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Paraprofessional Implementation of Evidence-Based Practices for Special Education Students

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Esther Bubb-McKinnie

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Walden University
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Abstract

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MS, St. Joseph's University, 2010

BS, Cheyney University, 2002

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Paraprofessionals often constitute the primary support system for special education students and are core members of special education instructional teams. Therefore, the Individuals With Disabilities Education Act requires that paraprofessionals receive adequate training, including training in evidence-based practices (EBP). However, paraprofessionals often do not obtain the training and professional development they need to become qualified. The unpreparedness of paraprofessionals may lead to discouraging student outcomes. Informed by social constructivism, the purpose of this exploratory case study was to understand the perspectives of 6 special education administrators, 5 special education teachers, and 1 special education paraprofessional on paraprofessionals' implementation of EBP and the status of EBP training for paraprofessionals. Purposely, and within the context of organizational sociocultural conditions, this study queried the perspectives of the participants in the purposeful sample on paraprofessional experience and training in EBP. During exploratory data analysis, open coding was used to analyze data thematically and identify central sociocultural themes. There was 1 overarching theme (organizational contexts of EBP implementation), 4 major subthemes (resources for EBP implementation, intrinsic attributes of professionals implementing EBP, extrinsic attributes of professionals implementing EBP, and acknowledging and valuing the role and importance of paraprofessionals tasked with implementing EBP), and several minor subthemes. This study may result in implementation of a yearlong paraprofessional professional development project, increased understanding and implementation of EBP, expansion of professional learning communities (PLC), and improvement of student outcomes.

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Dedication

I dedicate my doctoral study to my Lord and Savior, Jesus Christ, who blessed me with life and salvation, and without whom this project would not be completed. The strength of the Lord has been my source of encouragement every second, minute, hour, day, week, month, and year that I ever thought of giving up. Because of His grace, I am always reminded of Psalm 18:2: "*The LORD is my rock, and my fortress, and my deliverer; my God, my strength, in whom I will trust; my buckler, and the horn of my salvation, and my high tower*."

I also dedicate my doctoral study to my adorable, loving, caring, and intelligent daughter, Mikhaela McKinnie. Although Mikhaela is only 13 years old, I could not have completed this study without her support and understanding. Mikhaela, thank you for all of the times you woke me up, saying, "*Mom! Wake up and do you school work!"* whenever I would fall asleep while trying to complete this project. Moreover, thank you for being so understanding of all the sacrifices we made together to allow me to finish this journey. I could not be prouder or any more blessed to have you as my daughter! God knew what He was doing when He blessed me with you! I love you dearly, and I promise to support you for as long as God blesses me with life!

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I am proud to label myself as the first in our family to earn the doctoral distinction! I genuinely pray that my accomplishments not only inspire you to surpass boundaries, but also serve as a constant reminder of the words of the Apostle Paul in Philippians 4:13: "*I can do all things through Christ which strengtheneth me*."

Thank you, and may God bless you always!

I love you all!

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It is my deepest hope that the results of my study and the recommended project will fuel social change locally, nationally, and globally. In *A Blueprint for Reform: The Reauthorization of the Elementary and Secondary Education Act*, a document published by the U.S. Department of Education in March 2010, then-President of the United States of America Barack Obama stated, "*Reforming our schools to deliver a world-class education is a shared responsibility—the task cannot be shouldered by our nation's teachers and principals alone*." Also in the spirit of encouraging change and progress, Martin Luther King, Jr. once said, "*Our lives begin to end the day we become silent about things that matter*."

In reflecting and meditating on the words of Obama and King, it is my fervent hope that we are all inspired to work collectively, to share the responsibility of social change, and to lead authentically. I hope we are all challenged to advocate for changes in policy and law in the ever-evolving story of social justice for differently abled individuals and the advancement of special education.

Having listened to the participants' stories and reflected on Daniel Pink's 2006 *A Whole New Mind*, my goal is to continue to uncover and write the stories that enrich our world. My hope is that despite the perpetual research conundrums and quantitative, analytical achievements, we can all see the bigger, synthesized, qualitative pictures that can transform our profession!

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Section 1: The Problem

The Local Problem

Paraprofessionals are often the primary support system for special education students (Fisher & Pleasants, 2012) and part of the core special education instructional team (Giangreco, Suter, & Doyle, 2010). The federal government expects all special education professionals who deliver special education services pursuant to the *Individuals with Disabilities Education Act* (IDEA) to implement *evidence-based practices* (EBP). These EBP are core components of special education, in that federal legislation (*Every Student Succeeds Act* [ESSA], 2015; IDEA, 2004) mandates implementation of and training on EBP.

Together with the National Resource Center for Paraprofessionals, the Council for Exceptional Children (2011, 2015) validated the specialty set of prerequisite knowledge and skills for paraprofessionals serving students with disabilities under IDEA. In 2015, CEC aligned the *Paraeducator Common Core Guidelines* (PCCG) with the *initial and advanced preparation standards* for special educators. CEC expects that agencies will take steps to ensure that paraprofessionals master the knowledge and skills outlined in PCCG, which include Preparation Standard 5: Instructional Planning and Strategies (CEC, 2015), the standard that focuses on EBP.

Included in this proposition is an underlying expectation, as CEC (2015) stated, that organizations will provide quality training and continued education on EBP designed explicitly for paraprofessionals. However, Fisher and Pleasants (2012) explained that "the least qualified staff are teaching students with the most complex learning characteristics and in some cases with little oversight or direction" (p. 288). Further, Chopra and

Westland (2015) and Douglas, McNaughton, and Light (2013) found that paraprofessionals do not receive the training and professional development to become qualified to implement EBP, which was the driving problem for this study.

A qualified paraprofessional possesses knowledge and skills outlined in PCCG. Per the U.S. Department of Education Office of Special Education and Rehabilitative Services (2015), in 2012, 96.3% of paraprofessionals serving students ages 3 to 5 and 97.1% of paraprofessionals serving students ages 6 to 21 were qualified under IDEA Part B. Despite these data, Brock and Carter (2015) reported that paraprofessionals' implementation of EBP is limited and integrity levels are inconsistent because of a lack of adequate training. Lack of training, poor EBP implementation, and minimal levels of fidelity are significantly problematic.

The absence of innovative training, including training on EBP, directly violates IDEA Part B. IDEA Part B (2004) stipulates that paraprofessionals who provide special education and *related services* must receive appropriate training and direction before being assigned to provide services to special education students. IDEA Part B also requires that paraprofessional training include content on EBP implementation. Brock and Carter (2015) and Chopra and Westland (2015) found that although many school systems attempt to avoid these violations by providing in-services, the content of the in-services does not meet IDEA's requirements. Further, special education teachers are unprepared to supervise paraprofessionals (Brock, Huber, Carter, Juarez, & Warren, 2014; French, 1997; Hall, 2015; Steinbrecher, Fix, Mahal, Serna, & McKeown, 2015). Based on the sum of these findings, relying solely on federal mandates to narrow this gap in practice will not solve the problem. The solution to the problem must include

continuous action by education administrators at the local level to provide invaluable training to paraprofessionals.

The gap in practice that Brock and Carter (2015) and Chopra and Westland (2015) discussed was also evident at the local level. An administrator at the study site articulated this gap in practice precisely when he discussed the need for the enhanced staffing model he had designed to provide additional training to paraprofessionals who provide services to students affiliated with the local study sites. Several employees at the local study sites had also requested additional training in EBP for paraprofessionals.

Without adequate paraprofessional training that includes the implementation of EBP, paraprofessionals will remain inept and ultimately impact student outcomes negatively (Da Fonte & Capizzi, 2015; Giangreco, Backus, CichoskiKelly, Sherman, & Mavropoulos, 2003; Griffin-Shirley & Matlock, 2004; Rispoli, Neely, Lang, & Ganz, 2011; Tompkins et al., 2012). The detrimental effects of inadequate paraprofessional training include limitations on students' abilities to interact with nondisabled peers in their natural environments (Feldman & Matos, 2013; Harper, Symon, & Frea, 2008; Murphy, Robinson, Cote, Karge, & Lee, 2015; Robinson, 2011). Further, paraprofessionals cannot aid special education teachers comprehensively if they do not obtain applicable training (Bingham, Spooner, & Browder, 2007; Da Fonte & Capizzi, 2015; Douglas et al., 2013; Feldman & Matos, 2013; O' Keefe, Slocum, & Magnusson, 2013; Rispoli et al., 2011; Tompkins et al., 2012).

Because of these findings, Giangreco et al. (2001), Rispoli et al. (2011), and Tompkins et al. (2012) agreed that paraprofessional training is necessary for special education teacher reinforcement and to guarantee access to a *free appropriate public*

education (FAPE) in the *least restrictive environment* (LRE). Therefore, I designed this study to facilitate positive social change by collecting perspectival data on the gap in practice between the use of paraprofessional training at the local level and research-based recommendations. The data accumulated from the study may inform change at the local, regional, and national levels.

Rationale

Verification of the Problem at the Local Level

Within the local education context, paraprofessionals are unprepared to implement EBP. The local education setting for this study includes special education schools owned by a special education organization and situated at different locations in a local community in the northeastern region of the United States. Students in prekindergarten through Grade 12 who attend site schools receive special education services from paraprofessionals, teachers, and other special education professionals.

As noted in the problem statement, special educators at the local study sites have requested upgraded training to boost paraprofessionals' implementation of EBP. Special education administrators reported a lack of time to train paraprofessionals on EBP, that paraprofessionals are assigned to work without EBP training, and that the current training system for new paraprofessionals did not prepare paraprofessionals to implement EBP when serving special education students.

Other local proof of this problem at the study sites included direct communication from parents via emails, letters, and phone calls indicating that paraprofessionals assigned to provide special education services to their children were not prepared to implement EBP. Often, parents requested paraprofessional replacements in the interest of

enhanced knowledge of EBP. At other times, parents asked to meet with paraprofessionals before the initiation of services because of previous experiences with paraprofessionals who lacked requisite EBP training.

Likewise, teachers reported the unpreparedness of paraprofessionals to implement EBP and requested reassignments. During supervision meetings, special education staff commented that assigned paraprofessionals were unable to implement EBP. Special education administrators, who had acknowledged the problem at the local study sites, reported that they sometimes requested paraprofessionals from specific agencies that were more likely to provide prerequisite training on EBP. However, the paraprofessionals from those specific agencies were not entirely prepared to implement EBP.

At the local study sites, paraprofessionals who were unprepared to provide EBP often resigned on the first day of providing services to their assigned students, resulting in paraprofessional attrition. Special educators who provided training on EBP to paraprofessionals at the local study sites reported that occasionally, paraprofessionals did not master requisite skills for providing special education services by the end of the training period. However, those paraprofessionals needed to begin providing the services stipulated in individualized education plans (IEP) to avoid violating legal timelines for service delivery. Therefore, the paraprofessionals began providing services despite failing to master the skills required to support special education students.

The problem of focus in recent studies (Brock & Carter, 2015; Chopra, Sandoval-Lucero, & French, 2011; Chopra & Westland, 2015; Douglas et al., 2013) mirrors the problem that existed at the local level. The researchers in these studies found that paraprofessionals lacked prerequisite EBP training and emphasized the urgent need for

paraprofessional training. The confirmation of the problem at the local level contributed to the goal of this study, which was examining the perspectives of special education professionals regarding EBP training and preparation for paraprofessionals.

Substantiation of the Problem From the Professional Literature

As Fisher and Pleasants (2012) stated, in most cases, staff providing services to students with disabilities barely meet qualifying criteria, an issue that is compounded by the minimal oversight they receive. Chopra and Westland (2015) found that the most common issue paraprofessionals reported was that they had obtained little to no formal preparation and teachers were unwilling or unequipped to train them; Douglas et al. (2013) found that paraprofessional training is limited. Chopra and Westland also found that the most common issue teachers reported about supervising paraprofessionals was that paraprofessionals were unprepared and professional development focused on EBP did not address how to prepare paraprofessionals adequately. These findings indicate that CEC's (2015) expectations and IDEA's (2004) mandates for paraprofessional preparation are not realities in school settings.

An absence of paraprofessional and teacher perspectives exacerbates the problem. Da Fonte and Capizzi (2015) explained that failure to account for paraprofessional perspectives when designing paraprofessional training might have produced the inconsistency and inaccuracy in paraprofessional implementation of EBP that they found in their study. Confounding the problem, Greenway, McCollow, Hudson, Peck, and Davis (2013), Hall (2015), Hudson et al. (2016), and Johnson et al. (2014) found that training developers do not always consider the perspectives of teachers and paraprofessionals on EBP.

The lack of paraprofessional preparation that Chopra and Westland (2015) discussed creates a dilemma for special education administrators who assign unprepared paraprofessionals to provide special education services. Contemplating this quandary, Douglas, Chapin, and Nolan (2016) stated a need for paraprofessional training that aligns with the preparation standards CEC (2015) outlined for paraprofessionals and IDEA's (2004) requirements, to increase the likelihood that all special education students will access a high-quality FAPE in the LRE.

Compounding the problem is the fact that researchers have found that special educators focus on managing paraprofessionals rather than overseeing them holistically. Additionally, Hudson et al. (2016) found that special educators viewed EBP as generalized prescriptions rather than as contextual strategies to enhance the outcomes of students with low-incidence disabilities. Further, they found that teachers and administrators were unaware of the plethora of online training resources available on EBP. Brock et al. (2014) and Steinbrecher et al. (2015) found that special education administrators were unprepared to select EBP and thus unequipped to support special educators, including paraprofessionals implementing EBP. Moreover, French (1997) and Hall (2015) explained that special education teachers receive limited training on how to supervise paraprofessionals, proving the existence of the problem that provided the rationale for this study.

Considering the lack of preparation of paraprofessionals and teachers, Maggin, Fallon, Sanetti, and Ruberto (2012) highlighted the absence of efficient EBP training systems. Findings from several researchers have shown a lack of useful training systems for paraprofessionals (Da Fonte & Capizzi, 2015; Douglas et al., 2016; Giangreco &

Broer, 2005; Giangreco, Edelman, Broer, & Doyle, 2001; Tompkins et al., 2012). The fact that both paraprofessionals and teachers have recognized and acknowledged the problem and requested training to alleviate it (Breton, 2010; Butt & Lowe, 2012; Da Fonte & Capizzi, 2015; Griffin-Shirley & Matlock, 2004), confirmed the existence of the problem.

Although the persistence of the problem is evident, research providing recommendations for training paraprofessionals in their implementation of EBP is limited (Douglas et al., 2016). As Zients (2012) stated eloquently, "Where evidence is strong, we should act on it. Where evidence is suggestive, we should consider it. Where evidence is weak, we should build the knowledge to support better decisions in the future" (p. 1). Verification of paraprofessionals' use of EBP and training for paraprofessionals on EBP is weak in practice and research. Therefore, the sum of the corroboration of the problem at the local level and from the professional literature solidified the purpose of this study—exploration of special education administrators', teachers', and paraprofessionals' perspectives on paraprofessionals' implementation of EBP and EBP training for paraprofessionals—and justified the need for this study.

Definition of Terms

The following are special terms and definitions I used in this study:

Advanced preparation standards: Knowledge and skills teachers acquire through progressive study or specialization (CEC, 2015).

Evidence-based practices (*EBP*): The intersection of science, contextual consumer values, and clinical expertise in making decisions when providing services (Slocum et al., 2014).

Every Student Succeeds Act (*ESSA)*: A 2015 law that focuses on "provid[ing] all children significant opportunity to receive a fair, equitable, and high-quality education and … clos[ing] achievement gaps" (Section 1001).

Free appropriate public education (*FAPE)*: Special education services that align with the standards that a state education agency (SEA) has established and that are provided without cost in the local state per the IEP (IDEA, 2004).

Individuals with Disabilities Education Act (*IDEA)*: A 1975 federal law that ensures that all students with disabilities access FAPE in the LRE, that protects the rights of students with disabilities, that assists education agencies with providing early intervention and special education, that provides special education tools to families and educators, and that promotes the delivery of effective education practices (IDEA, 2004).

Initial preparation standards: Knowledge and skills required to begin teaching (CEC, 2015).

Least restrictive environment (*LRE)*: The education of students with disabilities with students without disabilities to the maximum extent that allows FAPE and educating students outside of the regular education setting only when the regular education environment does not establish FAPE (IDEA, 2004).

Paraeducator Common Core Guidelines (*PCCG*): Preparation standards comprising knowledge and skills that CEC expects special education paraprofessionals to acquire (CEC, 2015).

Paraprofessionals: Special education professionals who provides supportive special education per the IEP and under the direction of a certified or licensed special education professional (CEC, 2015; 22 Pennsylvania (PA) Code § 14.105(a), 2008).

Related services: Auxiliary services that increase the benefits that students receive from special education (IDEA, 2004).

Significance of the Study

This study is significant because of its potential to effect change in the broad special education field and to contribute to sustained social change at the local level.

Significance to the Broad Field of Special Education

Students with disabilities may fail to achieve sufficient progress when paraprofessionals provide instructional assistance without incorporating EBP. Brock et al. (2014) suggested that the implementation of invaluable practices instead of EBP grounded in the literature may explain the achievement gaps that ESSA (2015) seeks to close. Ross and Sliger (2015) explained that inconsistent use of EBP leads to a decline in opportunities for students to learn and practice expected outcomes and Pisacreta, Tincani, Connell, and Axelrod (2011) discussed an increase in the rate of problem behaviors.

Considering the number of paraprofessionals serving special education students, their expanding roles, and the effects of the inconsistent use of EBP that Ross and Sliger (2015) and Pisacreta et al. (2011) described, training paraprofessionals on EBP is imperative. In the absence of purposeful paraprofessional training, paraprofessionals may provide unsuccessful services that could disrupt students' learning (Da Fonte & Capizzi, 2015) and violate core professional ethical principles and expectations.

As Fisher and Pleasants (2012) explained, paraprofessionals supporting special education students have limited training and receive minimal guidance. Further, Chopra et al. (2011) found that the importance of paraprofessionals was only evident when they received straightforward leadership from teachers. Accordingly, the results of this study

provide viable options for training paraprofessionals, thereby increasing their ability to implement EBP, as well as recommendations for improving the direction that teachers provide to paraprofessionals.

Significance on the Local Level

Brock and Carter (2016) explained the continuing need for paraprofessional training focused on supporting special education students. Similarly, special education administrators, supervisors, teachers, and paraprofessionals at the local study sites stressed the urgent need for paraprofessional training.

The benefits of this study extend to school administrators, teachers, paraprofessionals, and agencies providing paraprofessionals. The results from this study provide administrators at the study sites with invaluable insight into the support that paraprofessionals provide to special education students. Further, the results from this study afford teachers the opportunity to perfect their supervisory skills and offer paraprofessionals a window to enrich their interactions with teachers and the special education students to whom they provide IEP services.

Administrators at the local study sites have the possibility of extending the findings to the locally contracted agencies that provide paraprofessionals and expand the model that an administrator at the local research site developed. Weighing the growing increase in the number of students receiving special education services and the number of paraprofessionals providing special education services, the expectation is to incorporate findings from this study into plans to address the local problem by improving services that paraprofessionals provide and fostering collaboration among teachers and paraprofessionals.

Adding to the significance of this study is the potential to decrease paraprofessional and teacher attrition by recruiting and training paraprofessionals, as Chopra et al. (2011) recommended, reducing staffing costs by approximately $15,000 per each full-time equivalent staff as an administrator at the local study site reported. Chopra et al. discussed the opportunity available to schools to develop "grow your own" (p. 23) programs. In these programs, paraprofessionals receive skill- and knowledge-based instruction and support when transitioning to teaching positions. Concurrently, teachers extend their observations of and collaboration with paraprofessionals. Extending the study by Chopra et al., Chopra and Westland (2015) explained that preservice and in-service training should include content that focuses on research-based paraprofessional feedback, a need that this study addressed.

Giangreco et al. (2001) and Ghere and York-Barr (2007) explained that when paraprofessionals feel supported and respected, attrition rates diminish because of increased paraprofessional morale. This study provided recommendations for increasing paraprofessional morale and subsequently lessening paraprofessional attrition in the local setting. Further, Giangreco et al. explained that paraprofessionals affect student outcomes and the school's capacity to support special education students. Therefore, training paraprofessionals and potentially shrinking attrition are expected to impact student and school outcomes positively.

Regarding attrition, this study is also significant because teacher attrition may also dwindle based on study outcomes. Cancio, Albrecht, and Johns (2014) and George, George, Gersten, and Grosenick (1995) reported that teachers without paraprofessional support are more likely to leave the profession. Cancio et al. recommended that

administrators explain the responsibilities of paraprofessional instruction to teachers, given that teachers may be inexperienced in providing such support. The authors concluded that in the absence of adequate explanations, inconsistent paraprofessional training would occur.

Research Questions

Chopra and Westland (2015) explained that the most common issue paraprofessionals reported was that they received little to no formal preparation and that teachers were unwilling or unequipped to provide the needed support. Douglas et al. (2013) found that paraprofessionals do not receive the anticipated training and professional development to become qualified to implement EBP. In consideration of the problem investigated in this study, the purpose of this research study was to gain an understanding of special education administrators', teachers', and paraprofessionals' perspectives on paraprofessionals' implementation of EBP and EBP training for paraprofessionals. The combination of the problem explored in this study and the purpose of this investigation prompted the following guiding research questions:

1. What are special education administrators', teachers', and paraprofessionals' perspectives on the status of paraprofessional preparation and training within the context of current sociocultural conditions in the workplace?
2. What are the perceptions of special education administrators, teachers, and paraprofessionals on the need for training to improve the effectiveness of paraprofessionals?

3. How do special education administrators and teachers perceive the role of experience, preparation, and training on paraprofessionals' implementation of EBP?

Review of the Literature

Theoretical Base/Conceptual Framework

The foundation of any research study is its grounding theoretical framework. In 2010, Lodico, Spaulding, and Voegtle explained that modern educational researchers have been reducing their subscription to a rigid separation of quantitative and qualitative research and replacing their firm beliefs with a more flexible approach. This flexibility allows them to use one or more theories to justify their choice of one research method over another. The overarching conceptual approach that guided this study was social constructivism. Social constructivists posit that phenomena are compound and enmeshed with contextual factors such as history, socioeconomics, culture, experience, and education (Lodico et al., 2010). Based on an underlying desire to understand the phenomena under investigation in this study within the context-specific perspectives of the participants, the social constructivist approach grounded this study. More precisely, other philosophical kernels that aligned with the social constructivist framework that I aggregated to form the framework of this study included situated learning, communities of practice (CoP), and sociocultural theory.

In 1978, Vygotsky explained his social constructivist belief that learning first occurs interpsychosocially via social interactions and then intrapsychosocially when individuals apply the knowledge gained from their socialization to their knowledge and

behavior. Vygotsky also stated that learners require social support from others to expand their knowledge and abilities based on their zones of proximal development. Therefore, collaboration with and assistance from others with more experience in the given area of knowledge are critical (Klingner, Boardman, & McMaster, 2013).

Klingner et al. (2013) pointed out that efforts to promote EBP must include exceptional professional development. The authors revealed that foci of supportive professional development include contextual sociocultural school conditions such as collaboration among professionals within CoP, opportunities for active learning among professionals, instructional materials, and administrative support. Similarly, Barnes (2016) highlighted other contextual sociocultural conditions that are relevant for teacher scholarship and professional development, including culture, history, psychology, age, and personal and educational experiences.

Harn, Parisi, and Stoolmiller (2013) explained that cogitation about contextual sociocultural conditions such as student-teacher ratio; teachers' perspectives, instructional philosophies, leadership, experience, and self-efficacy; staffing changes and turnover; and budget cuts is necessary for developing and establishing flexibility of fidelity, a prerequisite of sustainable practice. In fact, Harn et al. purported that adapting EBP to fit within the educational context may be a better option than presenting cookie-cutter EBP gathered from research.

In their 2010 study, Swain, Whitley, McHugo, and Drake (2010) found that 88% of sites that demonstrated sustainability of practice matched their practices to their contexts, including other practices, population, culture, and staffing. Adapting EBP to align with the needs of practitioners and students (Harn et al., 2013; Webster-Stratton,

Reinke, Herman, & Newcomer, 2011) may increase the accommodation, fit, and implementation of EBP and revolutionize special education practice.

Harn et al. (2013) noted that achievement of EBP outcomes within a given educational setting that is consistent with research results depends on the extent to which special educators consider the suitability of the EBP to the practice setting. This consideration is crucial when one deliberates on the multidimensionality and contextual dependence of educational interventions. Further, Klingner et al. (2013) explained that practitioners and researchers must collaborate to classify the contextual supports for promoting sustainability of EBP. In fact, Klingner et al. stated that failure to account for contextual factors might diminish sustainability.

Hudson et al. (2016) relied on sociocultural theory in their investigation of special education practitioners' perspectives on EBP. When developing their sociocultural framework, they included contextual sociocultural conditions such as the effects of the availability of conceptual and material tools on practitioner perspectives pertinent to EBP. They explained the underlying value in developing a more focused analysis of organizational sociocultural conditions applicable to the implementation of EBP than has been seen in the extant research on the lack of implementation of EBP.

In their case study of teacher education programs, Peck and McDonald (2014) explained that despite an increased emphasis on EBP within local, state, and national policies, EBP involves more than data supporting the use of EBP. In fact, implementation of EBP requires a fervent understanding of the complex, intricate interchanges between organizational contextual factors. Within their sociocultural approach, Peck and McDonald stressed the importance of understanding the organization's "culture of

evidence" (p. 4) when brainstorming about the implementation of EBP. The "culture of evidence" includes the organizational approach, the involvement of the members of the organization, the influence of the organization's goals on the participation of organizational members, the history of the organization, and the tools available for implementation of practice.

In 1991, Lave and Wenger discussed their theory of situated learning and CoP. Through situational learning, groups of learners coconstruct their knowledge per the specific social contexts and physical environment within their CoP. In collaborating throughout CoP, practitioners share common concerns about their communities and a pluralistic drive to learn how to expand their everyday interactions, strategic experiences, and professional skills, both intentionally and incidentally. Brown, Collins, and Duguid (1989) explained that knowledge is situational, in that the activities, contexts, and culture of learnedness affect the knowledge the recipient gains and the resources professionals rely on and acquire. Likewise, Leontiev (1978) acknowledged that the essence of the activities in which humans engage to amass learning occurs within the society and contexts wherein humans exist and the support they receive within those environments.

Like Leontiev (1978), Luria (1974) theorized the role of sociocultural processes in learning and cognition. He explained that the simplest of psychological processes, such as the perception of color, varies considerably based on an individual's experiences and cultural environment. He discussed his collaborative work with Vygotsky in which participants either had no experience of community-based activities or extensive cultural experiences within their communities. Results showed that the mechanisms that participants used to define objects differed based on their divergent experiences.

Participants with advanced cultural experiences defined objects using multiple ideas, whereas participants with underdeveloped cultural proficiencies integrated limited concepts when describing the objects presented to them. Luria concluded that socioeconomic and cultural encounters shaped perception of self, others, and environmental stimuli. The effects of social, economic, and cultural variables shaped not only perception, but many other cognitive activities, including categorization, inference, rationalization, ingenuity, and self-reflection.

In 2015, Kearney elaborated on a conceptual framework for beginning teacher induction. In this framework, Kearney explained that the training process for new teachers is twofold. Both socialization and induction play active roles and establish situated learning—the process whereby new teachers gain experiential knowledge. During the process of situated learning, which includes mentoring, new teachers must develop professional and personal relationships with peers before they can proceed through the knowledge community within their professional settings and eventually transition to the greater organizational community of practice.

Like Kearney (2015), Williams (2016) explained that the mentoring process for new teachers is foundational and the basis of the process is social constructivism. St. George and Robinson (2011) also stated that mentoring facilitates growth, acclimation to the professional environment, and personal development because of the auspices of an education mentor. New teachers understand the knowledge in their environments as a function of the social contexts in their professional settings and their peer-based interactions. The definition of EBP articulated by Slocum et al. (2014) embodies the precepts of situational learning and CoP and validated the appropriateness of the social

constructivist framework for this study. Slocum et al. defined EBP as the unification of scientifically validated strategies, contextual and personal factors, and clinical competence in making decisions when providing services. Further, the Slocum et al. definition aligns wholly with the concept of flexibility of fidelity.

Flexibility of fidelity refers to the adaptation of treatments to accommodate students' strengths and weaknesses; promote ownership, sustainability, and applicability across multiple contexts; and avoid rigidity (Coleman, Gallagher, & Job, 2012; Hamilton, Kendall, Gosch, Furr, & Sood, 2008; Harn et al., 2013; Steinbrecher et al., 2015; Sulkowski, Wingfield, Jones, & Coulter, 2011). One cannot promote the enhancement of practitioner knowledge and EBP within a given setting without giving any thought to the motivating values of the practitioners and the contexts within which they display those values. Anyone seeking to provide training and support to paraprofessionals and other educational practitioners within their everyday work settings must demonstrate an unquestionable understanding of the contexts within which special educators implement EBP.

Recently, Greenway et al. (2013) used Rogoff, Baker-Sennett, Lacasa, and Goldsmith's (1995) explanation of Bronfenbrenner's ecological systems theory and Engeström's (2001) cultural historical activity theory to form the sociocultural theoretical framework of their qualitative study. Sociocultural theorists recognize the breadth and depth of the role of contextual factors in the implementation of EBP. In 2016, Barnes relied on sociocultural theory when studying education processes for teachers during in-service periods, explaining that the sociocultural theory stemmed from the work of Alexander Luria, Alexsei Leontiev, and Lev Vygotsky. The sociocultural approach

allowed Barnes to account for the confluence of varied cultural, historical, social, and psychological factors, as well as personal experiences, training, and age when investigating teacher learning.

Like Vygotsky (1978), Lave and Wenger (1991), and Slocum et al. (2014), Hudson et al. (2016) explained that a comprehensive grasp of the perspectives of special education practitioners requires an examination of the sociocultural and organizational conditions within the school setting. A thorough understanding of organizational sociocultural conditions such as interpersonal interactions, staff buy-in and ownership, leader preparation, workplace setting, and the availability and accessibility of materials, activities, and administrative support (Klingner et al., 2013) is crucial.

The sum of these factors shapes not only practitioner perspectives, experiences, values, and beliefs, but also their comradery, initiative, and willingness to work in teams, accept feedback, and design and implement instruction rooted in EBP. Accordingly, the research questions within this study addressed the *what* and *how* of participant perspectives on paraprofessionals and paraprofessional training within the context of the local work setting.

Review of the Broader Problem

In reviewing the broader problem for this study, I examined literature related to paraprofessionals, EBP, and paraprofessional training. I used many search engines to locate journal articles, including Google Scholar, ERIC, Education Research Complete, ProQuest, and SAGE Premier. Key search terms used to locate research for this review included *paraprofessional*, *paraeducator*, *special education*, *training*, *professional development*, *EBP*, *sociocultural theory*, *social constructivist theory*, and *situated*

learning. The topics examined during this review are reflected in the following subsection headings: (a) EBP in Special Education: A Brief Historical Overview, (b) Evidence-Based Practice: Importance in Special Education, (c) Importance of Contextual Considerations, (d) Importance of Training, (e) Importance of Preference Considerations, (f) Brief Historical Review of the Paraprofessional Role, (g) Paraprofessional Role-Preparedness and Training: Is an Intersection Evident? (h) Views of Paraprofessionals on Training and Acculturation, (i) Paraprofessionals and Teachers: Understanding Their Relationship, (j) Factors Hampering Paraprofessional Success, and (k) Need for Paraprofessional Training.

Evidence-Based Practice in Special Education: A Brief Historical Overview

The use of EBP in special education is not a measly recommendation. In fact, federal (ESSA, 2015; IDEA, 2004) and state law (Pennsylvania [PA] Code, 22 PA Code § 14.102 (a) (2) (vii), 2008) require the use of EBP. Even though Congress did not pen the EBP requirement into education law until the passing of the No Child Left Behind (NCLB) Act (NCLB, 2002), the requirement for EBP remains. In fact, IDEA (2004) and Pennsylvania state law (PA Code, 22 PA Code § 14.102 (a) (2) (vii), 2008) unambiguously require the implementation of EBP in special education. Each reauthorization of special education laws since the original enactments has revolutionized special education immensely.

Congress enacted the Education for All Handicapped Children Act (EAHCA) (Public Law 94-142) in 1975 and reauthorized EAHCA several times over the following four decades, including the 1990 reauthorization that led to IDEA and the 2004 reauthorization titled the *Individuals With Disabilities Education Improvement Act*

(IDEIA). Because of Congress's reauthorizations of IDEA and its enactment of NCLB and the ESSA reauthorization, all special education practitioners are required to implement EBP. Further, IDEA (2004) and ESSA (2015) require that all special education professionals, including paraprofessionals, receive continued professional development that includes content on EBP because EBP augment student outcomes (Cook & Odom, 2013; Slavin, 2008).

Gable, Tonelson, Sheth, Wilson, and Park (2012) explained that the delivery of EBP helps to establish the professional authenticity of education. The absence of EBP amplifies the research-to-practice gap, which has existed for years (Cook & Odom, 2013). Dating back to 1968, Skinner noted that many manifestations of the appreciation and implementation of research did not exist in the modern classroom. Likewise, the amount of attention EBP has received in recent research shows the importance of EBP in education (Cook & Odom, 2013; Leko, 2015).

Evidence-Based Practice: Importance in Special Education

As Sayeski (2014) explained, the distance between the circumstances of the past and present determines progress. Practitioners must recognize practices such as EBP that focus on improving student outcomes to digress from findings of seminal researchers such as Skinner (1968) and the plethora of modern researchers who reiterate that the research-to-practice gap in EBP persists (Cook & Odom, 2013; Sayeski, 2014). Brock et al. (2014) noted that the absence or presence of EBP in schools may contribute to both favorable and unfavorable student outcomes during the schooling years, after high-school graduation, and into adulthood. Moreover, reliability of implementation of EBP is

imperative for improving student outcomes (Durlak & DuPre, 2008; Odom, Cox, & Brock, 2013; Torres, Farley, & Cook, 2012/2014).

Importance of contextual considerations. Consistent with the conceptual framework of this study and the Slocum et al. (2014) definition of EBP, Giangreco, Broer, and Suter (2011); Giangreco, Doyle, and Suter (2012); and Maggin et al. (2012) stressed that trainers must develop paraprofessional training and preparation within the context of the students they serve. Also in line with the philosophical framework of this study and the Slocum et al. definition of EBP, Klingner et al. (2013) stressed the importance of continual acknowledgment of the contextual realities in schools and districts because change is constant and inevitable.

The literature shows that special educators must meet the legal requirement to implement EBP within the contexts of special education teams. Several researchers have found that contextual and sociocultural factors impact the implementation of EBP (Boardman & McMaster, 2013; Brock et al., 2014; Cook, Cook, & Landrum, 2013; Cook, Tankersley, & Harjusola-Webb, 2008; Cook, Tankersley, & Landrum, 2013; Klingner et al., 2013;). Contextual factors include feasibility (Cook et al., 2008), ease of adaptation (Klingner et al., 2013), and teacher endorsement as likely to increase student outcomes (Cook, Cook, et al., 2013). When leaders do not tailor EBP to fit the context of the special education professionals and the needs of special education students, teachers resist their implementation and do not train or require paraprofessionals to implement them (Brock et al., 2014). Further, several researchers have found that teachers bypass EBP and choose practices that align with their experiences, preferences, and perceptions (Cook & Cook, 2013; Cook, Tankersley, et al., 2013; Hudson et al., 2016).

Some special education teachers violate special education laws and deprive special education students of a scientifically-validated FAPE (Vaughn & Dammann, 2001) by choosing to implement non-EBP, mostly because they believe that EBP are not suitable for their students and environments (Brock et al., 2014). Hudson et al. (2016) and Slocum et al. (2014) stressed that the promotion of the use of EBP must include rumination of the diversified contexts, values, and experiences of special education professionals and the students and families they serve.

Johnson et al. (2014) recognized the role of contextual factors in the implementation of EBP. Several other researchers have agreed (August, Gewirtz, & Realmuto, 2010; Bosworth, Gingiss, Pothoff, & Roberts-Gray, 1999; Durlak & DuPre, 2008; Dusenbury, Brannigan, Falco, & Hansen, 2003; Elliott & Mihalic, 2004; Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005; Gresham, 1989; Hagermoser Sanetti & Kratochwill, 2009; Han & Weiss, 2005). Failure to balance context with prescription perpetuates the gap researchers' and practitioners' have identified (Fixsen et al., 2005; Slocum et al., 2014). The research-to-practice gap must close to allow a narrowing of the gap between special education students and their nondisabled peers (Burns & Ysseldyke, 2009). This closing and narrowing will begin to occur when educators subscribe to the holistic definition of EBP (Slocum et al., 2014), which includes contextual and experiential perspectives, and apply that definition when developing EBP training (Freeman & Sugai, 2013; Slocum et al., 2014).

All special education professionals, including paraprofessionals, must understand that EBP is less of implementation rigidity and more of context-based decision-making to select original programming that caters to science, contexts, values, experiences,

resources, and needs (Cook, Cook, et al., 2013; Cook, Tankersley, et al., 2013; Freeman & Sugai, 2013; Slocum et al., 2014; Spencer, Detrich, & Slocum, 2012). That teachers and paraprofessionals understand that EBP encompass practices verified in empirical research as scientific and the combination of needs and context-based conceptualizations (Cook et al., 2008; VanDerHeyden & Harvey, 2012), is critical and cannot be overstated.

Consistent with the theoretical framework of this study and Slocum et al.'s (2014) definition of EBP, Harn et al. (2013), Leko (2015), and Odom (2009) stressed the importance of modifying and adapting practices to meet the contextual settings and students' needs, and bolster student outcomes. This thought is evident throughout research (Cook & Odom, 2013; Fixsen et al., 2005; Nelson, LeFfler & Hansen, 2009; Tseng, 2012). What is critical is striking a balance between conformity and adaptation of EBP to meet the needs of students and practitioners in the local setting (Leko, 2015).

Another aspect of consistency between the conceptual framework of this study and Slocum et al.'s (2014) definition of EBP, is Klingner et al. (2013) and Ruef et al.'s (2009) discussion on collaboration between professionals in higher education and school-age settings in adopting EBP that align well with the local school context. Further consistency is evident in their findings in that collaborative efforts in both studies demonstrate the use of CoP (Hall, 2015), one component of the philosophical framework of this study. Hall and Odom (2009) explained that the strength of CoP (i.e., PLC), is the bolstered support for sustained implementation of EBP. Hall noted that participants reported that they maintained the skills they acquired after the collaborative project ended because of the mutual commitment, focus on EBP, and opportunities for interaction within their CoP.

Importance of training. Any alignment between the quality of services special education students receive, the quality of services outlined in IDEA (2004), and other related mandates, depends on the skills, training, and experiences of the special education staff who provide those services. This dependence is true for paraprofessionals and special education teachers (Bruder, Mogro-Wilson, Stayton, & Dietrick, 2009) who interact most often with special education students during the school day. Despite the plethora of research that exists on EBP and the legal mandate to implement EBP, teachers, who seemingly have the best interests of students in mind, continue to implement inappropriate practices instead of EBP (Gable et al., 2012; Ross & Sliger, 2015; Vargas, 2013).

Both teachers and paraprofessionals must receive training on EBP if those practices are going to be productive (Gilbertson, Witt, Singletary, & VanDerHeyden, 2007). As Maggin et al. (2012) explained, the classroom teacher is responsible for selecting EBP and ensuring appropriate instructional delivery. Therefore, improving the outcomes of all students should provide a powerful impetus for improving paraprofessional implementation of EBP for special education students and teachers' ability to supervise paraprofessionals.

Teachers who supervise and support paraprofessionals are unable to train paraprofessionals in implementing EBP if they are either unfamiliar with or fail to implement EBP in the classroom. The de facto premise is that teachers select the EBP that they will use in their classrooms and consequently the practices that they will train their paraprofessionals to implement. Therefore, it goes without saying that teachers must understand the need to embrace EBP as a movement rather than an unchangeable

prescription (Boardman, Arguelles, Vaughn, Hughes, & Klingner, 2005; Cook et al., 2008).

Morrier, Hess, and Heflin (2011) surveyed teachers and found that most do not receive training on EBP during preservice. McGrath, Johns, and Mathur (2010) explained that most teachers lack training on supervising and training paraprofessionals. Even administrators lack knowledge of EBP in special education (Bays & Crockett, 2007; Blanton, Sindelar, & Correa, 2006; Steinbrecher et al., 2015). Lack of knowledge can lead to mediocre teacher feedback (Correa & Wagner, 2011; Steinbrecher et al., 2015) including feedback on teaching practices, EBP development and delivery (Billingsley, Carlson, & Klein, 2004; Steinbrecher et al., 2015), and paraprofessional support.

Importance of preference considerations. Johnson et al. (2014) discovered that incorporating practitioner preference when developing training intensifies results. Greenway et al. (2013) found that practitioners' perceptions about EBP could change with time and shape implementation. Greenway et al. concluded that practitioner perspectives might change from opposition to EBP to acceptance of EBP. Therefore, in changing the status quo, special educators must embrace differences in paraprofessional and teacher perspectives.

In their 2012 study, Jones, Ratcliff, Sheehan, and Hunt reported differences in the perspectives of teachers and paraprofessionals. Paraprofessionals revealed they performed more tasks than teachers credited them for completing, engaged in more positive relationships with their assigned students than their teachers reported, and rated the feedback they received from teachers as meaningful whereas teachers reported paraprofessionals were not receptive to their feedback. Further, teachers believed they

regarded feedback and input from paraprofessionals more often than paraprofessionals reported.

Chopra et al. (2004) found that paraprofessionals view themselves as liaisons between students' homes and schools. Further, paraprofessionals act as bridges between teachers and students, minimizing alienation (Genzuk, 1997; Goe & Matlach, 2014; Rueda & DeNeve, 1999; Wenger et al., 2004). Recognizing the importance of eco factors, Chopra et al. noted that trainers must account for environmental factors that prevent paraprofessionals from fulfilling their pivotal roles when developing paraprofessional training.

Paraprofessionals in Special Education

Historical review of the paraprofessional role. The onset and continued authorization of federal special education mandates, such as EAHCA (1975), NCLB (2001), IDEA (2004), and ESSA (2015), facilitated an increase in paraprofessionals providing services to students, including special education students. Advancement in the field also catapulted paraprofessionals into roles that required them to assist students with instruction. Changes in federal special education laws contributed to the evolution of the roles and responsibilities of paraprofessionals. Laws such as NCLB began to require special education paraprofessionals to be highly qualified to provide services to students. Further, the LRE requirement of IDEA increased the need for paraprofessionals to provide services to special education students.

1997 amendments to IDEA Part B (34 CFR § 300.136[f]) allowed states to assign paraprofessionals and personal care assistants with appropriate training and leadership to assist with the delivery of special education and related services to special education

students. Both the 1997 and 2004 amendments to IDEA Part D Section 635 required states to certify that all professionals and paraprofessionals who provide special and general education, and related and early intervention services, possess the requisite skills and knowledge to serve special education students. No clarity existed in the requirements provided regarding the requisite skills and training or the management to be provided (Breton, 2010; Likins, Zaleski, & Gross, 2016; Pickett, 1999).

In 2004, the elimination of Comprehensive Systems Personnel Development removed an important element in ensuring states provide professional development for paraprofessionals (Likins et al., 2016). In 2002, NCLB Act, Section 1119 began to require all Title 1 paraprofessionals who gained employment as paraprofessionals after the signing of NCLB to be 'highly qualified.' To demonstrate a 'highly qualified' status, paraprofessionals must provide documentation of the completion of at least two years of higher education or a college degree at the Associates level or higher; and knowledge, skills, and readiness in math and reading, as the IEP team determines appropriate.

Under NCLB (2001), paraprofessionals may provide instructional assistance and specialized tutoring for students, support the classroom teacher and IEP team, finish other tasks such as fostering parent participation and translation, or assist with other educationally-related activities. However, NCLB stipulates that paraprofessionals cannot provide instructional support unless directly supervised by a qualified teacher (Likins et al., 2016). Despite its provisions, NCLB did not provide clarity on the requirements of its mandates related to paraprofessionals nor did it promote system or personnel development at the state level. For example, the writers of NCLB did not include explicit

definitions of paraprofessional, direct supervision, professional development, and continuing education.

In 2015, President Barack Obama's administration passed ESSA. ESSA increased the focus on the local level, specifically in growth processes, which includes a focus on paraprofessionals. Schools recognized as requiring extensive support must develop verified plans to address inequity in resources. Moreover, these districts must include both teachers and paraprofessionals in the planning process.

ESSA (2015) created many implications for paraprofessionals at the federal, state, and local levels. ESSA affords paraprofessionals the opportunity to self-advocate and the power to garner respect from other professionals (Likins et al., 2016). Researchers such as Fisher and Pleasants (2012) noted the need for paraprofessionals to speak up for themselves. ESSA increased paraprofessional control in paraprofessional processes at the local level and requires states to create a "State Committee of Practitioners" that includes paraprofessionals and maintains the minimum entry-level requirements. Further, ESSA recognized Specialized Instructional Support Personnel and adopted the term 'paraeducator.' ESSA also requires districts to consult with organizations representing paraprofessionals.

The increased support for paraprofessionals in ESSA (2015) is evident across the titles within the Act. Title 1 includes implications at the federal, state, and local levels. At the federal level, Title 1 includes paraprofessionals in negotiated rulemaking (Likins et al., 2016). At the state and local levels, Title 1 requires SEAs and Local Education Agencies (LEA) to include paraprofessionals in the development of state and local plans in a timely and meaningful manner. Further, states must include paraprofessionals within

their Committees of Practitioners and ensure that they maintain entry level requirements for all professionals.

At the local level, the LEA must collaborate with paraprofessionals when categorizing students for Title 1 services. Further, in Title I at the local level, parents have the right to information on any services paraprofessionals will provide and the paraprofessionals qualifications. Further, LEA must develop and promote strategies for family engagement inclusive of paraprofessionals (Likins et al., 2016).

Within Title II, states can use funds to promote teacher certification for paraprofessionals and support collaboration with paraprofessionals in addressing transition to Kindergarten and school readiness (ESSA, 2015). States must consult with paraprofessionals when applying for Title II funds. At the local level, consultation must occur with paraprofessionals and their contracting or hiring agencies when applying for SEA grants. LEA can apply funds obtained from grants to activities that stimulate paraprofessional development.

Regarding Title III, the focus is on English Language Learners (ELL) and providing professional development for paraprofessionals to increase their ability to meet the needs of ELL. Title IV focuses on developing 21st-century schools and providing professional development to assist paraprofessionals with using and incorporating technology when providing services to reinforce instruction and student outcomes. Title VI emphasizes the requirement to provide paraprofessionals with professional development that allows them to increase their knowledge of and ability to support students of Indian, Native Hawaiian, and Alaskan Native American descent (Likins et al., 2016).

Title VIII focuses on definitions, which NCLB (2001) did not provide. Section 8002 (37) established that the term 'paraprofessional,' also known as 'paraeducator,' includes education and instructional assistants. Further, Title VIII, Section 8002 (42) provides an extensive definition of professional development and establishes that paraprofessionals should receive professional development.

Considering the changing legal special education requirements and the requirement to provide FAPE in the LRE, paraprofessionals have become ubiquitous classroom staples (Carter, O'Rourke, Sisco, & Pelsue, 2009; Douglas et al., 2016; French & Cabell, 1993; McGrath et al., 2010; Mirenda, 2014; Montana Office of Public Instruction [OPI], 2012). Serna et al. (2015) noted that although highly skilled and trained paraprofessionals are in tremendous demand, a significant shortage exists. Despite the deficit, Brock and Carter (2013) stressed the importance of paraprofessional retention and the role paraprofessionals play in changing student outcomes.

Paraprofessional role-preparedness and training: Is an intersection evident?

Despite the changing roles of paraprofessionals and the requirements of special education law, several studies show a lack of training for special education paraprofessionals (Giangreco, 2010). Further, Giangreco (2010) also found that standards for general education paraprofessionals are superior to those for special education paraprofessionals and that general education paraprofessionals received more training than their special education peers. ESSA's (2015) mandates demonstrate consistency with the implications of the findings of Chopra and French's (2004) qualitative study where parents, paraprofessionals, and special education teachers participated in in-depth interviews. The findings revealed the importance of preparing special education teachers to supervise

paraprofessionals and the value of paraprofessionals as team members with suggestions for student growth and development (Carter et al., 2009).

The lack of preparedness of paraprofessionals to fulfill their assigned tasks is an idea that pervades the literature (Carter et al., 2009). This lack of preparedness occurs because paraprofessionals do not typically receive preservice training on service delivery or EBP even though they assist classroom teachers with social and academic instruction (Fisher & Pleasants, 2011; French & Cabell, 1993). Most paraprofessionals receive sporadic training after they begin working (Fisher & Pleasants, 2012; French & Cabell, 1993). In fact, with respect to the legal requirements of federal special education mandates such as IDEA (2004) and ESSA (2015), LEA and other employers may risk legal ramifications by assigning untrained paraprofessionals to provide services to special education students (Breton, 2010; Etscheidt, 2005; French & Cabell, 1993).

Teachers are often unprepared to supervise paraprofessionals and rely principally on intuition. Many teachers remain uninvolved in the selection of paraprofessionals and do not prepare for paraprofessionals to begin providing services. Further, they are unable to debrief with paraprofessionals consistently, mostly because of lack of time or paraprofessional unavailability. Also, they do not provide adequate information to paraprofessionals on their assigned students and their programming (Breton, 2010; French, 2001). Both teachers and paraprofessionals require preservices and inservices (Fisher & Pleasants, 2012; OPI, 2012) to enhance growth in paraprofessional training and oversight.

Consistent with the theoretical framework of this study and ESSA's (2015) recommendations, Annland et al. (2001), Goe and Matlach (2014), OPI (2012), and

National Education Association of the United States [NEA] (2005), recommended that paraprofessional training designed and offered by school districts should focus on building collaborative relationships that are necessary for competent instructional delivery. Moreover, OPI suggested that training should be educationally holistic and comprehensive. The inclusion of the following key points demonstrates this completeness: orientation to the district, school, and classroom; data collection and other responsibilities; ethics; special education and disabilities; collaboration, communication, and problem-solving; individual and small group instruction, learning, accommodations, and adaptations; problem behaviors and health and safety; and functional routines and activities of daily living.

It goes without saying that judging the role of paraprofessionals, providing them with comprehensive preservice and continued training is imperative (Lane, Barton-Arwood, Nelson, & Wehby, 2008; Lane, Wehby, Little, & Cooley, 2005). The paucity of research on valid training procedures is widely evident (Giangreco et al., 2001). As Alquarini and Gut (2012), Douglas et al. (2016), and Hall (2016) pointed out, successful educational experiences of special education students require a team of professionals, including paraprofessionals who influence student outcomes regularly (Fisher & Pleasants, 2012). However, special education teachers must also recognize that paraprofessionals require quality support to be successful. Douglas et al. found that paraprofessionals are often uninvolved in the development of training processes for their growth and development. This lack of involvement is inconsistent with ESSA (2015) mandates, which require the involvement of paraprofessionals in educational processes, and the premise that supervision is most efficient when supervisors immerse supervisees

in the supervision process and delegate increasing ownership of the supervision process to supervisees over time (Douglas et al., 2016).

Views of paraprofessionals on training and acculturation. Often, paraprofessionals are dissatisfied with their work and do not perform exemplarily. This dissatisfaction and poor performance result because paraprofessionals work with students who engage in the most challenging behaviors in the absence of any significant training or resources to empower them to fulfill their roles adequately (Breton, 2010; Fisher & Pleasants, 2012; Giangreco et al., 2001; Riggs & Mueller, 2001; Sandoval-Lucero, 2006). The roles they must fulfill include managing problem behaviors and modifying plans or instruction. Considering the persistent issue of assigning underqualified paraprofessionals to support students who present with very significant academic and behavioral challenges, it is possible that society not only continues to undervalue and establish low expectations for students with special needs but may also be infringing on their legal right to FAPE in the LRE (Breton, 2010; Etscheidt, 2005; Giangreco et al., 2010).

Paraprofessionals assist with delivering quality special education. Therefore, everyone within society benefits from the services they provide, including the student, teacher, family, other team members (NEA, 2005). As such, it is imperative that the work of paraprofessionals receive adequate and meaningful acknowledgment. Findings from surveys Fisher and Pleasants (2012) administered indicated that paraprofessionals reported the primary factors for their job dissatisfaction included lack of (a) respect from peers, (b) acknowledgment of their achievements, (c) active membership within their teams, and (d) collaborative organizational acculturation. On the opposite end of the spectrum, Ghere and York-Barr (2007) found that positive organizational culture and

teaming promote a respectful, collaborative, and outcome-based atmosphere. Ghere and York-Barr also found that providing opportunities for paraprofessionals to offer suggestions increases job satisfaction among paraprofessionals and lowers turnover rates.

Consistent with the conceptual framework of this study and echoing the recommendations of ESSA (2015), paraprofessionals who are valued as members of a professional team build relationships with members of their schools and communities (Chopra et al., 2004; Sandoval-Lucero, 2006). Also, in harmony with the philosophical framework of this study is Flores and Clark's (2004) finding that culture, ethnicity, and self-efficacy affect levels of teacher efficacy. Research has shown that paraprofessionals often express lack of respect and appreciation and that educators continue to require them to perform mundane tasks instead of providing instructional support that aligns with their expanded roles (Chopra et al., 2004; Hughes & Valle-Riestra, 2008; Riggs & Mueller, 2001; Rueda & DeNeve, 1999; Sandoval-Lucero, 2006). ESSA empowers paraprofessionals to command respect and expand their roles, promoting self-advocacy and self-efficacy.

Paraprofessionals and teachers: Understanding their relationship. The importance of social role models in the development of paraprofessional self-efficacy (Jones, 2009) overlaps with the theoretical framework of this study. Paraprofessionals who participated in Sandoval-Lucero's (2006) study indicated that teachers who were social role models affected their self-efficacy and that the most positive and influential social role models were the teachers who provided high-quality paraprofessional supervision. As indicated by this finding and in alignment with the conceptual framework, when teachers provide excellent mentorship to paraprofessionals, levels of

paraprofessional self- and role-efficacy and professional satisfaction are likely to increase.

Wehby, Maggin, Partin, and Robertson (2012) found a direct relationship exists between the quality of trainer-trainee relationship and the quality of implementation of practice. Considering the philosophical framework of this study, Sandoval-Lucero (2006) found that the organizational environments of paraprofessionals may have channeled their self-efficacy. Stockall (2014) noted that teachers must build rapport with paraprofessionals and strengthen communication strategies to increase training outcomes. Brown, Gatmaitan, and Harjusola-Webb (2014) explained that teachers need to develop mentoring relationships; influential training and support are necessary for EBP implementation; and building positive relationships in supportive work environments may extend the implementation of EBP.

Factors hampering paraprofessional success. Several factors alter the ability of paraprofessionals to fulfill their responsibilities productively and maximize student outcomes. French (1997) explained that the skills of the special education teachers impact paraprofessional competency directly. Teachers' supervision skills, their ability to provide training, and their recognition of the distinction between the teacher and paraprofessional roles determine this effect. Although teachers are ultimately responsible for supervising paraprofessionals, many lack the skills needed to provide practical supervisory support to paraprofessionals (French, 1997; Brock et al., 2014; Jimenez, Mims, & Browder, 2012; Steinbrecher et al., 2015). Teachers lack required skills because they receive limited or no training on how to supervise paraprofessionals efficaciously

(French, 1997; Gable et al., 2012). Further, teachers expressed low self-confidence in their abilities to supervise paraprofessionals (Brock et al., 2014; French & Chopra, 2006).

Given that teachers supervise paraprofessionals they must make time to provide quality supervision; however, this seldom occurs. Also, Burns and Ysseldyke (2009) and Carter, Strnadová, and Stephenson (2012) found that special education professionals use non-EBP just as often as they implement EBP. Some teachers report low rates of use of EBP whereas others use EBP less often than their reported use of EBP. Jones (2009) and Boardman et al. (2005) found that practices rooted in research were not significant considerations when participants selected instructional strategies. Further, Brock et al. (2014) found that teachers have minimal interest in improving their ability to implement EBP or increasing their use of EBP. Others lack knowledge of EBP and are unaware of the breadth and depth of EBP (Torres et al., 2012/2014).

Need for paraprofessional training. Several researchers have studied paraprofessional training, found positive results, and discussed the research-to-practice gap. However, the gap persists; therefore, special education professionals must provide training to bridge the continuous gap. Practitioners must consider the results of research on paraprofessional training and determine how they can incorporate the results within their settings to elevate paraprofessionals' implementation of EBP.

In 2016, Brock and Carter found teachers delivered impactful professional development to paraprofessionals, paraprofessionals implemented EBP with integrity, and outcomes expanded for 75% (n = 4) of students. Before the study, paraprofessionals who participated in the study did not implement EBP consistently or frequently. Brock and Carter published the first study that found teachers trained paraprofessionals on how

to implement EBP with special education students. Teachers rated the training they delivered as credible and practicable. Brock and Carter found that though brief, plausible professional development facilitates paraprofessional implementation of EBP with high levels of fidelity.

Brock and Carter (2015) explained that most paraprofessionals lack specialized training in EBP. The authors found that video modeling and coaching increased paraprofessional implementation of specific EBP for school-aged students with disabilities and recommended future research focus on generalization of professional development results to other EBP, settings, trainers, and study designs.

Brock et al. (2014) surveyed special education teachers and administrators regarding professional development needs related to implementing EBP when educating students with autism. The authors found that teachers' self-confidence in implementing EBP was poor, they perceived coaching to be less beneficial than workshops, and because of their top-down view of EBP, their interest in professional development on improving their delivery of EBP was minimal. Brock et al. recommended that future studies include observational data on teachers' implementation of EBP and the impact on student outcomes.

Da Fonte and Capizzi (2015) evaluated the effects of a module-based training program on the accuracy and consistency of paraprofessional implementation of specific EBP for students with varying disabilities. The authors found variability in consistency and accuracy and concluded that paraprofessional perspectives on training might be crucial when designing training systems. Da Fonte and Capizzi also recommended that future researchers study other methods of training and supportive paraprofessional

networks, and conduct broader scale studies to determine trainings that are appropriate for paraprofessionals across the entire school setting, given that paraprofessionals support students with diverse disabilities.

Douglas et al. (2016) interviewed elementary special education teachers on their experiences supervising special education paraprofessionals. Based on the results of the interviews, the authors stressed the need for a system of consistent supervision and feedback for special education paraprofessionals from special education teachers. Douglas et al. (2013) noted that although paraprofessionals provide constant support to early childhood special education learners, training for paraprofessionals on supporting students with multifaceted communication needs is limited. The researchers studied the effects of providing interactive online training paired with opportunities to reflect and ask questions on the ability of the paraprofessionals to support students with autism and developmental delays with improving the students' communication. Douglas et al. (2013) found the number of opportunities the paraprofessionals provided for the students to engage in communicative interactions increased.

Greenway et al. (2013) interviewed special education administrators and teachers to understand their perspectives on EBP for students with intellectual and developmental disabilities. The researchers found that the changing perspectives of practitioners can aid in the development of plans to revolutionize implementation of EBP for students with disabilities. Hall (2015) found that special education teachers who received training and extensive professional development on EBP for students with autism spectrum disorders sustained their use of EBP and remained in the field. Considering the results of the

surveys and interviews, the researchers recommended future researchers investigate the effects of educator choice on the sustained use of EBP.

Hudson et al. (2016) interviewed special education directors and teachers and explained that special education leaders must consider the perspectives of special education practitioners when attending to the implementation of EBP by special education paraprofessionals. The authors suggested that trainers incorporate any replication of their finding of a top-down view of EBP into professional development packages. Johnson et al. (2014) examined the effects of incorporating teacher preference when selecting EBP for teacher trainings. The authors found that teachers who had the opportunity to communicate the EBP they preferred for inclusion in their training acquired the practice sooner and demonstrated greater consistency and quality once individual coaching ended.

Maggin et al. (2012) investigated the effects of intensive paraprofessional training on the ability of paraprofessionals to use group contingencies to transform the classroom. The researchers found increases in (a) integrity (which maintained after the withdrawal of performance feedback), (b) interactions between paraprofessionals and students, (c) teachers' rates of instruction, and (d) reductions in aggressive behaviors. Maggin et al. highlighted the need to develop advantageous training systems for paraprofessionals. However, teachers must exercise caution to avoid the training trap that Giangreco, Smith, and Pinckney (2006) discussed, which occurs when teachers relinquish more of their responsibilities to paraprofessionals because those paraprofessionals received 'adequate' training.

Steinbrecher et al. (2015) interviewed special education administrators and found administrators are not prepared to select EBP and are therefore unequipped to support and evaluate special educators in their implementation of EBP. The researchers suggested improving collaboration between special education administrators and special education preparation programs. Locally, the Pennsylvania Training and Technical Assistance (PATTAN) Network offers a plethora of resources for paraprofessionals and school personnel hiring and supervising paraprofessionals. PATTAN recently announced the availability of the 2016-2017 Special Education Paraprofessional Online Training Series Brochure (Goldbloom, 2016). The trainings provide information on methods and resources for special education paraprofessionals who support a variety of students in various settings. These trainings assist paraprofessionals with obtaining the Pennsylvania Credential of Competency for paraprofessionals. Despite, the availability of these resources in research and on the broad and local levels, the research-to-practice gap continues to exist.

Saturation of Literature

I reviewed a combination of literature for this study, including textbooks and other scholarly books, and peer-reviewed journal articles in electronic databases at Walden University and other local and national universities, including Google Scholar, ERIC, Education Research Complete, ProQuest, and Academic Search Premier. I used reference lists in peer-reviewed articles and scholarly dissertations from past doctoral students at Walden University and other universities to search for additional literature. I consulted a list of Selected Paraprofessional References from 1990 to present (Giangreco, 2016b), which included 415 non-dissertation literature review sources with information

related to paraprofessionals. Only two of the 415 sources included the term evidence-based in their titles, and only one of the two studies was germane to this study. I also reviewed Giangreco's (2016a) Paraeducator Support: Recent Dissertation Abstracts on Paraprofessional Topics from 1993 to present, which included 86 dissertations on topics related to paraprofessionals with reference lists containing peer-reviewed sources. None of these 86 dissertations included the term *evidence-based* in the title. Also, I perused federal, state, and local governmental websites; district, schools, and other educational websites; and other organizational websites for additional information. I included over 150 scholarly sources related to *paraprofessional, paraeducator, instructional assistant, teacher assistant, training, professional development, EBP, scientifically-validated practice, sociocultural theory, social constructivist theory, situated learning, and CoP* in this review.

Implications

The amount of attention attributed to EBP in recent research indicates the importance of EBP in education (Cook & Odom, 2013; Leko, 2015). Gable et al. (2012) explained that the delivery of EBP helps to establish the professional authenticity of education. The absence of EBP establishes a research-to-practice gap, which has existed for years (Cook & Odom, 2013). Dating back to 1968, Skinner noted that much affirmation of the appreciation and implementation of research did not exist in the modern classroom. Considering the requirements of special education law relevant to paraprofessionals and EBP, several studies show a lack of training for special education paraprofessionals (Giangreco, 2010). This lack of training limits paraprofessionals' ability to implement EBP when supporting special education students and perpetuates the

research-to-practice gap. My analysis of the data I obtained from my investigation of the problem assisted me with providing a compelling, research-based solution to address the problem through training, supervision, and support.

The reach of this study in the problem-solving process necessitates judgment of its associated implications based on findings from data collection and analysis. Findings revealed the perspectives of special education administrators, teachers, and paraprofessionals on paraprofessional implementation of EBP and EBP training for paraprofessionals. In combination with the theoretical grounding of this study, nascent patterns serve as catalysts for paraprofessional implementation of EBP in the local setting and beyond. Findings from this study formed the foundation of the problem-solving process about participant perceptions regarding paraprofessional implementation of EBP and the effects of socioculturalism.

Further, findings from this study assisted in the development of a comprehensive training project based on the implementation of EBP and in alignment with PCCG. It is the expectation of CEC that agencies confirm that paraprofessionals working with students with disabilities master the knowledge and skills described in PCCG (CEC, 2015). Agencies must provide paraprofessionals with continued training and professional development opportunities that match the expected knowledge and skills of paraprofessionals. Another implication of this study is that results facilitated the inclusion of participant perspectives in the development of a professional development project, the application of constructivism, and Slocum et al.'s (2014) definition of EBP, including a thoughtful consideration of contextual factors and the availability of resources.

The impetus of special educators should be to lead social change to reduce disparities on the local and broader level. With the growing increase in the number of students with low-incidence disabilities receiving special education and the number of paraprofessionals providing special education services, this study contributed significantly to expanded social change. Chopra et al. (2011) discussed "grow your own" (p. 23) programs, where school personnel train paraprofessionals. These programs facilitate (a) increased success, (b) reduced staffing shortages, and (c) broadened supervision and collaboration. The findings from this study assisted me with developing a similar project that, if approved by school administrators, could ultimately extend special education processes and foster diversity, which are essential for stimulating positive social change locally, nationally, and globally.

The extant research supports the implications of the development of a training project for paraprofessionals with a focus on EBP (Brock & Carter, 2015; Brock et al., 2014; Chopra & Westland, 2015; French, 1997; Hall, 2015; Steinbrecher et al., 2015). Professionals within the local setting indicate a similar and immediate need. The findings of this study promote scholarly social change by adding to the literature, principally on EBP training and support for special education paraprofessionals who implement EBP, the application of social constructivism, and the impact of contextual variables in service delivery.

Additional implications of this study include the expectation that professionals on the local and broader levels will gain new, digestible knowledge from the findings of the study either through direct participation in the professional development project or by reading this study and the project details. It is anticipated that the results from this study

will provide leaders at the local study sites with invaluable insight into the needs of paraprofessionals. This insight will most likely catalyze social change by addressing the local problem; improving the services that paraprofessionals provide via an increase in their comprehension and use of EBP; and expanding collaboration among teachers, paraprofessionals, and administrators.

Summary

As shown in research and the local setting, a research-practice gap exists between the requirements for paraprofessional training and supervision and what occurs in today's schools. Therefore, this exploratory, qualitative study sought to understand the perspectives of six special education administrators, five special education teachers, and one special education paraprofessional on paraprofessionals' implementation of EBP and EBP training for paraprofessionals. The epistemic value of data accumulated from this study is the social change that will occur on the local and broader levels, mostly in paraprofessional training and supervision.

To fulfill the purpose of this study, I subscribed to the methodological approach that allowed me to answer the research questions I posed. In Section 2, which follows, I describe and justify the selected research methods. Also in Section 2, I provide detailed descriptions of the participants and explained how I accessed and protected participants. I also discuss processes and procedures for data collection and analysis, and present limitations of the study.

Section 2: The Methodology

Introduction

Although paraprofessionals provide services under the supervision of special education teachers, they are core members of special education teams (Fisher & Pleasants, 2012; Giangreco et al., 2010). In this study, I investigated the problem facing special education teams wherein paraprofessionals are unprepared to support special education students (Chopra & Westland, 2015; Douglas, McNaughton, et al., 2013; Fisher & Pleasants, 2012). Based on this problem, the purpose of this study was to explore special education administrators', teachers', and paraprofessionals' perspectives on paraprofessionals' implementation of EBP and EBP training for paraprofessionals. Therefore, I posed the following three broad research questions to focus the study and allow me to remain open to emergent viewpoints:

1. What are special education administrators', teachers', and paraprofessionals' perspectives on the status of paraprofessional preparation and training within the context of current sociocultural conditions in the workplace?
2. What are the perceptions of special education administrators, teachers, and paraprofessionals on the need for training to improve the effectiveness of paraprofessionals?
3. How do special education administrators and teachers perceive the role of experience, preparation, and training on paraprofessionals' implementation of EBP?

Qualitative Research Design and Approach

Link Between Design, Problem, Purpose, and Research Questions

I used a qualitative, exploratory case study approach to understand the perspectives of six special education administrators, five special education teachers, and one special education paraprofessional on paraprofessionals' implementation of EBP and EBP training for paraprofessionals; to fulfill the purpose of the study; and to answer the research questions. Creswell (2012) and Lodico et al. (2010) defined qualitative research as an approach that explores a central phenomenon to improve awareness through rich and thick descriptions. Qualitative research is best suited to address problems where (a) variables are unknown, (b) there is a need for further exploration, (c) the literature provides limited information about the phenomena under study, or (d) the researcher needs to learn more from the participants involved in the study (Creswell, 2012). To learn about the phenomenon in this study—paraprofessionals' implementation of EBP— I asked participants open-ended questions, transcribed participant responses, analyzed data thematically, and applied personal experiences and past research to interpret the meaning of the data.

Description of Qualitative Research Design: Exploratory Case Study

As Stake (1995) explained, cases that receive attention from researchers in the field of education are typically people and the programs within which they provide services. Although somewhat paradoxical, each case is alike yet different from others in many ways. Case study researchers are genuinely interested in participants' stories and realities and are willing to forsake their various presumptions to learn from participants (Stake, 1995). Therefore, case study is an appropriate design for exploratory qualitative

studies because case studies provide in-depth exploration of cases in their natural contexts (Creswell, 2012; Lodico et al., 2010; Rumrill, Cook, & Wiley, 2011). Bogdan and Biklen (2007) explained that a case study provides a detailed examination of a subject, setting, document, or event. The case study design allows researchers to deepen their knowledge of meanings and processes related to the case or a collection of cases (Lodico et al., 2010). The goal of collective case studies is to understand the issue pertinent to each participant and the group to which the participants belong (Creswell, 2012; Lodico et al., 2010).

Social constructivism describes the conceptual assumptions underlying case study data collection and analysis most adequately (Lodico et al., 2010). The emphasis on multiple perspectives, social and political contexts, and data triangulation for accurate depictions of participant realities are consistent with the social constructivist approach, which was the grounding framework for this study. Further, case study researchers are cognizant of researcher bias and engage in constant reflection, a quality that is characteristic of social constructivism (Lodico et al., 2010).

Justification of Qualitative Approach: Why not Quantitative?

The naturalistic foundation of qualitative studies offers researchers the opportunity to gather descriptive data within participants' everyday settings (Bogdan & Biklen, 2007). Compared to the quantitative approach, the qualitative option was better for this study. Lodico et al. (2010) explained that quantitative researchers focus on the analysis of numbers to determine cause-effect relationships (experimental) or the existence of correlational relationships (nonexperimental), whereas qualitative researchers concentrate on using the meanings people attach to phenomena to interpret

their experiences within the participants' natural settings. Considering (a) the problem, purpose, and research questions within this study; (b) the explanations that Bogdan and Biklen (2007), Creswell (2012), Lodico et al., and Rumrill et al. (2011) provided; and (c) the focus of quantitative approaches, the qualitative approach was the better methodological option for this study.

Punch (2006) explained that the supporting reason for a researcher's decision to use one design over another lies in the research questions. Quantitative research questions seek out the existence of experimental and nonexperimental relationships, whereas qualitative research questions seek to establish relationship patterns (themes) among participants (Stake, 1995). The research questions in this study relate to the meanings participants attach to paraprofessional implementation of EBP and training, not cause-effect or correlational relationships between variables related to paraprofessionals and EBP. Thus, the focus of the research questions in this study justified my use of the qualitative approach. My emphasis in this study was on understanding each case in bare-bone detail (particularization) and not on quantifiable standardizations (generalizations; Lodico et al., 2010; Punch, 2006; Stake, 1995), adding further validation to my use of the qualitative approach. Moreover, the alignment between the research questions of this study and the qualitative approach, and the consistency of the purpose, research questions, and the qualitative approach improved the internal validity of the study (Punch, 2006).

Stake (1995) explained three major differences between quantitative and qualitative case study research. The following distinctions that Stake provided add further support to the qualitative case study approach as the design of choice for this study:

1. *Explanation versus understanding*: Quantitative researchers seek causes (the *whys*) by establishing control and searching for explanations. Qualitative researchers seek to understand what is happening (the *whats* and *hows*) by dissecting complex human relationships in the participants' natural habitats, as was the case in this study. Whereas qualitative researchers consider unique occurrences as relevant information that adds to their wealth of data and deepens their understanding, quantitative researchers, in their quest for explanations, deem unique cases erroneous because their focus is on data quantification.
2. *Personal versus impersonal research*: The nature of the research questions I constructed required me to assume a personal role as researcher in this study by positioning myself in the participants' natural environments during data collection, and analyzing and synthesizing data during the data collection process to maintain an independent, unbiased mind and maximize the powerful potential of an open mind. I remained in constant reflection on my subjective realities throughout the study. However, quantitative researchers must maintain an impersonal role, limiting their interpretation of data to after they have collected and analyzed data statistically. Answering the research questions posed in this study demanded that I interact with participants in their natural settings and construct knowledge during these interactions. The requirement in quantitative approaches to develop methodological instruments, control objective data collection, and delay interpretations of data until after researchers have collected and analyzed all data would not have

facilitated the interactions that were necessary to answer the research questions I posed in this study.

3. *Discovery versus construction of knowledge*: Qualitative researchers are social constructivists, whereas quantitative researchers are scientific realists. Social constructivists posit that to understand and interpret data, one must understand that perceptions vary across individuals, primarily because of their varied experiences. Therefore, qualitative researchers construct knowledge by interpreting the meanings that people attach to their experiences. The focus in this study on the meanings that participants attach to their experiences with paraprofessionals, EBP, and training required a qualitative approach. The scientific realism of quantitative researchers in positing that all reality is objective and seeking to detachedly yet objectively answer research questions by establishing cause-effect and correlational relationships through numerical data, constructs, and variables (Lodico et al., 2010) did not align with the research questions I posed in this study.

Justification of Qualitative Exploratory Case Study Design

As Creswell (2012) explained, qualitative researchers explore and understand a central phenomenon. In this study, my central interest in the implementation of EBP by paraprofessionals made the case study approach an appropriate choice. The process of collecting data from participants while grounded in social constructivism facilitated a limitation on subjectivity and an enhancement of accurate data collection during the case study. The collective nature of this study (i.e., I interviewed multiple participants across multiple sites; Stake, 1995) also supported the appropriateness of the case study

approach. Further, case study was the qualitative approach of choice because other designs did not align with the focus and trajectory of this study. Ethnographers use an extended period to focus on groups bound by social or cultural norms, grounded theorists develop theories when existing theories do not suffice, and narrative researchers tell historical stories of single lives (Creswell, 2012). Rumrill et al. (2011) explained that phenomenologists engage in extensive and prolonged interactions with participants to find patterns and relationships. None of these designs were as appropriate for this study as the collective exploratory case study.

The literature, problem, purpose, and research questions also supported the appropriateness of the exploratory case study design with the interview as the data collection tool. In 2004, Chopra and French interviewed 17 participants to examine the relationships between parents and paraprofessionals. Participants supported students with significant needs who received services at three program sites. Douglas et al. (2016) interviewed teachers about their experiences supporting and supervising paraprofessionals. Greenway et al. (2013) interviewed special education administrators and teachers to understand their perspectives on EBP for students with intellectual and developmental disabilities.

Hall (2015) used surveys and follow-up interviews to study the longevity of EBP implementation by special education graduates. Hall found that special education teachers who received training and extensive professional development on EBP for students with autism spectrum disorders (ASD) sustained their use of EBP and remained in the field. Hudson et al. (2016) interviewed special education directors and teachers and explained that special education leaders must consider the perspectives of special

education practitioners when attempting to upgrade the implementation of EBP by special education paraprofessionals.

In a collective case study, Jones (2009) explored 10 special educators' perspectives on the research-to-practice gap in special education using interviews, observations, and self-reports. Steinbrecher et al. (2015) interviewed special education administrators and found that they were not prepared to identify EBP and were therefore unequipped to support and evaluate special educators in their implementation of EBP.

Participants

The local education setting for this study included special education schools owned by a special education organization and situated at different locations in a local community in the northeastern region of the United States. Students in prekindergarten through Grade 12 who attended site schools received special education services from paraprofessionals, teachers, and other special education professionals. Participants included six special education administrators, five special education teachers, and one special education paraprofessional who provided special education services at the local school sites. The 12 participants were recruited from five schools, as shown in Table 1.

Table 1

Distribution of Participants Across Schools

Schools	Administrators	Teachers	Paraprofessionals	Totals
A	1	1	0	2
B	2	1	1	4
C	1	0	0	1
D	1	2	0	3
E	1	1	0	2
Totals	6	5	1	12

Note. Number of administrators, teachers, and paraprofessionals across each school.

Sampling

Like Chopra and French (2004), Douglas et al. (2016), and Hudson et al. (2016), I used purposeful sampling to pinpoint participants who could provide rich information, considering the exploratory nature of this study and the need to gather information related to the phenomenon under study. Purposeful sampling allows researchers to select information-rich participants who have appropriate knowledge about the phenomenon (Bogdan & Biklen, 2007; Creswell, 2012; Lodico et al., 2010; Patton, 2002). Consistent with Onwuegbuzie and Collins's (2007) recommendation that a minimum of 12 participants be included in a qualitative study when the primary data source is the interview, I selected 12 participants to participate in the study. Onwuegbuzie and Collins explained that a minimum of 12 participants facilitates saturation, redundancy, and analysis of data.

Selecting 12 participants was also consistent with the goal of purposeful sampling, which is to select participants who are key informants who can provide rich, detailed information to answer the research questions. The goal of purposeful sampling in qualitative research is not to select a large sample (Lodico et al., 2010), but to select an adequate sample that falls within the parameters of established participant characteristics and can facilitate an in-depth exploration of the central phenomenon (Creswell, 2012). This goal defended the use of the non-probability-based purposeful sampling in this study. Although the ideal scenario would have been to interview all administrators, teachers, and paraprofessionals in all schools owned by the special education agency, such an approach was unrealistic, impractical, unfeasible, and unnecessary, and it would not have facilitated in-depth inquiry (Creswell, 2012), a foundational characteristic of qualitative methodologies.

The specific form of purposeful sampling that I used to locate 12 participants who could provide answers to the research questions was homogenous purposeful sampling. Homogenous purposeful sampling allows researchers to find key informants who meet specific characteristics that will allow them to obtain thick, rich, and in-depth information to answer research questions (Creswell, 2012; Lodico et al., 2010). To promote a profound level of inquiry per participant, I located participants who met the defining characteristics identified in the following paragraphs.

Participant Identification and Criteria

I explained participant inclusion criteria to directors and administrators at the research sites. I asked special education directors at the research sites to nominate special education administrators whom they believed met the inclusion criteria. I also asked

special education directors to nominate individuals who, based on their interactions and experiences, they believed would most likely benefit from participating in the study and provide the most pertinent data related to the study, the research question, and the phenomenon under investigation. In the same manner and using the same explanation, I asked special education administrators to identify special education teachers and paraprofessionals. I invited participants to take part in the study if they met the following criteria:

1. Administrators
    a. Current, full-time employees.
    b. Worked in the special education field for at least 6 months.
    c. Willing to
        i. Identify teachers and paraprofessionals as potential study participants.
        ii. Participate in the study.
        iii. Complete the interview.
        iv. Sign the required consent form.
2. Teachers
    a. Current, full-time employees.
    b. Worked in the special education field for at least 6 months.
    c. At least 1 year of teaching experience.
    d. Implement IEPs and provide special instruction.
    e. Oversee at least two paraprofessionals.
    f. Willing to

i. Participate in the study.

ii. Complete the interview.

iii. Sign the required consent form.

3. Paraprofessionals

   a. Provide services to special education students for at least 50% of the school day.

   b. Worked as paraprofessionals for at least 6 months under the supervision of special education teachers.

   c. Implement specially designed instruction per the students' IEP, either as personal care assistants or instructional assistants.

   d. Willing to

      i. Participate in the study.

      ii. Sign the required consent form.

Site Entry: Gaining Access to Participants

I selected the study sites because of my direct relationship with the sites and general knowledge of the need to transform processes related to paraprofessionals. Before beginning the study, I sought written consent to conduct the study at the local schools from the designated representative of the special education agency. I also requested written permission from the Institutional Review Board (IRB) at Walden University to conduct the study and attached the Letter of Cooperation from the special education agency. After IRB approval from Walden University (02-24-17-0457099) and receipt of the signed Letter of Cooperation from the research site representative, I recruited site directors to serve as gatekeepers. I presented a summary of the proposed study to school

administrators and notified them of study approval with permission to access the sites, staff, and participants for the duration of the study.

I requested that administrators provide the names and email addresses of teachers and paraprofessionals who could serve as potential study participants. I advised administrators that the provision of the names and email addresses of potential participants was voluntary. Once I obtained the names and addresses of potential participants, I contacted each potential participant separately via email with an attached letter titled "Invitation to Participate in Research." I notified each participant that participation in the study was voluntary, if they agreed to participate they could withdraw their agreement at any time, and all information related to their participation in the study would be pseudonymized and kept confidential. Each participant could respond to the invitation to participate separately, independently, and voluntarily.

Establishing a Working Researcher-Participant Relationship

Given that I had a preestablished direct working relationship with the agency, the researcher-participant relationship with administrators was in existence before the commencement of the study. Only 33% (4/12) of the participants knew me or of me prior to participating in the study because of my involvement with the research agency for the past 3 years. To facilitate the researcher-practitioner relationship, I explained that the research study may afford the opportunity to inform a project that might cultivate a culture of EBP among paraprofessionals.

As Bogdan and Biklen (2007) recommended, I used a cooperative approach to build a working relationship with participants by meeting with participants, explaining my interests, seeking their support, and expanding rapport and trust via informal,

engaging conversations. As Lodico et al. (2010) suggested, I used a one-sentence statement to explain the study, listened actively, and showed genuine interest in participants and their behavior during data collection. I provided answers to the following five questions Bogdan and Biklen discussed and assurances of the responses:

1. What are you going to do?
    a. I am going to interview you for about 45-60 minutes about your perspectives on paraprofessional implementation of EBP. I will schedule a time that is convenient for you to participate in the interview.
2. Will you be disruptive?
    a. My goal is to remain as unobtrusive and noninterfering as possible. Other than asking you to participate in the interview, provide informed consent, and verify that I interpreted your interview responses correctly during a process referred to as member checking, I will not make any additional requests nor place any demands.
3. What are you going to do with your findings?
    a. I will share findings with my research committee and University, and the agency that owns your school. However, I will pseudonymize participants and sites. I will also use findings to inform a project that may encourage paraprofessional implementation of EBP.
4. Why us?
    a. Directors and administrators at your agency advised me that you, along with others, would be able to offer valuable insight into paraprofessionals and their implementation of EBP when supporting special education

students. I want to interview professionals who are knowledgeable about the focus of the study. I am also aware of the need for enrichment in paraprofessional processes in your school, and I believe you can help me understand these processes.

5. What will we get out of this?
    a. I will share my findings with you and you may be able to participate in the project that may result from the findings of the study.

Protection of Participants' Rights

Before beginning this research study, I completed the National Institutes of Health (NIH) Office of Extramural Research Web-based training course, "*Protecting Human Research Participants*," on September 24, 2015 (Certification Number: 1869400). Having participated in this course, I obtained in-depth insight into the meaning of protection of participants' rights. I applied for and received IRB approval from Walden University, which researchers do not receive if they do not indicate their efforts to protect participant rights. I also submitted a Letter of Cooperation to the research site, which the designated representative signed and approved. I did not contact any potential participant nor did I collect any data until I received IRB approval from Walden University and the signed Letter of Cooperation from the local research site.

I established participant protections to assure ethical compliance (Bogdan & Biklen, 2007; Creswell, 2012). As an administrator at another school but not one of the sites in this study, my collegial role minimized participant risk, including coercion, adverse effects of supervisory status, and preexisting relationships. To protect confidentiality, I discussed all participants pseudonymously and asked participants to use

pseudonyms if references to individuals at the sites was necessary to convey their perspectives. I interviewed participants in private offices with closed doors.

The exact location of the study is not revealed in this report. Instead, I discussed the study setting in terms of its broad geographical region. I kept all information about the study confidential and in secure locations accessible only to me. I explained the procedures for preserving confidentiality, mitigating risk, and avoiding loss of or unauthorized access to data to participants and site directors.

As indicated, I refrained from coercing anyone into participating in the study. Instead, I allowed all participants to provide voluntary informed to participate in the study. Preliminarily, I explained the purpose of the study, my role, and expectations to all participants and site administrators. I informed all participants of potential harm and benefit related to participating in the study and that they could withdraw from the study at any time without any repercussions. I allowed all participants to ask any inquiring questions about the study and probe what participating in the study entailed. I stored all raw and analyzed data securely in a locked cabinet in my home that will remain accessible to me only for up to 5 years. Once the 5-year period elapses, I will shred all raw data. I provided transcribers with password-protected external flash drives to save transcribed interviews. I asked the transcribers to save the transcribed interviews on the external flash drives and not on their personal computers. I erased all transcribed data from the flash drives upon conclusion of data analysis.

Data Collection

I collected data on participant perceptions as they related to the implementation of EBP by special education paraprofessionals. Social constructivists posit that human

beings construct reality based on their learned experiences (Lodico et al., 2010; Walker, Shenker, & Hoover-Dempsey, 2010). Therefore, the aim of researchers that ground their research in social constructivism is to understand the composite and multiple experiences of participants from the participants' perspectives. Accordingly, I applied the social constructivist theoretical approach to not only ground this study but also guide the interviews.

To understand the realities of participants, researchers must use data collection methods that will allow them to get closer to participants' realities. Given that the purpose of the study and the goal of the research questions were to gain information on participant perceptions, I used interviews as the data collection tool. In addition to applying the social constructivist paradigm to ground the study, I relied on the theoretical framework to construct the interviews and guide the interview process. Using interviews to obtain data was reasonable because I gathered information on participant perceptions from the interviews. As Stake (1995) explained, qualitative cases study researchers take pride in unmasking and presenting the multiple realities of each case. The veracity of the multiple realities of case study research is that the interview is the main data collection tool that facilitates the discovery of multiple realities.

I would not have been able to obtain information on participant perceptions from other data collection tools such as observations and record reviews. Through formal interviews, researchers obtain meaningful, detailed information about participants' views, which is uncharacteristic of observations (Wright, White, & Gaebler-Spira, 2004) or record reviews. By probing for additional information, researchers expand their inquiry even further. Also, data collection instruments that align with social constructivism

include in-depth interviews, which form one typical method of data collection researchers use in exploratory qualitative case studies (Rumrill et al., 2011). Specifically, I used a formal semistructured interview protocol (see Appendix C) with open-ended (a) background, (b) broad, and (c) specific interview questions. I developed the interview questions using results from past studies, recommendations from Patton (2002), personal communication with staff at the study sites, and the PCCG (CEC, 2015).

Once I obtained permission and informed consent, I audio-recorded all interviews, which occurred one-on-one and face-to-face. Each transcriber and I transcribed all recorded data verbatim to maximize the efficiency and accuracy of data analysis (McLellan, MacQueen, & Neidig, 2003). No participants opted out of being recorded. Therefore, I did not have to write or type their answers to capture the extensive information they provided in response to the research questions as Bogdan and Biklen (2007) and Creswell (2012) recommended. I recorded reflective field notes during the data collection process to remain in a state of continuous reflection. I also noted any nonverbal behaviors in which participants engaged. To maintain confidentiality, I pseudonymized participants, interviewed them in a private area, and stored all data securely in a locked location accessible to me only.

Because of the nature of this study, the one-on-one interview was a better selection than a group or focus group interview (Lodico et al., 2010). The one-on-one interview facilitated privacy and in-depth exploration of responses. Given that researchers cannot control what participants reveal or discuss during or after group interviews, I would not have been able to assure confidentiality if I chose group interviews. Further, group or focus group participants who are strongly opinionated may

have been domineering, creating reluctance or intimidation in other participants, who may have then decided to withhold their views (Bogdan & Biklen, 2007; Lodico et al., 2010). Further, if some participants in the focus group held a leading organizational status or supervisory role, a subordinate or someone in a lower position may have been reluctant to state divergent or unfavorable views. Therefore, to protect the rights of participants, preserve confidentiality, and build security in trust, I interviewed participants individually.

I conducted interviews during noninstructional times convenient to the participants and when the probability of distractions and interruptions was at a minimum. Considering this study's focus on participants' perceptions, I used the interview protocol (see Appendix C) I designed to gather data from 12 participants and to facilitate the collection of sufficient data to answer the research questions posed in a meaningful manner. Using the interview protocol (see Appendix C) to interview 12 participants aligned with Onwuegbuzie and Collins's (2007) recommendation of a minimum of 12 participants for interviews. Further, interviewing 12 participants was consistent with the suggestions of Bogdan and Biklen (2007), Creswell (2012), Lodico et al. (2010), and Rumrill et al. (2011) for facilitating in-depth data collection.

To secure participant trust, I began the interview process by building rapport, putting participants at ease, and thanking them for agreeing to participate. I described the purpose and format of the interview, and reminded participants of my obligation to establish confidentiality and avoid harm, and that they could withdraw from the study at any time without encountering any repercussions, as Bogdan and Biklen (2007) recommended. I also advised participants that they could skip any questions they did not

wish to answer or end the interview at any time if they no longer desired to continue with the interview, as Bogdan and Biklen also suggested. I reminded participants that directors and administrators recommended them, among others, to participate in the interview. Completing these steps prior to delving into the interview questions put participants at ease and attained their trust.

I structured the interview protocol (see Appendix C) to allow me to begin the interview with broad background questions such as "*Tell me about yourself in terms of your current role*?" The purpose of the background questions was to help me learn how sociocultural factors might influence perspectives and EBP implementation. Next, I proceeded to broad, context-specific questions such as "*What is your understanding of the role of paraprofessionals*?" to specific, focused questions such as "*Tell me about your thoughts on training and its effect on EBP implementation?*"

The interview questions included questions based on the same thematic categories across all participants. These categories included: (a) Background, (b) Paraprofessionals and EBP, (c) Perspectives on Paraprofessional Training and Preparation Relevant to Workplace Conditions, (d) Perspectives on the Need for Training, and (e) the Role of Experience, Preparation, and Training in Paraprofessional Implementation of EBP. The purpose of the questions included in the interview protocol (see Appendix C) was to allow me to collect data that provided responses to the following three guiding research questions of this study.

1. What are special education administrators', teachers', and paraprofessionals' perspectives on the status of paraprofessional preparation and training within the context of current sociocultural conditions in the workplace?

2. What are the perceptions of special education administrators, teachers, and paraprofessionals on the need for training to improve the effectiveness of paraprofessionals?
3. How do special education administrators and teachers perceive the role of experience, preparation, and training on paraprofessionals' implementation of EBP?

The interview concluded with closing questions such as "*Is there any question you believe I should have asked you that I did not think to ask*?"

I asked probing questions during the interview to seek further clarification and elaboration as needed. Follow-up probes allowed me to determine how participants envisioned skills, knowledge, and dispositions occurring within their special education environments. Bogdan and Biklen (2007) suggested permanent products stimulate conversation, facilitate multiple-source data collection, and enrich understanding of phenomena. Therefore, to extend probes further, I requested copies of permanent products that participants referenced during their responses. Specifically, I requested copies of the training outline that the teacher at School A stated she provided to all new paraprofessionals who began working in her classroom. I allowed participants to express themselves as they saw fit while answering the interview questions and telling their stories (Creswell, 2012) and avoided interrupting participants during their responses as (Bogdan & Biklen, 2007) advised.

The Interview: Gaining Access to Participants

Once I obtained IRB approval from Walden University and the signed Letter of Cooperation from the research site, I contacted site directors via email explaining the

study and its purpose. Within the email, I requested that directors provide the names and email addresses of administrators who could serve as potential study participants. I advised directors that the provision of the names and email addresses of potential participants was voluntary. Once I received the names and addresses of potential participants, I contacted each potential participant exclusively via email with an attached letter titled "Invitation to Participate in Research." When I contacted administrators, I also requested that they provide the names of teachers and paraprofessionals who could serve as potential study participants. I advised administrators that the provision of the names and email addresses of potential participants was voluntary. I notified each participant that participation in the study was voluntary, if they agreed to participate they could withdraw their agreement at any time, and that I would pseudonymize and keep confidential all information related to their participation in the study. I allowed each participant to respond to the invitation to participate separately, independently, and voluntarily.

Role of the Researcher

In assuming the role of researcher in this qualitative study, I became the instrument of data collection (Niesz, Koch, & Rumrill, 2008; Rumrill et al., 2011). Therefore, the accuracy of the findings from this research study depended on my skills, experience, and rigor (Rumrill et al., 2011). As the researcher in this study, I possessed an adequate understanding of human interactions and my social constructivist philosophical approach grounded my understanding. Also as researcher, I allowed participants to share their views while remaining attentive and empathetic (Rumrill et al., 2011). Of the multiple roles of case study researchers (Stake, 1995) discussed and consistent with the

social constructivist approach to this study, my role as researcher in this study was a combination of teacher (sharing knowledge), advocate (offering data-based recommendations), and interpreter (constructing new meanings).

As Bogdan and Biklen (2007) recommended, I incorporated triangulation of data across participants, research sites, and data sources (e.g., permanent products of sample paraprofessional training plan received from the teacher at School A) to minimize researcher bias. As part of the interview process, investigators engage in reflective practices to limit any biases and supplement the research process because of their direct interactions with participants (Rumrill et al., 2011). To strengthen my role as researcher and to create a mental separation between my role as researcher and my professional role within the agency that owns the research sites, I interviewed myself before interviewing participants using the same interview protocol I used to interview participants (see Appendix C) to gauge and clarify my assumptions and expectations as Rumrill et al. (2011) recommended. I documented any presumptions or biases and manifestations of dual role conflict to facilitate reflection and introspection before beginning the interview process. Throughout the research process, I self-reflected on the methodology, ethical dilemmas, my frame of mind, and any uncertainties, to learn from my experiences, maintain separation of my dual roles, and discover how I could strengthen future research as Bogdan & Biklen (2007) recommended.

For the past four years, I have cultivated a direct, professional relationship with the agency that owns the site schools. However, any supervisory relationships between the participants and I was nonexistent because I did not recruit participants from the school where I maintain direct contact. The probability that participants were aware of

who I was before the start of the study was low, as only 33% (4/12) of participants knew me or of me prior to participating in the study. Although the preexisting knowledge may have resulted in researcher reflexivity (Creswell, 2012), it is highly unlikely that this occurred because participants answered questions, openly, passionately, honestly, and captivatingly. Similarly, openly discussing my dual role did not result in participants censoring their responses most likely because I did not provide any services at any of the research sites prior to or during the research study.

In my role as researcher, my goal was not to be viewed as someone with authority over participants but as a collegial professional. As researcher, it was my intention to develop an honest relationship with participants to gain their trust. My past and present experiences as a supervisor of special education paraprofessionals did not lead to bias in my opinions of the expectations of special education paraprofessionals, teachers, and administrators regarding paraprofessional training, supervision, and implementation of EBP. My awareness of some of the issues with paraprofessional training, supervision, and implementation of EBP within the agency did not sway my analysis of data. Further, my statuses as Board Certified Behavior Analyst (BCBA) and Licensed Behavior Specialist (LBS) did not guide my role as researcher or my views of participant responses to interview questions. I remained in a state of continuous, ongoing, honest reflection throughout the study.

Remaining in a constant state of self-reflection during the study removed any impact of my role on data collection and analysis. Self-reflection was dually beneficial in that it allowed me to minimize my biases and negated any harmful impressions on my role as researcher. I understood that the researcher must remain self-aware and cognizant

of biases to produce high-quality research. Optimizing self-awareness and knowledge of preexisting biases allowed me to remain ethical considering the likelihood that my familiarity with the site and my passion for the phenomena under study may have skewed results.

Data Analysis

Data analysis included exploratory analysis and open coding to answer the research questions (Creswell, 2012). With exploratory analysis, I allowed the data to determine the analytical structure of its analysis via emergent themes. In analyzing data, I transcribed responses to questions and probes verbatim. I reviewed field notes and reflective notes after listening to each audio-recorded interview and reviewing transcribed interviews. I listened to each audio-recorded interview as many times as needed while reviewing interview transcripts to ensure accuracy of interview transcription. I also wrote incipient views in the preestablished transcript. As Creswell (2012) recommended, I noted actions during the interview such as laughs, smiles, eye contact, head nodding, facial expressions, and suggestive comments, in the transcriptions. Bogdan and Biklen (2007) explained that recording information such as impressions and remarks facilitate the reflective process. I used transcribers to transcribe interviews but only after they signed the confidentiality agreement (see Appendix B). Further, asking participants to use pseudonyms if referencing any staff or student during their interviews preserved confidentiality in terms of the transcribers who assisted with interview transcription.

Thematic coding, which results from constant comparison, allows researchers to discover similar and repeated beliefs with links to the research questions (Creswell, 2012). I began the thematic coding and analysis process by creating a coding tree with the

research question at the root and new topics as the branches, grouping similar perspectives in clusters. Once I coded all interviews, I revisited and reexamined the data to reorganize and regroup perceptions as needed. I located repeated text within the transcribed interviews, categorized each repetitive segment, and use repeated themes to form conceptualizations as Creswell (2012) recommended. I continued this process of coding and recoding data throughout the data analysis and writing processes to facilitate rich and thick data interpretation via constant comparisons. Based on the inductive style of constant comparison, I found, coded, and grouped specific indicators into broad concepts and categories (Bogdan and Biklen, 2007; Creswell, 2012; Leech and Onwuegbuzie, 2007; Wright et al., 2004).

I used color-coded highlights to distinguish broad codes. I placed questions, probes, answers, codes, premises, and ideas in designated columns within tables for each interview. Given that 12 interviews required transcription, I assigned an abbreviation to each coding and subcoding category to allow memorization of the coding system and ease the coding and analysis processes. I used primary findings to guide subsequent analysis, and establish the previous corroboration of meaning within the data. I reviewed the transcripts and coding results multiple times to assure completeness of data analysis and confirm that assertions and coded categories related to each other and the guiding research questions.

I triangulated data to strengthen the validity of this study by comparing the perspectives of different participants (Lodico et al., 2010) during the data analysis process. Triangulation facilitated corroboration of data across different participants (Creswell, 2012) such as teachers and paraprofessionals. During triangulation, the

researcher compares, contrasts, and cross-references data obtained from various sources, including multiple participants, to preserve accuracy of data interpretation. Triangulating data from multiple participants across multiple settings fortified the validity of the data because data from multiple sources led to a fuller understanding of the phenomena under study (Bogdan & Biklen, 2007). Therefore, triangulation allowed for the minimization of erroneous interpretations and conclusions, and comparison of my experiences and results to those included in the literature (Rumrill et al., 2011). During triangulation, I examined each information source and found confirming data for arguments. Extracting information from multiple sources of information or processes encourages researchers to develop a report laced with accuracy and credibility (Creswell, 2012).

In addition to triangulation, I incorporated member checks to boost validity. To conduct the member checks, I emailed participants and notified them that I was ready to begin the member check process. I reminded them that completing the member checks was voluntary and that no repercussions would occur if they opted out of the member check process. I explained my expectations for the member check process in writing. I provided my interpretations of their responses to each interview question and the summarized themes, like Douglas et al. (2016). I asked participants to review the information I provided for accuracy and consistency, to identify any interpretations that were inconsistent with their views, and to make corrections to any information they deemed inaccurate, as Niesz et al. (2008) suggested. Like Creswell (2012) discussed, I asked participants to share their views on the (a) completeness and reality of the descriptions I provided, (b) accuracy of the themes, and (c) the fairness and

representativeness of my interpretations. Of the 12 participants, 67% (8/12) completed member checks and agreed with my interpretation of their perceptions.

Stake (1995) described member checking as a process where researchers ask participants to review unfinalized drafts of their interpretations after the conclusion of data collection and before finalizing the research report. Therefore, member checking allows researchers to review the data and assess their analysis of the data with participants as they interpret the meaning of the data (Punch, 2006). Stake also explained that member checking allows participants to check for accuracy and consistency between their views and those of the researcher. Barnes (2016), Butt and Lowe (2012), Bryan, McCubbin, and van der Mars (2013), Harris and Aprile (2015), and Trent (2014) used member checks to increase the trustworthiness of their qualitative studies on paraprofessionals. Au contraire, Biggs, Gilton, and Carter (2016) did not use member checks in their qualitative study on paraprofessionals. However, they noted the absence of member checks as a limitation of their study and advised future qualitative researchers to conduct member checks to boost the accuracy of their interpretive findings. Lodico et al. (2010) and Niesz et al. (2008) explained that member checks (respondent validation) contribute to the credibility of the report, researcher reflexivity, and the goal of uncovering participants' true meanings.

Although researchers may encourage participants to edit inaccuracies to achieve more accurate representations of their realities, case study researchers do not promise participants that they will include their edits in the final study report. Member checking allowed me to establish the validity of findings by questioning participants about the parallelism between their perspectives and my interpretative analysis (Creswell, 2012;

Koelsch, 2013). Member check results also permitted me to review the credibility and accuracy of the meaning I assigned to participant responses.

To further buttress the accuracy, credibility, and impartiality of the data, I documented my reflections from initiation of the study to the presentation of the findings (Bogdan & Biklen, 2007; Creswell, 2012). I placed interpretive comments on my reflective thought processes, the development of my own constructions, and my opinions of emergent themes and patterns (Shenton, 2004) in the far-right column of the data analysis table to minimize biased analysis and reporting. I included reflective commentary on the effectiveness of data collection techniques as Shenton (2004) suggested. Demonstrating minimized biases and accounting for any biases and how they may have influenced conclusions and interpretations increase the trustworthiness and validity of data.

The fact that I completed qualitative research courses and have acquired an understanding of qualitative data collection and analysis also enhances the trustworthiness of the data. However, I incorporated other strategies to further reinforce the trustworthiness of the data. Probing and iterative questioning during interviews allowed me to detect, correct, and eliminate any inaccuracies or discrepancies in participant responses (Shenton, 2004). Writing detailed notes of participant performance and nonverbal behaviors during interviews added more trust in the data collection process. Further, using the semistructured interview protocol I developed to interview each participant allowed for consistency and believability in themes and patterns. Affording participants the opportunity to participate voluntarily and triangulating data across sources (Lincoln & Guba, 1985; Shenton, 2004) also increased data

trustworthiness. Further, my knowledge of the organizational culture within the research sites prior to data collection may increase readers' trust in the data and my interpretative conclusions. Listening to the interview tapes assigned to transcribers to ensure accuracy of transcription and conducting an audit trail to track each step in the research study (Lincoln & Guba, 1985; Shenton, 2004) may add value to the study's believability.

Ensuring that I provided sufficient details of not only the phenomena under study but also the research context (Shenton, 2004) may increase trustworthiness via transparency. Further, my use of well-established research methods and systematic data collection may promote trust. Also, analyzing each response from each participant separately without making any assumptions allowed me to find the true meaning the data provided and negative case analysis allowed me to establish consistency across themes, patterns, data, and findings.

Occasionally, data that researchers obtain during a study may not support preliminary conclusions. During triangulation, I did not discover any conflicting perspectives from participants. Therefore, reexamining discrepant data rigorously, to determine whether I would retain or modify research findings as Rumrill et al. (2011) proposed was not necessary. I remained diligent in examining the potential for discrepant data to avoid premature dismissal of applicable data that did not fit into existing conclusions (Rumrill et al., 2011). Given that there were no differences to resolve, I did not have to decide whether to describe the differences as unique to a certain person, group, or site as Lodico et al. (2010) explained nor whether I would report those differences in my findings.

Limitations

Research limitations are weaknesses within any study's design (Creswell, 2012; Punch, 2006). Punch (2006) stressed that researchers should describe drawbacks in the research and establish the importance of the research study notwithstanding the existence of imperfections. The purpose of pinpointing shortcomings goes beyond the mere "limitations" label by extending the knowledge of the study in question and similar studies. Further, recognizing constraints allows readers to determine the extent of the usefulness and generalizability of the findings to their unique situations and settings (Creswell, 2012).

Practitioners who engage in research are practitioner-researchers (Jarvis, 1999). Considering my role as a practitioner-researcher, the most inherent weak point of this study was in the explanation Jarvis (1999) provided. Jarvis (1999) explained that practitioner-researchers are most likely going to research problems within their practice settings. Inevitably, the extent of practice-based research is significantly more limited than research outside of the researcher's practice setting. Further, the "entrapment" (p. 46) that Stake (1995) described amplifies when practitioners probe responses with questions that the participants may not have thought about previously. Despite these inadequacies, the uniqueness of practice where each person's practice differed (Jarvis, 1999) validated the location of this research study. Also, the best route for practitioners researching within their practice is through singular cases (Jarvis, 1999) as was the case with this qualitative, exploratory collective case study.

Justifying the small sample size of 12 participants may be difficult, even though a small sample size is a typical characteristic of collective case studies (Stake, 1995).

Further, research findings may be labelled as subjective and as not meeting the minimum standards for generalization and reliability in scientific studies (Stake, 1995) as demonstrated in controlled, experimental studies. However, redundancy and saturation of data was achieved, validating the sufficiency of the sample size. Further, Bogdan and Biklen (2007) explained that not all qualitative researchers focus on generalizability or have the same expectations regarding reliability as those engaged in quantitative research. My focus within this study was not on establishing generalization across paraprofessionals on the regional level and beyond, or reliability across researchers and studies, but rather on producing an objective study on the subjective perspectives of study participants (Bogdan & Biklen, 2007).

Moreover, the generalizability limits of case studies are typical because case study researchers study a single case or a few cases. However, as Stake (1995) explained, case study researchers study cases to find their full meanings, which typically facilitates a repetition of codes and themes. Therefore, establishing generalizations across repeated data is achievable. Stake further pointed out that the interaction between the case and the researcher is unique and not necessarily replicable for other cases and researchers, especially because the goal of case study research is "particularization, not generalization" (p. 8). Also, case study researchers focus primarily on getting to know a case very well in terms of its unique characteristics and secondarily on how to distinguish the case from other cases (Stake, 1995). The emphasis in case study research is on understanding the case and not on generalizing findings to the entire population. Likewise, my goal in this study was not to generalize the findings from this study to the entire population of paraprofessionals. My goal was to produce a study with interpretive

findings of the ‘what’ and ‘how’ regarding participant perceptions that participants and others value (Stake, 1995) and allow for honest and open listening and reflection by professionals at the local practice sites and beyond.

As explained, the interview was the data collection tool for this qualitative case study. Creswell (2012) noted that a limitation of the interview is that researchers provide information gathered during the interview process through their lens. Further, because I am the sole writer of the research and interview questions and the sole interpreter of the data collected, it is possible that my biases may have impacted my representation of the findings. Also, my professional role as BCBA and LBS may have modified my perceptions when recording and analyzing data, along with my inside knowledge of the status of paraprofessional services at agency schools and locations. However, I remained in continued reflection throughout the study; therefore, any potential for bias in my perceptions was erased. The use of member checks (Creswell, 2012; Koelsch, 2013) curbed the extent of this disadvantage; however, only to the limit of the 67% (8/12) participants who completed and returned the member checks.

Another limitation of the interview is that my presence during the data collection process may have shaped participant responses (Creswell, 2012) because of the Heinsberg observer effect (Bogdan & Biklen, 2007; Cooper, Heron, & Heward, 2007), which may have increased reactivity of the participants to the researcher (Patton, 2002). Participants may not have been entirely open when responding to questions or may have provided responses that (a) they thought I would want to hear, (b) may present the organization with a good image, or (c) may ultimately benefit them. Also, the “entrapment” that Stake (1995, p. 46) discussed is applicable and may have caused

participants to change responses or decide to discontinue participating in the interview. Further, participants may have offered distorted or false representations of their realities based on personal biases, emotions and lack of awareness of the effects of their emotions, political affiliations or beliefs, self-fulfillment, and recall failures (Patton, 2002). However, the tradeoff for these limitations is the fact that qualitative researchers can gather a wealth of information during interviews, such as background information on participant relationships and privy to the nonverbal behaviors participants may display during interviews (Patton, 2002).

As stated, I maintain a direct professional relationship with the agency that I cooperated with the complete this research study. Therefore, my role at the agency may have altered participant responses because of researcher reactivity (Bogdan & Biklen, 2007; Cooper et al., 2012; Creswell, 2012; Patton, 2002) and expectations of professionals in the research setting. My dual role may have also resulted in participants perceiving consequences as likely to occur because of responses or information they provided during interviews. Limitations associated with the purposeful sampling employed in this study and the small sample size are that randomization was nonexistent and not all potential participants agreed to participate in the study.

Within case studies, not all cases are successful, and it is incumbent on the researcher to assess cases promptly to determine progress and decide whether to continue with the case or drop the case and select another (Stake, 1995). Not all participants in the purposeful sample participated in the study, resulting in only one paraprofessional participating in the study, which limited the data that could have been gathered from paraprofessionals. Although participants electing not to participate in the study could be

the result of several factors, it is possible that participants chose not to participate in the study because of my dual role as researcher and administrator and their status as employees or contractors within the research setting.

Even though I notified participants that I would use pseudonyms in the report and keep all information confidential, my role within the research setting may have manipulated participants' responses to questions. In terms of confidentiality, some participants chose to notify other participants and in some cases their supervisors, of their participation in the study. This disclosure of participant information to other participants or staff at the sites was not the result of actions of the researcher, but that of the participants themselves. The participatory disclosure may have resulted in participants discussing the interview process, which may have influenced their responses.

Because of the nature of qualitative research, the speed of adding any potential information to the scientific literature base is slow and arguably controversial (Stake, 1995), which limits any payoff in terms of enhancement of education and social science. Ethical and privacy risks, costs, and time heighten with any qualitative study when compared to quantitative options (Stake, 1995). Despite these limitations, the problem and purpose of the study support the study's importance, considering the potential contribution to social change within the local practice setting and beyond.

I established myself as a reflective-reflexive practitioner-researcher (Bolton, 2010; Jarvis, 1999; Shepherd & Hasazi, 2011; van Diggelen, den Brok, and Beijaard, 2013) by engaging in a continuous process of documented reflection, self-assessment, and knowledge reconstruction. Reflecting and reflexing permitted me to limit researcher bias and damaging outcomes from my role as researcher. The reflective-reflexive process

allowed me to remain self-aware, neutral, and nonjudgmental, and avoid actions that would have contributed to biased participant responses (Lodico et al., 2010). As Lodico et al. (2010) recommended, I listened actively and objectively, limiting my presuppositions to uncover the true meanings of the participants' expressions. Based on Stake's (1995) recommendation for qualitative case study researchers, I referenced and included my personal perspectives when reporting my interpretive analysis of the data.

Scope and Delimitations

The scope and delimitations of any study establish the study's boundaries (i.e., what the researcher includes in and omits from the study). Delimitations describe the populations or constructs to which findings may be generalized (e.g., the sample and data analysis; Locke, Spirduso, & Silverman, 1993). Specifying the range and restrictions of the study is critical because of the potential to avoid reader misunderstanding (Punch, 2006). The confines of this study are limited to the knowledge and implementation of strategies to sustain the implementation of EBP by paraprofessionals and the supervision and training they receive from special education teachers, within the five schools included in this study. The limits of this study include a purposeful, homogeneous sample comprised of six special education administrators, five special education teachers, and one special education paraprofessional who provide special education services at five local schools.

Data Analysis Results

Introduction

The social constructivist theoretical basis of this study was based on the belief that phenomena within educational environments are not only compound. but also

intertwined with contextual factors within the given setting and influence paraprofessional implementation of EBP for special education students (Lodico et al., 2010). Based on an underlying desire to understand the phenomena under investigation in this study within the context-specific perspectives of the participants, the social constructivist approach aligned with the focus of the study. The focus of the inquiry within this study was to gain an understanding of special education administrators', teachers', and paraprofessionals' perspectives on paraprofessionals' implementation of EBP and EBP training for paraprofessionals. The research questions within this study addressed the *'what*' and *'how'* of participant perspectives on paraprofessionals and paraprofessional training within the context of their school settings.

Using a qualitative exploratory case study design, exploratory data analysis, open and thematic coding, and constant comparison, I identified themes as the basis for answering the questions posed in this study.

Results of Data Analysis

The results of the qualitative data analysis are discussed in the following sections: (a) Data Analysis Review, (b) Findings: Themes, (c) Quality of Data Analysis, Findings, and Report, (d) Outcomes, and (e) Conclusion.

Data Analysis Review

During data analysis, I examined the perspectives of special education administrators, teachers, and paraprofessionals on paraprofessional implementation of EBP for special education students. I analyzed perception data to determine contextual factors within the school setting that participants identified as affecting paraprofessional implementation of EBP and participants' beliefs on how these factors influenced

paraprofessional implementation of EBP for special education students. The study sample included six special education administrators, five special education teachers, and one special education paraprofessional. The following three research questions guided participant interviews:

1. What are special education administrators', teachers', and paraprofessionals' perspectives on the status of paraprofessional preparation and training within the context of current sociocultural conditions in the workplace?
2. What are the perceptions of special education administrators, teachers, and paraprofessionals on the need for training to improve the effectiveness of paraprofessionals?
3. How do special education administrators and teachers perceive the role of experience, preparation, and training on paraprofessionals' implementation of EBP?

Data from each participant's response to each research question were included in the data analysis. The qualitative data analysis for this study included an exploratory, thematic, open coding procedure (Creswell, 2012). All interviews were transcribed using Word software and printed. Then, I analyzed the printed data by hand and searched participants' responses for major themes that related to paraprofessional implementation of EBP. I organized each participant's response for each question in tables with rows and columns. Thematic coding, the result of constant comparison, allowed me to discover similar and repeated beliefs that linked to the research questions (Creswell, 2012).

I continued the thematic coding and analysis process by creating a coding tree with the research question at the root and new topics as the branches, grouping similar

perspectives in clusters. Once I coded all interviews, I revisited and reexamined the data multiple times to reorganize and regroup perceptions. I highlighted repeated text within the transcribed interviews, categorized each repetitive segment, and used repeated themes to form conceptualizations as Creswell (2012) recommended. I continued the process of coding and recoding data throughout the data analysis and report writing processes to facilitate rich and thick data interpretation via constant comparisons. able

Based on the inductive style of constant comparison, I found, coded, and grouped specific indicators into broad concepts and categories (Bogdan and Biklen, 2007; Creswell, 2012; Leech & Onwuegbuzie, 2007; Wright et al., 2004). I listed emergent themes, clustered repeated concepts, then labeled similar topics as themes (Creswell, 2012). I used color-coded highlights to distinguish broad codes. I placed questions, probes, answers, codes, premises, and ideas in designated columns within tables for each interview. I assigned an abbreviation to each coding and subcoding category to allow memorization of the coding system and ease the coding and analysis processes. I used primary findings to guide subsequent analysis and establish the previous corroboration of meaning within the data. I reviewed the transcripts and coding results multiple times to assure completeness of data analysis and confirm that assertions and coded categories related to each other and the guiding research questions.

During data analysis, I analyzed themes across each individual participant, the role of each participant, and the school where each participant was employed. This analytical method facilitated the process of data triangulation to strengthen the validity of this study by allowing me to compare the perspectives of different participants and groups (Lodico et al., 2010) during the data analysis process. Triangulation facilitated

corroboration of data across different participants (Creswell, 2012) such as teachers and paraprofessionals. During triangulation, I compared, contrasted, and cross-referenced data obtained from various sources, including multiple participants, to preserve accuracy of data interpretation. Triangulating data from multiple participants across multiple settings fortified the validity of the data because data from multiple sources allowed me to develop to a fuller understanding of the phenomena under study (Bogdan & Biklen, 2007).

Triangulation also allowed me to minimize erroneous interpretation and conclusions, and maximize the comparison of my experiences and results to those included in the literature (Rumrill et al., 2011). During triangulation, I examined and reexamined each information source and found confirming data for all arguments. Extracting information from multiple sources of information or processes encouraged me to develop a report laced with accuracy and credibility (Creswell, 2012). As Creswell (2012) recommended, I used the labeled data with the most repetitions as the data themes that provided answers to the research questions.

Findings: Themes

I gathered, summarized, and grouped all qualitative data into one main theme—Organizational Contexts of EBP Implementation—based on the overarching salience of the theme throughout each participant's response.

Theme 1: Organizational contexts of EBP implementation. The overarchingly salient theme of the responses of each participant was contextual factors within the school settings. Reflected in the views of participants on organizational contexts of EBP implementation was the repetitive participant perspective of EBP as environmentally

contextual. This salient theme in participants' views on the contextual application of EBP was reflected in their responses. An administrator at School D said, "EBP would be science merging with education." Another administrator from School B stated that EBP are strategies "that we can use with several different students but individualized to their needs." In these sample responses, participants alluded to the role of context in the application of EBP.

Responses were consistent with Hudson et al.'s (2016) finding and recommendation to consider contextual variables that may influence EBP. Hudson et al.'s finding is also consistent with the conceptual framework of this study and Slocum et al.'s (2014) definition of EBP. Also, participants' beliefs support the views of Giangreco et al. (2011), Giangreco et al. (2012), Klingner et al. (2013), and Maggin et al. (2012) that practitioners must account for contextual factors when selecting EBP. Four specific, major subthemes were evident in the data, which are all characteristics of organizational contexts within an educational organization:

1. Resources for EBP implementation,
2. Intrinsic attributes of professionals implementing EBP,
3. Extrinsic attributes of professionals implementing EBP, and

   Acknowledging and valuing the role and importance of paraprofessionals tasked with implementing EBP.

Theme 1.1: Resources for EBP implementation. Participants focused repeatedly on the role of resources in the implementation of EBP by paraprofessionals. These resources were cited repeatedly across participants and form the salient minor subthemes of the Resources for EBP Implementation major subtheme. Each of the following themes

was repeated constantly throughout the data and across the different participant roles and school locations. Each theme represents the various perspectives of special education administrators, teachers, and paraprofessionals on the implementation of EBP by paraprofessionals in special education settings. These themes support Aarons and Palinkas' (2007) finding that practitioners who were members of a culture of administrative support were more likely to implement EBP. Participants' responses contributed to the discovery of this salient Resources for EBP Implementation theme. An administrator at School D stated, "There's a lack of support and resources. Being in this position now, I don't have the resources." A special education administrator at School B offered the following explanation:

> Well, our Director is very knowledgeable about the program. If you are in our program and you are a new paraprofessional that would come in, I would recommend her as a good resource because she has trained all of us, but there are other resources around here that can help you. The teachers are good resources but if [the teacher is] kind [of] new as well, and not sure, then you have somebody likes me that comes in as the supervisor for the class, and then the Director. We have a lot of social workers and liaisons. We have a lot of people here that know the program that can help.

The following Resources for EBP Implementation form the minor subthemes (smaller themes that relate to the broader themes) of Theme 1.1:

- Time (1.1.1),
- Money/Cost (1.1.2),
- Attrition (1.1.3),

- Training and Preparation (1.1.4),
- Culture: Organizational and Social (1.1.5),
- Professional Status (1.1.6),
- Expectations (1.1.7),
- Staff Input (1.1.8),
- "WH" Explanations (1.1.9), and
- Consequences (1.1.10).

Theme 1.1.1: Time. The limited availability of time for training, preparation, and review of paraprofessionals' implementation of EBP limits the extent to which special education paraprofessionals implement EBP. An administrator at School B stated "I think training is vital and, unfortunately, I think folks that get left out of the trainings are the paraprofessionals. Part of that is, I think, because of time." Another administrator at School B said:

> Time set aside…when you can just say, "okay let's walk through a day. Let's see what it looks like…this is what you would be doing, this is what I would be doing, this is what I need you to be doing." Where there's no rush, you know, and then time after that where there are stopping points where you can say, "How are we doing?" "What happened today?" "What can we do better?" and we can all agree when this child does this we're all going to do this…Also a time where they can reflect too and say, "How do you feel?" "Do you feel good?" "Do you feel like you're successful?" "Do you feel I'm asking too much of you?" "Is it, just right?" "Is there stuff that you need training [on]?"

Theme 1.1.2: Money/Cost. Financial resources determine the extent to which special education paraprofessionals received advanced training and support in EBP. Where financial resources are limited, training and support are also limited, and consequently, paraprofessionals do not receive the training required to implement EBP effectively and consistently. A teacher at School B stated, "Unfortunately, I think here it would be cost. I think cost and time are still the major factors in this type of setting because it's hard here." An administrator at School A said, "I feel like it's worth it for agencies to compensate a paraprofessional for being on board in a class or in a school for one or two days."

Theme 1.1.3:Attrition. Loss of paraprofessionals during the school year results in new paraprofessionals in the middle of the school year. Therefore, paraprofessionals who begin in the middle of the school year do not receive training available to those paraprofessionals who are assigned and available at the beginning of the school year. A teacher at School B expressed her views on attrition when she stated, "The trouble with…paraprofessionals here is that it always seems like they are moving in and out."

Theme 1.1.4: Training and preparation. Training and preparation of teachers and paraprofessionals was an extremely salient and repeated theme across all participants, roles, and settings. Participants explained that professionals who train paraprofessionals must possess the requisite knowledge and understanding of EBP to train others on EBP. Professionals who are versed and experienced in EBP are not always available.

Overwhelmingly, participants explained that training on EBP should be relevant and relatable to their context-specific needs, and must be meaningful, practical, and valuable to the paraprofessionals. Some of the context-specific needs they cited

repeatedly include students, teachers, paraprofessionals, families, school settings, current and future needs, and curricula. In terms of context-specific needs, participants believed that the training they receive should be relevant to their needs within their everyday contexts. For example, they believed that the design, structure, and content of their training should align with students' characteristics and needs. Several participants mentioned that tell-show-do trainings were more likely to meet their needs than lecture-based, didactic training.

Participants perceived that training and preparatory activities on EBP should involve case-study examples based on actual students. They also discussed the need for training and preparation that allow them to interact, access multiple modes of learning, participate in question and answer activities, and engage in hands-on, real-time practice with actual students and colleagues. Participants also explained that both preliminary and ongoing training on EBP are needed to improve paraprofessional implementation of EBP. In addition, participants noted that most paraprofessionals were unable to prepare mentally or physically prior to supporting students with special needs.

Repeatedly, participants articulated their views that EBP training within their schools and classrooms need to focus on EBP that are most likely to work in their setting, when all the context-specific criteria they cited are considered. However, participants also explained that materials, tools, and resources that are necessary for context-specific EBP within their schools must be available. Also, they emphasized that trainers should use materials, tools, and resources that allow trainees to link empirical evidence to the practical application of the EBP within the context of their school settings simultaneously and conversely.

Participants expressed that they believed that the training process on EBP implementation for paraprofessionals should follow a tell-show-do approach, and that teachers should facilitate this process prior to paraprofessionals providing services to special education students. Participants cited the importance of a variety of methods during the training process such as observing, shadowing, and practicing (e.g., practicing data collection).

Regarding follow-up and feedback, participants explained that feedback from EBP training should take multiple forms (e.g., immediate (i.e., in-vivo), delayed (i.e., post training), written, verbal, face-to-face). Participants added that feedback, support, monitoring, and coaching should continue to occur posttraining on a consistent, ongoing basis. Participants noted that follow-up and feedback will foster continuous improvement, learning, and understanding.

With respect to consistency, one thought conveyed repeatedly across all participants, roles, and school locations was the need for teachers and paraprofessionals to attend professional development sessions on EBP together. Participants explained that presently and for most trainings, teachers and paraprofessionals do not attend the same trainings. Paraprofessionals are unable to attend together with teachers because they remain in the classroom to cover for teachers who attend trainings during the school day. Participants reasoned that when teachers and paraprofessionals attend trainings together, they obtain the same knowledge and are more equipped to coimplement the targeted EBP and support each other in the implementation of the EBP, if the EBP aligns with the context-specific needs of the setting.

Overwhelmingly, participants noted their beliefs on the duration (e.g., one day versus two days or one week) and structure (e.g., didactic versus interactive, or one-to-one versus small group versus large group) and compensation (i.e., paid or unpaid) as they pertain to the attendance, participation, and positive perspectives of attendees. Participants indicated that trainings on EBP are less meaningful and decrease attendance and participation when they were very long in duration, minimally interactive, and unpaid.

An administrator at School A stated, "It's worth it for agencies to provide…training or to be able to compensate a paraprofessional." Another administrator at School D expressed her views when she stated, "I feel like training is hand-in-hand with support. There's such a lack of support so that means there's a lack of training. There's a lack of support and lack of resources." A different administrator at School A stated, "I think training is vital and, unfortunately, I think folks that get left out of the trainings are the paraprofessionals." A teacher from School B said,

> I think that training is a big part. The ideal para[professional] is…you walk into the room and you're not able to tell the difference [between the teacher and the paraprofessional]. How [would this occur] if they don't have the training? Training is extremely important. It's tough because unless you're an [employee] you get the [site-based] trainings and if you're a [contractor], you don't get those trainings.

Another teacher at School B added,

> I think that we offer opportunities for training experiences and I wish they would find a way to offer them to paraprofessionals as well. If the paraprofessionals

> were also trained…it would be a lot less stressful for the teachers. We don't have time to sit down, especially in the middle of the year when a new person starts, to teach them the proper way to do all these things so I think…if they were offered to [paraprofessionals] as well it would be a lot more helpful.

These perspectives supported literature regarding paraprofessional training and preparation. Landrum, Cook, Tankersley, and Fitzgerald (2002) found that teachers rated workshops and in-service programs higher than they rated journals because of usability, accessibility, relevance, and believability. Researchers also found that paraprofessionals do not receive the training and support necessary to fulfill the paraprofessional role and implement EBP (Brock & Carter, 2015; Chopra & Westland, 2015; Douglas et al., 2013; Douglas et al., 2016). Greenway et al. (2013) found that the changing perspectives of practitioners can aid in the development of plans to revolutionize implementation of EBP for students with disabilities.

Hudson et al. (2016) explained that special education leaders must consider the perspectives of special education practitioners in terms of the implementation of EBP by special education paraprofessionals. Johnson et al. (2014) found that teachers who had the opportunity to communicate preferred EBP for their trainings acquired the practice sooner and demonstrated greater consistency and quality once individual coaching ended. Klingner et al. (2013) pointed out that foci of supportive professional development include contextual sociocultural school conditions such as collaboration among professionals within CoP, opportunities for active learning among professionals, instructional materials, and administrative support.

Theme 1.1.5: Culture: Organizational and social. All participants expressed their beliefs that the informal and formal culture within their respective schools play a role in paraprofessional implementation of EBP for special education students. Participants indicated that as an aspect of culture, communication among teachers, paraprofessionals, and transdisciplinary team members is critical for the implementation of EBP. An honest, supportive, collaborative, and collegial team approach where paraprofessionals are viewed as partners, included in all aspects of educational programming, particularly discussions on select EBP, and where teachers and paraprofessionals are supported by administrative personnel, may boost the implementation of EBP by paraprofessionals. Bergan and Kratochwill (1990) and Kratochwill and Bergan (1990) discussed the importance of collegiality in consultative relationships such as those that exist in classroom multidisciplinary teams and between teachers and paraprofessionals. In these relationships, each member should be viewed with "his or her own special expertise that can be applied to problem resolutions" (Kratochwill and Bergan, 1990, p. 30).

Interview responses also indicated that informal cultures such as those formed by the existence of veteran paraprofessionals with position seniority influences the likelihood of the teacher providing EBP training and support. This occurs either because of the fear that the teacher may be rejected for attempting to introduce new ideas and change the status quo or because customarily, veteran staff implement historical strategies instead of EBP.

Participants also explained their beliefs that aspects of the formal school culture (e.g., curriculum, mandated trainings, meetings) decrease the implementation of EBP by special education staff and their availability for and participation in EBP training.

Aspects of the social culture relevant to the local school community (e.g., socioeconomic status, tight-knit families and relatives, influence of family and community members, sociocultural conditions such as urban versus rural settings) influence the likelihood of paraprofessionals implementing EBP during the school day. An administrator at School D stated, "I think what's important is cultural factors…socioeconomic factors…how you were raised." Another administrator at School C expressed her views when she said, "I think the setting, whether you're in a rural setting, an urban setting, [is] a huge aspect…because when you are implementing EBP…it might not fall in line with the family culture."

This finding is consistent with the literature and the theoretical framework of this study. The overarching conceptual approach guiding this study is social constructivism. Barnes (2016) found contextual sociocultural conditions impacted professional development. Harn et al. (2013) explained that cogitation about contextual sociocultural conditions is necessary for developing and establishing flexibility of fidelity, a prerequisite of sustainable practice. In fact, Harn et al. purported that adapting the EBP to fit within the educational context may be the better alternative than presenting a cookie-cutter EBP gathered from research. In their 2010 study, Swain et al. (2010) found that 88% of sites that demonstrated sustainability of practice matched the practices to their contexts, including other practices, population, culture, and staffing. Klingner et al. (2013) explained that practitioners and researchers must collaborate to classify the contextual supports for promoting sustainability of EBP. When developing their sociocultural framework, Hudson et al. (2016) acknowledged the effects of contextual sociocultural conditions on practitioner perspectives pertinent to EBP. Peck and

McDonald (2014) explained that implementation of EBP requires a fervent understanding of the complex, intricate interchanges between organizational contextual factors.

Flexibility of fidelity refers to the adaptation of treatments to (a) accommodate the students' strengths and weaknesses, (b) promote ownership, sustainability, and applicability across multiple contexts, and (c) avoid rigidity (Coleman et al., 2012; Hamilton et al., 2008; Harn et al., 2013; Steinbrecher et al., 2015; Sulkowski et al., 2011). One cannot promote the enhancement of practitioner knowledge and EBP within a given setting without devoting any thought to the motivating values of the practitioners and the contexts within which they display those values.

Theme 1.1.6: Professional status. This theme was repeated by every participant in the study. Participants explained their perceptions that the professional status of paraprofessionals influenced their implementation of EBP and their participation in trainings on EBP. Compared to employed school paraprofessionals, contractual paraprofessionals are less likely to attend EBP trainings and prepare to implement EBP during the school day. They are not compensated to attend trainings, to participate in prep time, or for any increase in service time above and beyond what is specified in the IEP (e.g., prepping before the student arrives at school or following up with teachers after the students leave at the end of their school day). Further, their contractual status limits the level of authority teachers may apply (e.g., administering discipline for tardiness and irregularity or requiring completion of certain tasks (e.g., prep before the students arrive). An administrator at School A stated, "I mean, they [contracted paraprofessionals] have to hit the ground running when they come to school so unless they do something at home, which realistically they're not and that's okay, there isn't a lot of prep time." A teacher at

School B added, “It’s tough because unless you’re an [employee] you get the [site-based] trainings and if you’re a [contractor], you don’t get those trainings.”

Theme 1.1.7: Expectations. Participants believed that in terms of paraprofessional implementation of EBP, the existence and discussion of expectations are indicated. Participants explained that expectations need to be stated clearly and consistently. Further, they must be realistic, and align with the contextual needs and circumstances, and staff within their schools. An administrator at School C stated, “The expectation in my mind for teachers in higher. The expectation is that [paraprofessionals] are functioning as classroom teachers but that’s not [who] they are. They’re the [paraprofessionals].”

These findings are consistent with the literature. Brown and Stanton-Chapman (2017) and Allen and Ashbaker (2004) found that paraprofessional expectations depend on the context or setting. Burgess and Mayes (2009) found that paraprofessionals believed their responsibilities were clearly assigned. Brown and Stanton-Chapman and Appl (2006) found that because paraprofessionals are expected to be part of the students’ team, expectations must be stated and explained clearly to maximize the likelihood that they will be met. Brown and Stanton-Chapman added that paraprofessionals must also feel valued and comfortable with the expectations to achieve mastery.

Theme 1.1.8: Staff input. Participants explained their beliefs that when input from teachers and paraprofessional is sought during the development and design of EBP, the training is more likely to match their contextual needs. They are also more likely to participate in the training and implement the strategies discussed. Further, participants reported that current trainings are not designed specifically for paraprofessionals. They

recommended that future trainings should cater to paraprofessionals, their roles and expectations, and the overarching requirement to implement EBP. An administrator at School A stated, "I feel like if we were able to provide a more in-depth preliminary training for [paraprofessionals], they would understand why we want their perspectives."

These participant beliefs support the literature on the importance of considering staff perspectives when designing training on EBP. Aarons and Palinkas (2007) found that when the EBP is more acceptable to the practitioner, the probability of EBP implementation peaks. Da Fonte and Capizzi (2015) explained that failure to account for paraprofessional perspectives may have contributed to the inconsistency and inaccuracy in paraprofessional implementation of EBP.

Theme 1.1.9: "WH" explanations. Participants deemed paraprofessional training as focused on the "what" and not on the "why" or "how." They clarified that if they are told what EBP to implement, they are not told "why" a strategy is selected for the student or "how" it is practical within their school settings and their classroom teams. Participants believed that providing basic 'WH' explanations may increase paraprofessionals' understanding of the EBP, why it is necessary, how it meets the needs of the student and the team, their implementation of the EBP, and the effectiveness of their implementation. A teacher at School D said, "[I am] trying to orient her more with why it's important."

Theme 1.1.10: Consequences. Participants expressed the lack of consequences for EBP implementation or the lack thereof. Consistent with basic principles of behavior and the field of Applied Behavior Analysis (Cooper et al., 2007), participants believed that the incorporation of consequences (e.g., positive or negative reinforcement) may

influence the implementation of EBP by paraprofessionals and their participation in EBP training. A teacher at school A stated, “I could be on my phone [during the entire training] and nothing would happen.” An administrator at School C said, “I train you on something and say this is how I want this implemented then nobody ever comes back until six months later. It has to be more consistent and ongoing.”

Theme 1.2: Intrinsic attributes of professionals (teachers and paras) implementing EBP. All participants focused on the role of intrinsic attitudes in the implementation of EBP by paraprofessionals. The attributes that participants cited repeatedly follow and form the salient minor subthemes of the major subtheme. Each of the following themes were repeatedly constantly throughout the data and across the different participant roles and school locations. However, the most salient minor subtheme was motivation and morale. Each theme represents the various perspectives of special education administrators, teachers, and paraprofessionals on the implementation of EBP by paraprofessionals in special education settings.

The following Intrinsic Attributes of Professionals (Teachers and Paras) Implementing EBP form the minor subthemes of Theme 1.2:

- Motivation, morale, confidence, interest, initiative, and willingness (1.2.1),
- Attitudes, beliefs, perceptions, open-mindedness, and mindfulness (1.2.2),
- Commitment and investment (1.2.3), and
- Reflective and reflexive dispositions (1.2.4).

Theme 1.2.1: Motivation, morale, confidence, interest, initiative, and willingness. Participants believed that teachers and paraprofessionals with high motivation, morale, confidence, interest, and exemplary initiative are more likely to provide EBP training to

paraprofessionals and to implement EBP, respectively. Likewise, participants also believed that paraprofessionals who are more willing to seek help, obtain enhanced explanations, and improve their knowledge, are more likely to implement EBP and participate in EBP training, even when unpaid. The paraprofessional at School B stated, "I think it all depends on the person and [that person's] motivation to do and their will to help the children." A teacher at School D stated, "I think motivation also has a lot to do with it. I also think that the motivation you have to want to learn and become more experienced also has a big [role]." Similarly, a teacher at School A said, "It was tough because the motivation to be better…was not there. There [was] not that motivation to do good or move forward. If you're not self-motivated then [you're] getting nowhere."

This finding supports the literature. Aarons and Palinkas (2007) found that practitioner motivation influenced EBP implementation.

Theme 1.2.2: Attitudes, beliefs, perceptions, perspectives, open-mindedness, and mindfulness. Participants perceived that teachers with positive attitudes, beliefs, perceptions, and perspectives are more likely to provide EBP training to paraprofessionals and to implement EBP respectively. Participants expressed the same views regarding teachers and paraprofessionals who are open-minded toward EBP and who are mindful of the effects of EBP training and implementation. An administrator at School D stated, "I actually just ran into a situation with a specific teacher who doesn't believe in planned ignoring. It could be that person's belief system."

Theme 1.2.3: Commitment and investment. Participants expressed their views that teachers and paraprofessionals whose value systems and contextual needs are considered when designing EBP training and selecting EBP are more likely to be committed to and

vested in EBP training and implementation. Participants explained that their beliefs were based on the increased likelihood that context-based training and EBP would be implemented successfully. Thus, the implementation behavior of the paraprofessionals and the likelihood that paraprofessionals would continue to implement the selected EBP and other selected EBP in the future, increases. A teacher at School D stated, "It does require commitment" and an administrator at School C said, "I'm pretty committed to being in [this city] and serving kids in [this city]."

This finding supports the literature on contextual considerations. Aarons and Palinkas (2007) found that the suitability of the EBP to the needs of the recipients increased the likelihood of implementation. The authors also found that the outcomes of EBP within the given setting impacted the sustained implementation of EBP.

Theme 1.2.4: Reflective and reflexive dispositions. Participants voiced their beliefs on the importance of reflective-reflexive practice. Teachers and paraprofessionals who reflect on and respond to the results of their reflections consistently, may be more likely to provide EBP training and implement EBP. A teacher at School E stated, "They can reflect too and say, "How do you feel?" "Do you feel like you're successful?" "Do you feel I'm asking too much of you?" "Is [this] just right?" "[Are] there [concepts] that you need training on?" At School B, an administrator said, "[You] reflect and think about what you could have done differently. Next time, you try to do it differently [after taking the time to] sit back and reflect. Reflection, I think, is a big part." A teacher at School D stated, "It all leads back to the…person who's receiving that training and feedback and their reflective thinking about it." Another administrator from School C said, "I think if there's time to just be able to step back and look…and do some kind of self-assessment:

These are the things I do well in. It's also being honest with what my strengths and what your strengths are."

These findings highlight the importance of Slocum et al.'s (2014) explanation that contextual fit, including the characteristics of those charged with implementing EBP should be considered because the successful implementation of the EBP and the larger plan may depend not only on the skills but also on the attributes of the implementers. Slocum et al. further explained that plans for EBP that do not consider the values or reinforcement of those implementing the plan may be implemented without fidelity and may not be maintained. The reinforcement the participants described is consistent with the basic behavior analytic principle of positive reinforcement (Cooper et al., 2007; Slocum et al., 2014). Bolton (2010) and Shepherd & Hasazi (2011) expressed the importance of practitioners developing themselves as reflective-reflexive practitioners and being supported in their efforts.

Theme 1.3: Extrinsic attributes of professionals (teachers and paras) implementing EBP. This theme was salient in the data. Participants focused consistently on the role of extrinsic attitudes in the implementation of EBP by paraprofessionals. They believed that the skills, knowledge, expertise, and education of the teachers and paraprofessionals impact the quality of EBP training and implementation by teachers and paraprofessionals directly. This perspective was evident in the depth of the responses participants with more advanced skills, knowledge, expertise, and experience provided when compared to those with less advanced qualifications.

Participants believed the background, upbringing, and educational status of teachers and paraprofessionals directly influenced their delivery of EBP training and their

implementation of EBP. They explained that the credibility of teachers with respect to EBP increases paraprofessional desire and motivation to implement EBP. An administrator at School D stated, "It's about how long someone has been doing something. I feel like you receive different types of training from experience." The paraprofessional at School B stated, "The trainings that we get here are pretty proficient as far as what we need in the classroom. I believe the trainers are trained…so they learn it first and then they teach it to us."

These findings support the literature. Aarons and Palinkas (2007) found that practitioners were more likely to implement EBP if their perceptions of the trainers were positive. Landrum et al. (2002) found that teachers were more apt to trust information when the sources understood their needs and challenges. French (1997) explained that the skills of the special education teachers impact paraprofessional competency directly. Teachers' supervision skills, ability to provide training, and their recognition of the distinction between teacher and paraprofessional roles determine this effect.

Although teachers are ultimately responsible for supervising paraprofessionals, many lack the skills needed to provide practical supervisory support to paraprofessionals (French, 1997; Brock et al., 2014; Jimenez, Mims, & Browder, 2012; Steinbrecher et al., 2015). Teachers lack required skills because they receive limited or no training on how to supervise paraprofessionals efficaciously (French, 1997; Gable et al., 2012). Further, teachers expressed low self-confidence in their abilities to supervise paraprofessionals (Brock et al., 2014; French & Chopra, 2006). Brock et al. (2014) found that teachers have minimal interest in improving their ability to implement EBP or increasing their use of

EBP. Others lack knowledge of EBP and are unaware of the breadth and depth of EBP (Torres et al., 2012/2014).

Theme 1.4: Acknowledging and valuing the role and importance of paraprofessionals as partners tasked with implementing EBP. Reflected in the view of participants on the meaning and role of paraprofessionals was the overwhelmingly repetitive participant perspective of paraprofessionals as partners. This salient theme in their views of the meaning and role of paraprofessionals as partners was reflected in the responses of special education administrators, teachers, and the paraprofessional and indicated in the following sample responses. An administrator at School A stated, "I really try to emphasize that there needs to be a team approach so that they have an understanding that we're all here working together." Another administrator at School B stated, "The teachers also need to share responsibility for classroom tasks." A teacher at School A stated, "Their role currently in my room is pretty much doing the exact same thing that I would do or the way that I like to describe it is to be an extension of me." A teacher at School E stated, "I know that it's important to treat them as equals regardless of their educational status." The paraprofessional at School B said, "We all run this classroom on a family basis."

Participants focused consistently on the role of partnership in the implementation of EBP by paraprofessionals. These themes that were repeated across participants follow, and form the salient minor subthemes of the major subtheme. Each of the following themes were repeatedly constantly throughout the data and across the different participant roles and school locations. However, the most salient minor subtheme was the partnership that should exist between teachers and paraprofessionals. Each theme

represents the various perspectives of special education administrators, teachers, and paraprofessionals on the implementation of EBP by paraprofessionals in special education settings. The following aspects of Acknowledging and Valuing the Role and Importance of Paraprofessionals as Partners Tasked With Implementing EBP form the minor subthemes of Theme 1.4: (a) Partnership and Acknowledgement (1.4.1) and (b) Respect, Recognition, and Value (1.4.2).

Theme 1.4.1: Partnership and acknowledgement. Participants expressed their beliefs that teachers should treat paraprofessionals as partners in the special education process. Teachers should include paraprofessionals in decision-making processes by soliciting their input and considering their contributions. Participants also believed that teachers should be flexible in their consideration of EBP and special education programming to allow room for paraprofessional recommendations. They also explained that teachers should remain open to paraprofessional suggestions. Participants expressed their views that paraprofessionals may feel more valued and may be more likely to implement the EBP recommendations of special education if teachers consider their views and opinions.

An administrator at School B stated, “We need to be a team because if we are not a team it is not going to work.” A teacher at School D said, “When paraprofessional[s] come into my classroom, they’re apart of the class. They’re apart of the team so it’s not just they’re [people] that [are] working with that one student.” An administrator at School C stated, “I think a team approach to working [is important].” Another administrator at School E said, “They’re a really big part of the team and I think they need to be treated more like that.” An administrator at School A stated, “We really do emphasize a team

approach. I think [it's] important that we do things together as a team and understand where everyone comes from." An administrator at School B offered the following insight into her perspectives: "Everybody tries to work as a team here. Paraprofessionals are expected to be team players in the classrooms. We need to be a team because if we're not a team it's not going to work."

The findings from these responses are consistent with findings in the literature. Johnson et al. (2014) found that incorporating practitioner preference when developing training intensifies results. Consistent with the theoretical framework of this study and ESSA's recommendations, Annland et al. (2001), Goe and Matlach (2014), OPI (2012), and NEA (2005) recommended that paraprofessional training designed and offered by school districts focus on collaborative relationships. Chopra et al. (2004) found that paraprofessionals view themselves as liaisons between the student's home and school. Other researchers found paraprofessionals act as bridges between teachers and students, minimizing alienation (Genzuk, 1997; Goe & Matlach, 2014; Rueda & DeNeve, 1999; Wenger et al., 2004). Ghere and York-Barr (2007) found that positive organizational culture and teaming promote a respectful, collaborative, and outcome-based atmosphere. Ghere and York-Barr also found that providing opportunities for paraprofessionals to offer suggestions increases job satisfaction among paraprofessionals and lowers their rate of turnover.

Brown and Stanton-Chapman (2017) noted that paraprofessionals and teachers have similar responsibilities. The difference between teachers and paraprofessionals is in the execution of those responsibilities based on the students' needs, tasks, and outcomes, and the specific context or setting in question. The authors found a dually connected

interplay between paraprofessional motivation, teachers' acceptance of paraprofessionals, and their willingness to allow them to assume increased responsibility. Brown and Stanton-Chapman also found that the context and setting in question play a role in what practitioners perceive to be the responsibilities of paraprofessionals.

Theme 1.4.2: Respect, recognition, and value. Participants perceived the role, recognition, and value of paraprofessionals as important factors in their implementation of EBP. They believed that all paraprofessionals should be respected and recognized for their influential roles and their skills should be valued. They also thought that special education teachers and administrators should consider the fact that most paraprofessionals are underpaid, untrained, and often asked to fill in for classroom teachers without additional compensations. An administrator at School B expressed the following: "The paraprofessionals are the folks that are working with the students all day long." Another administrator at School B stated, "Paraprofessionals in a lot of cases hold the class together so I think that they need to be respected more. They need to be given more credit." An administrator at School A stated, "They're not objects. They're not food. It's really important when we value that. If they feel that they're valued I think that they might feel better about what they do." A teacher at School E stated, "I think we need to value and be careful to honor [paraprofessionals] regardless of their educational status and just appreciate them."

The findings from these responses are consistent with findings in the literature. In their 2012 study, Jones, Ratcliff, Sheehan, and Hunt reported that paraprofessionals revealed they performed more tasks than teachers credited them for completing and engaged in more positive relationships with their assigned students than their teachers

reported. Jones et al. (2012) also reported that paraprofessionals rated the feedback they received from teachers as meaningful whereas teachers reported paraprofessionals were not receptive to their feedback. Findings from surveys Fisher and Pleasants (2012) administered revealed that paraprofessionals reported the primary factors for their job dissatisfaction included lack of (a) respect from peers, (b) acknowledgment of their achievements, (c) active membership within their teams, and (d) collaborative organizational acculturation.

Consistent with the conceptual framework of this study and echoing the recommendations of ESSA (2015), paraprofessionals who are valued as members of a professional team build relationships with members of their schools and communities (Chopra et al., 2004; Sandoval-Lucero, 2006). Research has shown that paraprofessionals often express lack of respect and appreciation and that educators continue to require them to perform mundane tasks instead of providing instructional support that aligns with their expanded roles (Chopra et al., 2004; Hughes & Valle-Riestra, 2008; Riggs & Mueller, 2001; Rueda & DeNeve, 1999; Sandoval-Lucero, 2006). ESSA (2015) empowers paraprofessionals to develop self-advocacy and self-efficacy by commanding respect and expanding their roles.

Brown and Stanton-Chapman (2017) found that a power dynamic exists in teacher-paraprofessional relationships where paraprofessionals believe they are subservient to teachers and often work to appease the teacher instead of focusing on meeting the needs of the student. This relationship dynamic often differs based on the specific context or setting in question. Consistent with findings within the current and previous studies, Brown and Stanton-Chapman found that views of paraprofessional job

satisfaction are influenced by contextual factors. For example, whereas paraprofessionals reported job dissatisfaction due to the absence of teacher recognition and low monetary compensation, teachers reported that positive aspects of the profession such as high teacher praise should outweigh the low monetary compensation and therefore, paraprofessionals should be highly satisfied with their jobs.

This finding may be the result of contextual factors because typically, teachers acquire more advanced tertiary education and more advanced postgraduate experiences than paraprofessionals. The finding may also be the result of positional effect—the teacher and paraprofessionals are in two different professional positions. Thus, based on their experiences, teachers' perspectives and thought patterns may differ from those of paraprofessionals. Similarly, the fact that teachers and paraprofessionals have distinctly competing views on the occurrence or lack thereof of teacher appreciation, praise, recognition, and the conceptualization of paraprofessional job satisfaction may be the result of contextual, situational, and positional factors.

Quality of Data Analysis, Findings, and Report

In this qualitative, exploratory case study, I implemented the methodological procedures described previously in this report to maintain the quality of the study and ensure the study was aligned with IRB approval. Consistent with the IRB-approved methodological procedures, I secured 12 participants via purposeful sampling, completed a one-on-one audio-recorded interview with each participant, and transcribed each interview verbatim with the assistance of two IRB-approved transcribers.

I analyzed the content of participant responses using exploratory analysis; open, thematic coding; and constant comparison. I continued to employ constant comparison

methods throughout the data analysis and report writing processes to facilitate rich and thick data interpretation. Ongoing review of the research procedures employed in this study and the review and editing of the research report by the scholars on my doctoral committee boosted the quality of the findings and the reporting of the results of this study.

I triangulated data by comparing perspectives across participants, as Bogdan and Biklen (2010) and Lodico et al. (2010) recommended, and to findings in the literature, consistent with the recommendations of Rumrill et al. (2011). Several salient and repetitive themes emerged but no discrepant cases were identified. The quality of the findings in this study is further enhanced by the completion of member checks. I initiated the member check process with the 12 participants included in the study. Eight (67%) participants completed the member check process. Summarily, participants agreed with my interpretations of their responses. Two of the eight participants who completed and returned the member checks noted two minor errors in my interpretations: one error related to the educational setting where the participant previously worked and the other error related to the duration of time that students attend the school where the participant works.

Outcomes

The purpose of this exploratory, qualitative case study was to explore the perspectives of special education administrators, teachers, and paraprofessionals as they relate to paraprofessional implementation of EBP and EBP training for paraprofessionals. Through open, thematic coding and ongoing constant comparison of data themes, the overarchingly salient emergent theme was organizational contexts of EBP

implementation. Four major subthemes emerged: (a) resources for EBP implementation, (b) intrinsic attributes of professionals implementing EBP, (c) extrinsic attributes of professionals implementing EBP, and (d) acknowledging and valuing the role and importance of paraprofessionals tasked with implementing EBP. Several minor subthemes also emerged, which have been identified in the *Data Analysis* section of this report.

The results of the study showed that special education administrators, teachers, and paraprofessionals were all concerned and aware of the problem in this study. They acknowledged the existence of the problem in their settings and perceived the subpar implementation of EBP by special education paraprofessionals who support special education students as due largely to socioeconomic variables in their school settings. Findings revealed corroboration between participants' responses and the literature. Overwhelmingly, interviews revealed that all participants believed paraprofessionals are unequipped to support special education students and incorporate EBP, mostly because of the absence of or inadequacy in trainings systems, where organizational sociocultural conditions play a major role. Secondarily, this study revealed that the perspectives of special education administrators, teachers, and paraprofessionals revolve around resource availability, intrinsic and extrinsic attributes of special education professionals, and the contributory value of paraprofessionals and their roles. The research questions for this study shape the analysis of data and the findings that emerged from this exploratory, qualitative case study. Answers to each research question follow.

What Are Special Education Administrators', Teachers', and Paraprofessionals' Perspectives on the Status of Paraprofessional Preparation and Training Within the Context of Current Sociocultural Conditions in the Workplace?

As stated throughout this report, paraprofessionals are often the primary support system for special education students (Fisher & Pleasants, 2012) and part of special education instructional teams (Giangreco et al., 2010). CEC (2015) expects organizations will provide the training and support that paraprofessionals require. However, what resonates throughout this study is the finding Fisher and Pleasants (2012) reported: "The least qualified staff are teaching students with the most complex learning characteristics and in some cases with little oversight or direction" (p. 288). Other researchers (Chopra & Westland, 2015; Douglas, McNaughton, et al., 2013) have reported similar findings, which was the driving problem in this study.

Qualitative findings agree with the status of paraprofessionals' implementation of EBP for special education students and EBP training for paraprofessionals. Further, the qualitative findings highlight the imminent need for training and support of paraprofessionals assigned to provide services to special education students. In terms of the status of paraprofessional preparation and training, participants stated that paraprofessionals are unprepared, lack the requisite skills and knowledge, and do not receive adequate training. Participants also indicated that this status is the result of sociocultural and contextual conditions that exist within their respective schools.

Of the 12 participants interviewed, 10 indicated that typically, paraprofessionals assigned to provide services to students in their schools do not possess the requisite knowledge and skills necessary for them to be prepared to support special education

students. These 10 participants included special education administrators and teachers across all five schools included in this study. In terms of the status of paraprofessional training, nine of the 12 participants indicated that paraprofessionals do not receive the requisite training prior to beginning to provide services and supports to special education students. These nine participants included special education administrators and teachers across all five schools included in this study.

In considering the current sociocultural conditions within the workplace, all 12 participants cited their workplace contextual conditions as significant determinants of the current norm where paraprofessionals do not have the requisite skills to be prepared to support special education students and do not receive the requisite training to provide services to special education students. Participants cited contextual conditions such as time, availability of personnel support, knowledge of the current needs of their students and school teams, professional status, team-orientation, level of communication, teacher preparedness, individual motivation, expectations, and compensation, as influencing the status of paraprofessional preparation and training in their current school systems. For example, teachers do not have the time to provide the training—which paraprofessionals should have received prior to beginning to provide services—during the school day or school year when they are consumed with providing special instruction to their students.

Research findings also revealed that the limited training that paraprofessionals receive after they begin fulfilling their roles, do not focus on EBP. Rather, the focus of training is on the information the paraprofessional needs to *survive* in the specific classroom setting and to provide the services and supports outlined in the IEP of the student to whom the paraprofessional is assigned. Furthermore, participant responses

revealed that currently, training sessions provided to paraprofessionals who are employed by their schools (most paraprofessionals are contracted) focus on the needs of the school setting and mandatory trainings that align with school policies and procedures, such as safety care training, instead of EBP, and are insufficient to prepare paraprofessionals to fulfill their roles.

What Are the Perceptions of Special Education Administrators, Teachers, and Paraprofessionals on the Need for Training to Improve the Effectiveness of Paraprofessionals?

As indicated throughout this report, failure to train paraprofessionals violates IDEA Part B (2004) directly. Often, training content does not meet IDEA's mandates (Brock & Carter, 2015; Chopra & Westland, 2015). Also, special education teachers are unprepared to oversee paraprofessionals (Brock et al., 2014; French, 1997; Hall, 2015; Steinbrecher, Fix, Mahal, Serna, & McKeown, 2015). To solve this problem, local administrators must lead change in paraprofessional training. Without change, paraprofessionals will remain unequipped to support special education students (Da Fonte & Capizzi, 2015; Giangreco et al., 2003; Griffin-Shirley & Matlock, 2004; Rispoli et al., 2011; Tompkins et al., 2012) and student outcomes may be impacted negatively (Feldman & Matos, 2013; Harper et al., 2008; Murphy et al., 2011). Further, paraprofessionals cannot support special education teachers withoug training (Da Fonte & Capizzi, 2015; Bingham et al., 2007; Douglas et al., 2013; Feldman & Matos, 2013; O' Keefe, Slocum, & Magnusson, 2013; Rispoli et al., 2011; Tompkins et al., 2012). Giangreco et al. (2001), Rispoli et al. (2011), and Tompkins et al. (2012) concurred that access to FAPE in the LRE warrants paraprofessional training.

Qualitative findings agree with the literature. Congruence was noted in all participants' responses in that they indicated that the need for preliminary and ongoing training to improve the effectiveness of paraprofessionals is immediate. Whereas all participants noted the need for training is imminent, similarities and differences existed in the perspectives of participants relevant to training paraprofessionals. Four administrators and one teacher from three of the five schools included in the study mentioned the need for preliminary training prior to paraprofessionals beginning to support special education students. Seven participants (administrators, teachers, and paraprofessionals representing all five schools included in the study) stressed the need for varied training modalities to be incorporated into training development and design to accommodate the different learning styles of trainees. Four participants (administrators, teachers, and paraprofessionals from three of the five schools included in the study) accentuated the need for teachers, and employed and contracted paraprofessionals to attend trainings together. Nine participants (administrators and teachers representing all five schools included in this study) highlighted the need for training to relate to the needs of the staff, school, and students and consider the contextual conditions within the school and classrooms. Five participants (administrators, teachers, and paraprofessionals) illuminated the appropriateness of the number of people participating in the training at the same time (e.g., one-on-one, small or large group) and the duration of the training (e.g., hours, days, weeks). Six participants (administrators and teachers from four of the five schools included in the study) underscored the importance of feedback, follow-up, coaching, and support.

These findings further indicate the need for a professional development project focused on training paraprofessionals, teachers, and administrators on EBP and training and supporting paraprofessionals in providing evidence-based services and supports to special education students. Findings from this study will be used to develop a comprehensive training project that aligns with PCCG and based on the implementation of EBP. It is the expectation of CEC (2015) that agencies conform with the requirement that paraprofessionals working with students with disabilities master the knowledge and skills described in PCCG (CEC, 2015).

Agencies must provide paraprofessionals with continued training and professional development opportunities that match their expected knowledge and skills. In developing the project, I will incorporate participant perspectives, apply social constructivism—the theoretical foundation of this study—Slocum et al.'s (2014) definition of EBP, contextual factors, and available resources. The project will align with Chopra et al. (2011) "grow your own" (p. 23) programs, where school personnel train paraprofessionals. The extant research supports the development of a training project for paraprofessionals targeting EBP and based on the findings of this study (Brock & Carter, 2015; Brock et al., 2014; Chopra & Westland, 2015; French, 1997; Hall, 2015; Steinbrecher et al., 2015).

I envision that professionals on the local and broader levels will gain new knowledge from the findings of the study either through direct participation in the project or by reading this study and the project details. The results from this study will provide leaders at the local study sites with invaluable insight into the needs of paraprofessionals. This insight will most likely catalyze social change by addressing the local problem, improving the services that paraprofessionals provide via an expansion of their

comprehension and use of EBP, and expanding collaboration among teachers, paraprofessionals, administrators, and other transdisciplinary team members. In terms of sociocultural conditions, all participants indicated that these conditions influence the need for paraprofessional training in their current school environments. Sociocultural conditions include availability of time, money, resources, and administrative support; paraprofessional professional status, compensation, valuation, motivation, background skills, knowledge, and education level; funding; and attrition.

How Do Special Education Administrators and Teachers Perceive the Role of Experience, Preparation, and Training on Paraprofessionals' Implementation of EBP?

At the core of any research study is its theoretical framework. As indicated throughout this study, several researchers applied the social constructivist framework in their studies (Barnes, 2016; Harn et al., 2013; Hudson et al., 2010; Klingner et al., 2013; Peck & McDonald, 2014; Swain et al., 2010; Webster-Stratton et al., 2011). Cumulatively, their studies have shown that sociocultural conditions play meaningful roles in the outcomes of students, paraprofessionals, teachers, administrators, schools, and districts.

The qualitive research findings in this study support the literature. Interview responses revealed that participants perceived the role of experience, preparation, and training on paraprofessionals' implementation of EBP as catalytic in linking research and theoretical explanations to practice and practical applications. Research provides empirical validation and explanation for the 'what' and 'why' of EBP. Experience, preparation, and training offer the applied evidence that adds the 'how' to the 'what' and

the ‘why’ in the ‘WH’ chain of grounding, contextually-relevant, theoretical and practical applications of EBP in everyday settings.

Participants believed that experience, preparation, and training provide (a) the applied practice necessary to obtain a comprehensive understanding of the EBP and (b), the reflective practice to understand and appreciate the full meaning of the EBP, the importance of effective and consistent implementation, and the value of EBP. The focus of their value-laced views was on the educational growth and development of special education students and the continuous professional learning, growth, improvement, and development of special education professionals. Participants perceived that experience, preparation, and training play significant roles in the acknowledgment and value special education professionals apply to paraprofessionals. They hold this view largely because of their beliefs that paraprofessionals who feel acknowledged, valued, respected, and included are more likely to implement the EBP recommendations of their classroom teachers. Eight participants (administrators and teachers employed at the five schools included in the study) expressed these views explicitly and collectively.

Participants also alluded to the impact of sociocultural factors on the role of experience, preparation, and training on paraprofessionals’ implementation of EBP. Specifically, nine participants (administrators and teachers from four of the five schools included in the study) held those views. At the forefront of sociocultural factors that participants cited as influential in EBP implementation by paraprofessionals, were (a) motivation, (b) willingness to implement the EBP, (c) the relevance of the EBP to contextual conditions, (d) the respect and value afforded to paraprofessionals by colleagues in their assigned schools and classrooms, (e) paraprofessionals’ confidence in

implementing the EBP, and (d) the cultural, social, educational, professional, and experiential backgrounds of the paraprofessionals.

Conclusion

My goal in completing this exploratory, qualitative case study was to understand the perspectives of special education administrators, teachers, and paraprofessionals on paraprofessionals' implementation of EBP and the status of EBP training for paraprofessionals in their local school settings. The findings from this study may decrease the research-to-practice gap (Cook & Odom, 2013) through the implementation of the recommended professional development project and the initiation of the problem-solving process based on participant perspectives, participant perceptions, and socioculturalism.

Collectively, the overarching theme, the four major subthemes, and all minor subthemes aligned with the three research questions posed in this study and confirmed findings in previous research and preliminary information received from professionals at the research sites during the prospectus and proposal phases of this study. Findings from this study also provided insight into the status of affairs and the professional development needs of special education administrators, teachers, and paraprofessionals providing special education services to special education students.

Conducting the interviews allowed not only for an in-depth understanding of the perspectives of special education administrators, teachers, and paraprofessionals on the implementation of EBP by special education paraprofessionals but also an intimate understanding of how meaningful this study was to participants because of its relevance to their current needs and its potential to stimulate social change in their schools. An

administrator at School A stated, “Well, it was very convicting and now I feel like I really have a lot of work to do and that’s good. I feel like it’s important.” A teacher at School A said, “It’s nice to definitely get a teacher’s perspective.” Another administrator at School D noted, “It’s really eye opening because we might have to make some changes.”

The combined results of the exhaustive review of the literature for this study and preliminary information I obtained by communicating with special educators employed at the research sites indicated the existence of a research-practice gap in paraprofessional implementation of EBP and the training that is vital to EBP realization. The review of the literature also revealed that the individualized perceptions of educators relevant to paraprofessional implementation of EBP and the status of training for paraprofessionals on EBP might differ. However, the theme that remained consistently germane throughout the study is this that paraprofessional implementation of EBP by paraprofessionals do not equate with the requirements outlined in federal and state law based largely on insufficient or ineffective training. Therefore, the review of the literature and the existence of this problem in the local research setting justified the need for this study and underscored the findings that triggered the recommendation of problem-solving alternatives.

Answering the questions I posed in this study, required consideration and understanding of the role of contextual factors in paraprofessional implementation of EBP and the variance that existed in EBP training standards and expectations. It is incumbent upon educators responsible for imparting the knowledge required to live successfully and independently, to commit to delivering instruction in a manner that is authentic, transformational, and contextually-appropriate. Understanding the perspectives

of educators, therefore, is a critical component of achieving this feat. Moreover, the findings of this study could solidify this achievement and social change.

The potential of this qualitative, collective case study to stimulate social change is unquestionable. In addition to extending the existing literature, this study provides researchers with suggestions for future investigations and information on the current state of paraprofessional implementation of EBP and the training they do or do not receive. Further, it is expected that the knowledge needed to solve or decrease the intensity of the problem within the parameters of contextual constraints and resources will transfer from the sample of participants to others within the population. This qualitative, exploratory case study facilitated the gathering of rich, detailed information, via interviews, on participant perspectives on paraprofessionals' implementation of EBP and the status of EBP training for paraprofessionals. Data collection and analysis informed an invaluable problem-solving project, based on emergent themes, that may produce social change at the local and broader levels. Accounting for participant perspectives and contextual factors further reveals the astronomical nature of the potential for social change.

To delve into the perspectives of participants as they relate to the research questions in this study, I will proceed with presenting the findings and my interpretations of the results in the remaining paragraphs of Section 2. In Section 3, I will describe a project that data might inform and likely social change outcomes. Subsequently in Section 4, I will review my reflections and conclusions; strengths and limitations of the study; and implications, applications, and directions for future research.

The congruence between the findings of this study and those from the literature review is evident. Both research and practitioners highlighted the need for supporting all

special education paraprofessionals in improving and extending their knowledge and application of EBP in special education settings. The findings of the current and previous studies emphasize the need for extending special education training and support to paraprofessionals assigned to provide evidence-based services and supports to special education students. Considering the pivotal role that paraprofessionals play in the lives of special education students throughout their academic careers, this need cannot be understated and should not be overlooked. Special education practitionersincluding administrators, teachers, paraprofessionals, and researchers—must gain an intricate understanding of the needs of paraprofessionals who are expected to implement EBP and take the necessary steps to produce social change to address the problem addressed in this research study.

The most critical outcome from this study is the local application and the data-based professional development project that is recommended for the local setting to initiate the problem-solving process. As Ashbaker and Morgan (2006), Brown and Stanton-Chapman (2017), Giangreco et al. (2001), and Klingner and Boardman (2011) explained, unlike most studies in special education that employ research methods that do not include the best tools for solving the ‘complicated issues in schools’, this study utilized a methodological approach within the local setting that meshed with the needs of the local setting. Further, findings obtained from professionals in the local setting based on their multiple meanings and perspectives informed the recommended professional development project. The data-based application increases the likelihood that the project will be meaningful to practitioners in the local setting, implemented by practitioners, and

produce not only positive outcomes in the local setting but also social change in the broad field.

Section 3: The Project

Introduction

Fisher and Pleasants (2012) explained that "the least qualified staff are teaching students with the most complex learning characteristics and in some cases with little oversight or direction" (p. 288). Further, Chopra and Westland (2015) and Douglas, McNaughton, et al. (2013) found that paraprofessionals do not get the training and professional development they need to become qualified to implement EBP, which was the driving problem in this study. Despite these data, Brock and Carter (2015) reported that paraprofessionals' implementation of EBP is limited and integrity levels are inconsistent because of a lack of adequate training.

Paraprofessionals' lack of training, poor EBP implementation, and minimal levels of fidelity pose a significant problem. The gap in practice that Brock and Carter (2015) and Chopra and Westland (2015) discussed is also evident at the local level. An administrator at the local site articulated this gap in practice precisely when he discussed the need for the enhanced staffing model he designed to provide additional training to paraprofessionals who provide services to students affiliated with the local study sites.

Ideally, paraprofessionals should receive adequate training and be included as active members of IEP teams as mandated by law. However, the problem explored in this study indicated a gap in practice. Based on an underlying desire to understand the phenomena under investigation in this study within the context-specific perspectives of the participants, I used an exploratory qualitative case study to gain an understanding of special education administrators', teachers', and paraprofessionals' perspectives on paraprofessionals' implementation of EBP and EBP training for paraprofessionals. The

social constructivist approach guided the study and the interviews. I conducted interviews with the 12 participants to understand their perceptions of paraprofessional implementation of EBP for special education students. Phenomena within educational environments are not only compound but also intertwined with contextual factors relevant to the given setting and influence paraprofessionals' implementation of EBP for special education students (Lodico et al., 2010).

Using a qualitative exploratory case study design, exploratory data analysis, open and thematic coding, and constant comparison, I identified themes as the basis for answering the questions posed in this study. Data analysis determined the following main themes relevant to participant perspectives on implementation of EBP by special education paraprofessionals: (a) organizational contexts of EBP implementation, (b) resources for EBP implementation, (c) intrinsic attributes of professionals implementing EBP, (d) extrinsic attributes of professionals implementing EBP, and (e) acknowledging and valuing the role and importance of paraprofessionals tasked with implementing EBP. I used the findings from the study to design a yearlong professional development plan (see Appendix A). The plan focuses on training paraprofessionals to provide quality services, with a focus on EBP.

The goal of this professional development project is to improve paraprofessionals' implementation of EBP and the training, supervision, and support that they need. Once I completed data analysis, I shifted the tasks for this study from analysis to planning and project development. Findings from the study showed that participants were concerned with the current state of paraprofessional support and the needs of the professionals who serve special education students in their schools. Collectively, participants indicated a

need for improvements in paraprofessional support and training. Based on the findings of this study and current literature, the deliverables in this professional development plan will cater to the organizational contexts and situational factors in the local setting. The project will also provide advanced professional knowledge on paraprofessional implementation of EBP and the supports needed for paraprofessionals and teachers. I will incorporate study findings related to resources, attributes, and value perspectives within training content and design.

This section provides a brief description of the project's framework, purpose, goals, learning outcomes, and target audience. It also offers a scholarly rationale for the project linking it to data findings and explaining how it will address the problem. In addition to a literature review relevant to the project, this section contains a description of the project, the plan for evaluating the project, and implications of the project, including those relevant to social change on the local level and beyond. It is expected that the professional development activities within this professional development plan will provide participants with the knowledge and skills needed to improve current performance levels, nurture supportive environments, and stimulate advancement opportunities.

The findings of this study and past research indicate a need for EBP professional development not only for paraprofessionals and teachers, but also administrators (Hudson et al., 2016; Marder & deBettencourt, 2015). The growth and development of paraprofessionals and their ability to implement EBP will remain stunted in the absence of effective and pertinent professional development (Clarke & Visser, 2017). Moreover,

practitioners require continued guidance and support in translating research into practice, which demands ongoing professional development (Purper, VanderPyl, & Juarez, 2016).

Sociocultural theory, which helped to form the grounding framework for this study, lends credence to the proposition that individuals' learning is shaped by their environments and aligns with the basic principles of behavior and ABA approaches (Cooper et al., 2007). To improve EBP, paraprofessional support, teacher supervision of paraprofessionals, and student outcomes, the professional development project's primary focus is preparing paraprofessionals to fulfill their roles and implement EBP.

Brief Description of the Project

Social constructivism, which grounded this study, indicates that individuals construct meaning from their experiences, which include environmental experiences such as trainings (Lodico et al., 2010; Vygotsky, 1978). As specified in the literature review, recent and seminal researchers have pointed out a link between professional development, social constructivism, and contextual variables and have recommended that professional development lead to improvement in EBP, EBP implementation, and paraprofessional support (Brock et al., 2014; Cook, Cook, et al., 2013; Cook et al., 2008; Cook, Tankersley, et al., 2013; Dynarski, 2010; Guerin & de Oliveira Ortolan, 2017; Hudson et al., 2016; Klingner et al., 2013; Sheridan et al., 2009; Slocum et al., 2014). The sum of the findings in the literature and the recommendations provided by researchers led to the development of the professional development project proposed herein.

Although the professional development project is described in detail in the Project Description section (i.e., after the literature review—this section—concludes), a brief

description of the project is being provided in this section to set the stage for the literature review and the full project description. The professional development project will be implemented through 5 full nonconsecutive days of training over a 5-month period, with 1 training day occurring per month. Paraprofessionals will receive coaching for 1 hour weekly during the weeks that elapse between training days. A reflective 4-hour session will occur during the last month of the project (i.e., Month 12).

Along with focusing on EBP, the trainings will incorporate the focus areas required to become a Registered Behavior Technician™ (RBT®), an advanced credential offered to paraprofessionals by the Behavior Analyst Certification Board (BACB). An RBT is a paraprofessional who receives supervision from a BCBA (BACB, n.d.1). The added value for paraprofessionals participating in and completing this training is the opportunity to complete the RBT certification process by passing a competency assessment and applying for the RBT credential from the BACB. In addition to the increased skills and knowledge that RBTs acquire via the training and certification process, RBTs typically earn higher pay than non-RBTs and they receive ongoing supervision from qualified BCBAs, which must include at least two face-to-face contacts per month as required by the BACB (BACB, n.d.2). Therefore, paraprofessionals will automatically receive ongoing behavior-analytic supervision even after the conclusion of the formal professional development project.

Trainings will occur during (a) information sharing and (b) practice and review sessions. Paraprofessionals will participate in the information-sharing sessions, in which knowledge will be shared on (a) their roles, (b) becoming effective and efficient paraprofessionals, and (c) EBP and their implementation. Paraprofessionals and teachers

will also participate in practice and review sessions in which paraprofessionals will summarize knowledge gained and practice skills, with teachers serving as optional mock students. Teachers will be offered the opportunity to volunteer to be mock students; otherwise, paraprofessionals will act as mock students. Teachers will receive copies of training materials for their review and reference and for incorporation within ongoing supervision and support of their assigned paraprofessionals. Coaches will receive initial training on supervising paraprofessionals, along with monthly supervision and support from senior BCBAs. This professional development project is being recommended as a pilot project for one classroom in one of the site schools. The recommendation is for school administrators to continue to roll out this project systematically across each school and classroom after the formal implementation period elapses.

As stated throughout this report, special education laws mandate EBP, and research shows positive change in outcomes when EBP are implemented. However, the gap in practice remains profoundly evident, as indicated throughout interviews and in the literature (Brock & Carter, 2015; Chopra & Westland, 2015; Da Fonte & Capizzi, 2015; Giangreco, Backus, CichoskiKelly, Sherman, & Mavropoulos, 2003; Griffin-Shirley & Matlock, 2004; Rispoli, Neely, Lang, & Ganz, 2011; Tompkins et al., 2012). This gap is particularly evident when one considers the fact that paraprofessionals are often placed to support students with the highest need with little to no training and no conceptualization of the meaning of EBP and the requirement to implement EBP (Fisher & Pleasants, 2012). Therefore, as explained, the focus of the professional development package will be EBP and the role of the paraprofessional.

The implementation of this project will be initiated with a presentation of a summary of the results of this case study and literature review to administrators, contractors, and providers. For this project to be successfully meaningful and for change to occur, collaboration must occur across leaders at all levels (Klingner et al., 2013; Metz et al., 2013; Peterson, 2013) to facilitate a shared understanding of the problem, its effect, and the proposed project aimed at providing a potential remedy. The proposal for the professional development project will be presented to administrators along with an implementation timeline. The implementation timeline is detailed in the full Project Description section. The initiation of this project is dependent on IRB approval.

Professional Development Focus Areas

The foci of this professional development project include factors relevant to the findings of this study and the project literature review. The targeted professional development topics include the following:

- Practice: Conduct, scope, and EBP
    - Resources for EBP implementation
    - Intrinsic attributes of professionals implementing EBP
    - Extrinsic attributes of professionals implementing EBP
    - Acknowledging and valuing the role and importance of paraprofessionals as partners tasked with implementing EBP
- Measurement and assessment
- Skill acquisition
- Behavior reduction
- Documentation and reporting

Professional Development Workshop Goals

The overarching broad goal of this project is to address the problem identified in this study and the areas of need identified during the case study interviews. Further, the goal of this project is to increase awareness of the status of paraprofessional implementation of EBP via the reporting of the findings of the study as an embedded component of the professional development project. Specific primary goals of this project include the following:

1. Share research findings.
2. Offer recommendations for improving professional development designs relevant specifically to EBP and broadly to social change.
3. Increase the knowledge, skills, efficacy, and confidence of paraprofessionals and teachers on EBP.
4. Effect social change, create PLCs, and improve relationships.
5. Obtain and share outcome data.

Rationale for Selecting the Professional Development Project

Of the four project options—evaluation report, curriculum plan, professional development training, and policy recommendation—professional development training was the only option applicable for the current study and its findings. Moreover, the findings from the current study and the literature review indicate and support, respectively, that the most appropriate project for meeting the needs of the special education professionals in the local setting is professional development. Further, study participants indicated an overwhelming need for professional development. The literature also indicated a gap in practice and a need for professional development to improve staff

performance, broaden paraprofessional support and supervision, increase EBP implementation, and expand student outcomes. Many participants indicated that paraprofessionals are unprepared to work with special education students, let alone implement EBP. Others indicated that training is warranted. Further, included in the comprehensive professional development project are recommendations for using untapped resources that would provide great potential for improving the current state of affairs and effecting social change.

The professional development project is proposed not only to address the problem, resolve the issues discovered in the findings, and promote social change, but also to create a cultural atmosphere where paraprofessionals receive the respect and inclusion they deserve. Further, the project is designed to implement the creation of PLCs where individuals share ideas, knowledge, skills, and EBP and learn from each other to continue the advancement of the special education field locally, regionally, nationally, and globally. It is expected that participants would benefit immensely from direct or indirect participation in this professional development project as they increase their knowledge and skills, expand professional relationship circles, access materials and resources on EBP, realize an expansion in their evaluation systems, develop critical thinking and problem-solving skills relevant to EBP implementation and paraprofessional support and supervision, and improve student and staff outcomes.

Review of the Literature

Introduction

As emphasized throughout this report, federal special education laws, such as IDEA (2004) and ESSA (2015), mandate that all special education professionals,

including paraprofessionals, continue to receive professional development. Special education professional development should include EBP foci that have the potential to improve staff performance and student outcomes (Brock et al., 2014; Cook & Odom, 2013; Slavin, 2008). Professional development improves not only paraprofessionals' skills, but also their ability to deescalate problem behaviors (Clarke & Visser, 2017). Further, professional development facilitates progress (Sayeski, 2014) and narrowing of the research-to-practice gap (Cook & Odom, 2013; Sayeski, 2014).

Based on findings in the literature on the impact of sociocultural contexts on the implementation of EBP (Brock et al., 2014; Cook, Cook, et al., 2013; Cook et al., 2008; Cook, Tankersley, et al., 2013; Klingner et al., 2013), professional development designers must ensure that the contextual conditions of the special educators receiving the training are considered. Other researchers have noted that some special education professionals choose to implement practices that align with their contextual needs instead of EBP that have no relation to their situational requirements (Brock et al., 2014; Cook & Cook, 2013; Cook, Tankersley, et al., 2013; Hudson et al., 2016). Although adapting EBP to meet the needs of the group is critical, the adaptations must not be so extreme that they cause the EBP to deviate from the original EBP to a point where benefit is no longer gained or the EBP is unbeneficial or no longer recognizable (Leko, 2015).

Paraprofessionals who are trained and supported are invaluable additions to the IEP teams of special education students (Marder & deBettencourt, 2015). Even more valuable are paraprofessionals who have been trained and continue to be trained in the implementation of EBP (Brown & Devecchi, 2013). Research and findings from this study support these propositions and highlight the need to move away from business-as-

usual one-time workshops and delve into systems of continuous, interactive learning. Moreover, as research and findings indicate, aligning trainings with the organizational context and the perspectives of participants is crucial.

This review of the literature resulted in the following themes, which will be discussed in this section and contribute to the framework of the professional development plan project: (a) Need for Professional Development, (b) The Importance and Role of the Teacher, (c) Student Outcomes, (d) Organizational Contexts of EBP Implementation, (e) Theoretical Applications, (f) Coaching and Consultation, (g) Potential Litigation Avoidance, and (h) Professional Development Model: Effective Professional Development Characteristics Aligned with Participant Perspectives, the Local Context, and Data Analysis Findings. This section will also explain the appropriateness of the project for addressing the problem, present an interconnected analysis of how theory and research support the project, and discuss research efforts.

Need for Professional Development

In 2008, the National Professional Development Center on Inclusion [NPDCI] offered the following definition for professional development:

> Professional development is facilitated teaching and learning experiences that are transactional and designed to support the acquisition of professional knowledge, skills, and dispositions as well as the application of this knowledge in practice. The key components of professional development include: (a) the characteristics and contexts of the learners (i.e., the "who" of professional development, including the characteristics and contexts of the learners and the children and families they serve); (b) content (i.e., the "what" of professional development;

> what professionals should know and be able to do; generally defined by professional competencies, standards, and credentials); and (c) the organization and facilitation of learning experiences (i.e., the "how" of professional development; the approaches, models, or methods used to support self-directed, experientially-oriented learning that is highly relevant to practice). (p. 3)

Several researchers have indicated that professional development on EBP for all special educators is warranted (Alborz, Pearson, Farrell, & Howes, 2009; Azad, Lock, Downey, Xie, & Mandell, 2015; Giangreco, 2009; Hudson et al., 2016; Marder & deBettencourt, 2015). In 1988, Feynmann wrote:

> Scientific knowledge is an enabling power to do either good or bad—but it does not carry instructions on how to use it. Such power has evident value—even though the power may be negated by what one does with it. (p. 2)

Considering Feynmann's (1988) discussion on scientific knowledge, the need for professional development that empowers practitioners to apply scientific knowledge in the absence of implementation instructions is even more apparent. The current absence of adequate professional development and monitoring not only results in inappropriate placements of paraprofessionals, but also bars their ability to progress, develop, and deescalate problem behaviors (Brown & Devecchi, 2013; Clarke & Visser, 2017). Further, even though practitioners within a given setting may have an abundance of resources for implementing EBP, what is often missing is the translation of EBP research into practice (Feynmann, 1988; Purper et al., 2016). Dynarski (2010) explained that if this void continues, the result will be collision between research and practice.

Yoon, Duncan, Lee, Scarloss, and Shapley (2007) reported that studies that included at least 14 hours of professional development influenced student outcomes positively. In support of this finding, O'Keeffe, Slocum, and Magnusson (2013) found that participants did not meet mastery criteria, suggesting that their ability to meet criteria may have improved with an increase in the duration of training. O'Keeffe et al. (2013) found that not only should professional development be designed to meet the needs of the learners, but also cater to their prior learning, knowledge, and experiences. In fact, Cook and Cook (2013), Cook, Tankersley, et al. (2013), and Hudson et al. (2016) found that teachers choose to implement EBP that merge well with their contextual needs. O'Keeffe et al. and Walker and Snell (2017) also noted that the inclusion of an increased number of content examples and training modalities, such as modeling and coaching, improves the effectiveness, efficiency, and outcomes of the professional development plan.

The Importance and Role of the Teacher

Biggs et al. (2016) argued that the intersection of the professional relationships that exist between special education teachers and paraprofessionals is critical to the quality of instruction and support that special education students receive. Therefore, teachers must play an active role in paraprofessional professional development. The involvement of teachers could lead to improvement in the preparedness of paraprofessionals to support special education students. This support from teachers is needed if paraprofessionals are expected to implement EBP with high levels of efficacy (Blatchford, Russel, & Webster, 2012; Jenkins, Vadasy, Firebaugh, & Profilet, 2000). Further, teachers must engage in meaningful and collaborative instructional planning

with paraprofessionals including data collection and problem-solving, quality feedback and encouragement, and reflective practice (Jenkins et al., 2000).

Teacher involvement is even more crucial in situations where paraprofessionals separate students from the teacher, their peers, and curriculum-based group instruction to provide pull-out instructional support (Alborz et al., 2009). Teachers must get to know the paraprofessionals assigned to their classrooms to ensure that they are only assigned to tasks within their scope of comfort, competence, training, and expertise (Harris & Aprile, 2015). However, teachers must receive professional development in EBP so that they are fluent in the support they provide to paraprofessionals relevant to EBP (Sheridan, Edwards, Marvin, & Knoche, 2009). Biggs et al. (2016) found positivity between teachers when their influence was balanced and supportive. Scheeler, Morano, and Lee (2016) investigated the effects of immediate teacher feedback to paraprofessionals via bug-in-ear (BIE) to increase the use of an EBP—contingent specific praise—for two special education teachers and four paraprofessionals. Paraprofessionals increased their delivery of contingent specific praise and maintained high rates post intervention.

Student Outcomes

In 2015, Wong et al. wrote,

> The most important evidence supporting an EBP at the individual student level is the progress the student makes when the EBP is implemented. This places a great responsibility on the practitioner to implement the EBP with fidelity, collect data on child/youth performance, and use the data to evaluate the success of the EBP for meeting the child/youth's goal. (p. 33)

The support that paraprofessionals provide impact student outcomes as Wong et al. (2015) explained. Alborz et al. (2009) echoed the same thoughts regarding the effect of paraprofessional support on student outcomes. Likewise, change in practitioner behavior because of professional development may influence student outcomes (Fetherston & Sturmey, 2014; Ledford, Zimmerman, Harbin, & Ward, 2017). Duncan, Lee, Scarloss, and Shapley (2007) reported that studies that included at least 14 hours of training influenced student outcomes positively.

The support that paraprofessionals provide impacts student outcomes (Alborz et al., 2009), particularly when one considers the very restrictive nature of paraprofessional support (Giangreco, 2009) and the legal requirement to provide FAPE in the LRE (IDEA, 2004). The direction of this impact is determined largely by the quality and extent of professional development paraprofessionals receive. CEC and its Special Interest Divisions emphasized the importance of professional development by recommending practices for improving student outcomes through professional development. For example, the CEC (2015) outlined professional development as the third standard in a total of nine standards that special educators must master to provide effective and ethical professional practice. In its fifth standard, CEC stated that special education professionals must ensure that paraprofessionals receive appropriate professional development.

With the understanding of the effect of paraprofessional support on student outcomes, CEC (2015) included Preparation Standard 6, which focuses on professional development and Professional Learning and Ethical Practice for Special Education Paraprofessionals, in its Specialty Set of Knowledge and Skills for Special Education Paraprofessionals. Similarly, in 2014, the CEC Division for Early Childhood (DEC)

recommended the following practices that align with effective methods for improving student outcomes:

- Teaming and Collaboration for professional development (Recommended Practice TC2);
- Leadership, through which professionals "engage in ongoing evidence-based professional development" (p. 6; Recommended Practice L4);
- Instruction, where professionals use coaching and consultation to promote instruction that promotes student learning and development (Recommended Practice INS13); and
- Interaction, where practitioners promote professional development by implementing strategies such as modeling and guided support (Recommended Practice INT2).

Organizational Contexts of EBP Implementation

As indicated in the findings of this study, organizational contexts of EBP implementation formed the guiding theme of the results of data analysis. Several researchers have explained that professional development must align with contextual variables within the educational settings because alignment determines the success and implementation of the EBP (Brock et al., 2014; Cook, Cook, et al., 2013; Cook et al., 2008; Cook, Tankersley, et al., 2013; Dynarski, 2010; Guerin & de Oliveira Ortolan, 2017; Hudson et al., 2016; Klingner et al., 2013; Sheridan et al., 2009; Slocum et al., 2014).

In 2014, Guerin and Guerin stated, "People living with very different social properties stemming from very different forms of social relationships require very

different analyses and interventions" (p. 78). Guerin and Guerin (2014) added "Analyses of 'mental illness' are only as good as your analysis of the social strategies, contexts and details of life" (p. 78). Likewise, analysis and development of EBP, are only as good as the extent to which they have been aligned with the situational factors within their application settings. However, what continues to occur is a movement of EBP from the research laboratories where they have been developed to the practical contexts where they are to be implemented, without any consideration being given to the contextual settings that may influence EBP implementation (Leugi & Guerin, 2016). Further, research indicates that contextual factors not only influence the implementation of EBP, but also the professional relationships within educational settings and the status and outcomes of professional development (Biggs et al., 2016).

Harris and Aprile (2015) found that contextual factors such as the size of a school may also influence the role of paraprofessionals across different school systems. Domitrovich et al. (2008) and Locke, Kratz, Reisinger, and Mandell (2014) explained that factors within the school setting, such as organizational arrangement, policies, resources, school climate, professional differences, perceptions, attitudes, and even contextual factors at the district level may influence EBP implementation. Therefore, Brown and Devecchi (2013) stated that professional development must be localized and designed to align with factors within the school. O'Keeffe et al. (2013) found that variables such as prior experience and training may dictate the nature of professional development that would best meet the needs of paraprofessionals. O'Keefe et al. suggested that paraprofessionals' experiences prior to participating in the training may have influenced the differential training results across participants.

In their explanation of practice-based coaching (PBC), Snyder, Hemmeter, and Fox (2015) added that trainee intrinsic and extrinsic attributes impact the amount of coaching a paraprofessional requires. Paraprofessionals with long histories of incorrect implementation may require modified training to master, generalize, and maintain skills. At the same time, paraprofessionals with limited experience may require modified training because their responses to training may differ from that of their peers with vast levels of experience. Likewise, different programs and EBP will require different training approaches. Mason et al. (2017) explained that the individualized nature of PBC may alleviate some of the potential problems for training delivery when contextual factors such as differences in paraprofessional education and experience are considered. Similarly, Walker and Snell (2017) found variable implementation results in their study, citing a need for differential training to meet the needs of all participants as a possible confounding variable. Britton, Collins, Ault, and Bausch (2017) also found variable training results, noting that some participants had more extensive learning histories and performed better than participants with less experience.

The CEC (2015) acknowledged the dynamic nature of EBP with its explanation that the intention of the CEC standards is not to impose any specific EBP as this would negate not only the contextual variables that dictate a situational application of EBP within a given setting, but also the collegiality among special education professionals that should be acknowledged, supported, and fostered. In 2004, Novak and Peláez in their dynamic systems approach explained that a multitude of contextual variables and relationships influence behavior. Mason (2009) explained that in order to promote

sustainable development and continuous development within practice settings, these factors must be considered.

Mandell et al. (2013) explained that results of their study suggests that teachers extract aspects of EBP based on the needs of individual students (a contextual variable) and apply them appropriately. The authors noted the existing need to understand teachers' perspectives on selective EBP application based on contextual variables. In terms of professional development, O'Keeffe et al. (2013) added that programs with different instructional characteristics require different professional development packages.

Odom and Haring (1994) provided an extensive explanation of the importance of contextual applications in behavior change processes, such as changing the behavior of special education teams from implementing non-EBP to implementing EBP practices. As Odom and Haring explained, "Contextual factors include cultural variables, family variables, intrachild variables, and immediate environment variables" (p. 97). Similarly, Metz, Halle, Bartley, and Blasberg (2013) and Peterson (2013) explained the importance of establishing a contextual fit between EBP and factors within the implementation setting.

Metz et al. (2013) and Peterson (2013) cited several contextual and organizational factors (e.g., administrative support, staff development, student-teacher ratios, prep time overlap, class size) that must be considered. Odom, Hume, Boyd, and Stabel (2012) explained that within their Evidence-Based, Individualized Program for Students with Autism (EBIPSA) model, they accounted for contextual variables such as collaboration and ecology. Metz et al. and Peterson clarified that resources such as additional costs,

equipment, and materials affect the implementation of EBP. Further, Metz et al. and Peterson added that a commitment to the ongoing availability of resources and support to schedule and conduct ongoing coaching is imperative. Similarly, the National Implementation Research Network (NIRN; n.d.) noted that the effectiveness of coaching depends on a myriad of resource-based factors, such as time, availability, organizational culture, leadership, and staffing.

Mason et al. (2017) reported that effective paraprofessional training models account for contextual variables. However, Mason et al. recognized that contextual variables such as time and qualified personnel limit the ability of districts to move away from stand-alone workshops. Mason et al. explained that the exemplars and questions in the study were directly related to the specific classroom contexts to which the teachers and paraprofessionals were assigned. Hicks, Shahidullah, Carlson, and Palejwala (2014) reported that based on the surveys they administered, psychologists reported that lack of time, resources, money, and inadequate graduate-level training were the most significant barriers to EBP implementation. Based on their findings, Hicks et al. (2014) recommended that training programs include direct instruction in contextual barriers that affect EBP implementation, such as time, resources, and financial constraints.

"An individual's behavior can only be understood in the context of the stimuli that set the occasion for the behavior to occur and the environmental stimuli that increase or support the probability that the behavior will occur again" (Odom & Haring, 1994, p. 91). The focus of ABA is on the functional relationship between an individual's behavior and the environmental variables that occasion the behavior. Therefore, an ABA-based approach requires behavior analysts to focus on the target behavior within the context in

which it occurs instead of as an occurrence separated from the environment (Odom & Haring, 1994). In developing professional development programs focused on EBP, developers must consider the environmental or contextual variables that increase or decrease the probability of the behavior occurring. In this case, the implementation of EBP qualifies as the behavior expected to occur. As Odom and Haring (1994) explained, "a contextualistic perspective may also make behavioral interventions more palatable and acceptable for practitioners" (p. 92). The same is true for EBP and professional development programs focused on EBP implementation. Odom and Haring noted that in early intervention/early childhood special education (EI/ECSE), "factors or variables related to the child may serve as the context or setting events for the type of instruction that the teacher plans" (p. 93). Likewise, contextual variables must be considered when designing and implementing professional development programs to bolster implementation of EBP by special education teams.

Theoretical Applications

Mason (2009) used complexity theory to explain the link between continuous improvement and sustainability. According to complexity theorists, sustained practices occasion a level of complexity that requires ongoing improvement to maintain the effectiveness of the practices. What this means is that when practices are sustained, novel or nonprogrammed events occur with heightened degrees of complexity than when the practices were initially introduced. These inevitable developments require practical improvements, through professional development and continuing education that includes knowledge, application, and implementation for long-term sustenance of the practice.

The focus of complexity theory is on dynamic systems that are in constant interaction with each other and ever-changing. This ongoing change requires continuous improvement through ongoing learning and professional development. The dynamism that Novak and Peláez (2004) described is the essence of the complexity theory that Mason (2009) discussed. The constant reorganization and development of interactions result in continuous improvement through professional development processes that sustain practice efforts. These interactions are the result of a multitude of factors, influences and determinants acting simultaneously and reciprocally. Professional development, which involves multiple directions of outcomes and changes in behavior, may occasion new pathways of implementation. The complexity, nonlinearity, and exponential interconnectedness associated with development and continued improvement, which Mason and Novak and Peláez described, are what fuel and sustain educational practice, as displayed in the Figure 1.

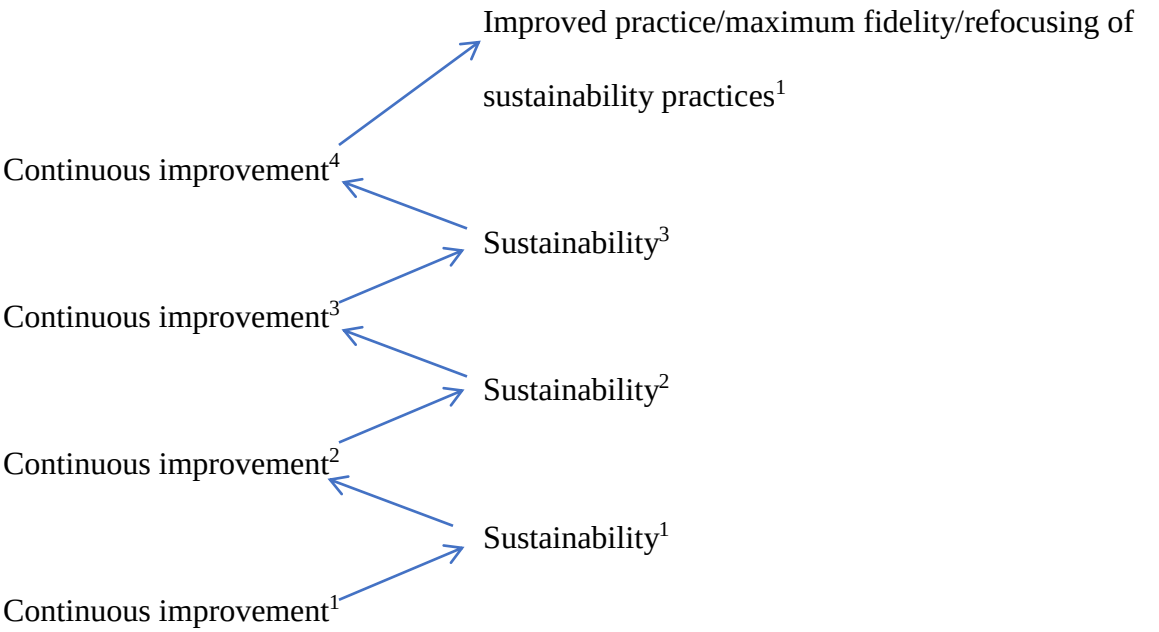

Figure 1. Complexity theory linking continuous improvement and sustainability.

Initially, the change is quantitative, as indicated by the exponents attached to continuous improvement and sustainability in Figure 1. For example, an ongoing coaching process for a newly introduced modification to an EBP based on new research (continuous improvement^{1}) increases the probability of the continuation of the EBP (sustainability^{1}). As coaching continues (continuous improvement^{2}), the continuation of the EBP becomes more and more likely to occur (sustainability^{2}). The continued coaching (continuous improvement^{3}) further increases the likelihood that the EBP would continue to occur (sustainability^{3}). As coaching (continuous improvement^{4}) continues and consistent with the principles of dynamic systems (Novak & Peláez, 2004) and complexity theory (Mason, 2009), the practice being sustained is replaced by a new, emergent behavior, in the form of an improvement in the practice (e.g., higher and sustained levels of fidelity). This stimulates the need for a refocusing of sustainability

practice to support the new levels of fidelity and other new practices that may have been introduced. Thus, the change is no longer quantitative only, but qualitative as well.

Consistent with basic principles of behavior and theories of ABA (Cooper et al., 2007), contextual attributes within a given setting may affect the behavior and behavior change of individuals within the environment and continue to be of utmost application within the field of ABA (Morris, 1998; Odom et al., 2013; Odom & Haring, 1994). As indicated earlier, Mason (2009) explained that based on the premise of complexity theory, practices must continue to be improved to facilitate sustainability. Therefore, EBP must undergo continuous improvement, particularly novel EBP, to meet the needs and skills of implementers and contextual conditions.

The premise of this study was grounded in social constructivism, along with sociocultural theory and situational learning, which emphasize the influence on sociocultural conditions within professional environments, including their influence of professional development, relationships, performance, and EBP implementation (Hudson et al., 2016; Lave & Wenger, 1991; Slocum et al., 2014; Vygotsky, 1978). Radford, Bosanquet, Webster, and Blatchford (2015) applied sociocultural theory in their qualitative study and recommended theoretically-informed professional development. Based on sociocultural theory, Radford et al. (2015) explained in their qualitative study that paraprofessionals' role should be viewed flexibly according to the needs of the learner and the task at hand.

Clarke and Visser (2017) explained that understanding the ability of paraprofessionals to fulfill their roles within their school settings requires an application of sociocultural theory and CoP perspectives. The authors explained that multiple

relationships within CoP result in a myriad of perspectives, which must be considered and understood when addressing the professional development needs of paraprofessionals. As Clarke and Visser stated, "there is more than one version of knowledge, which is contextual and therefore varied. This view of knowledge as context based also fits with the constructionist epistemology chosen" (p. 70).

Spouse (2001) emphasized the importance of understanding and applying humanistic and sociocultural approaches—as was the case in this study—when designing professional development packages. As Barnes (2016), Harn et al. (2013), Klingner et al. (2013), and Spouse explained and as indicated in this study, sociocultural approaches that focus on collaboration and situation-specific factors are more meaningful and beneficial to participants. Within their andragogic approach, Gregson and Sturko (2007) added that professional development can provide meaningful outcomes for teachers when their contextual variables are considered and applied. Informed by sociocultural theory, Radford et al. (2015) explained in their qualitative study that paraprofessionals' role should be viewed flexibly according to the needs of the learner and the task at hand. Gregson and Sturko emphasized that consistent with the literature, professional development for adults should employ andragogic approaches that incorporate the values of respect and positivity; active participation; past and current experiences; collaborative inquiry; immediate application of concepts learned; and empowerment via reflection, action, and transformative learning. Further, collaborative partnerships in professional development are necessary for improving practitioner skills and promoting the sense of community, collegiality, sharing, support, and care consistent with CoP.

Participants in the current study corroborated Spouse's (2001) assertion. As Spouse explained, catering to the context-specific needs of practitioners when developing professional development packages fosters their ability to connect episteme (formal or book knowledge) and phronesis (practical applications). The application of sociocultural theoretical concepts such as those proposed by Vygotksy (1978) and Luria (1974) within the design of professional development packages, stimulate the understanding of the complex contextual conditions within the professional setting, craft professional knowledge, secure readiness to change, and promote reflective practice. As is the case in pedagogy, andragogic approaches require implementation teams to foster effective social interactions with practitioners within the contexts of their settings to promote adult learning. Consistent with the concept of zones of proximal development (Klingner et al., 2013; Vygotsky, 1978), implementation teams scaffold support when they apply their advanced knowledge and experience to support practitioners during implementation via coaching, mentoring, modeling, and feedback (Spouse, 2001).

Spouse (2001) found that the application of these theoretical principles to promote scaffolding within zones of proximal development was the most important factor in the acquisition of professional knowledge and development. Spouse's finding means that implementation teams should recognize not only the capabilities of practitioners, but also their readiness to change (Peterson, 2013) by designing collaborative training and coaching plans that challenge their episteme and extend their phronesis (Spouse, 2001). Also, consistent with sociocultural applications, the findings of this study, and the literature, Spouse acknowledged that the ability of implementation teams to scaffold

knowledge lies in the availability of the resources and social variables that are requisites for social learning.

Stokes and Baer (1977) emphasized the importance of coaching and mentoring as aspects of professional development and their relevance to generalization. They explained that in a train and hope framework, implementation teams hope that generalization and maintenance would occur and do not actively program for generalization and maintenance. As they further explained, successful and sustained implementation requires implementation teams to plan for generalization and maintenance by including components that align with the contextual variables within the natural setting. Supporting this view and relevant to the methodological approach applied to this study, Maxwell (2005) explained that the generalizability of the findings from qualitative studies hinges on the development of a theory that is applicable to and can be extended to other cases. Therefore, designing a professional development plan that is not only based on the results of this study but can be generalized to other professionals (cases) within the setting and applied to other contextual factors within the setting, is critical.

Mason et al. (2017) explained that consistent with basic principles of andragogy theory, the relevance of the training content to the participants' contexts increased the meaningfulness and applicability of the training and the likelihood that training efforts would be sustained. Gregson and Sturko's (2007) andragogic approach to professional development embraced trainees as active versus passive participants. The authors found that when professional development packages align with the basic principles of andragogy, opportunities for reflection, knowledge construction, and peer collaboration

increase. Gregson and Sturko added that trainings that align with andragogy are more likely to result in change in practice. Gregson and Sturko also reported that social validity data revealed participants rated the professional development exercise grounded in andragogy and constructivism as highly effective and recommended that all future professional development packages be rooted in andragogy. This is understandable, because professional development focused on an andragogic framework prioritizes its focus on the learner as opposed to the content because learners are encouraged to integrate knowledge with reflections on their experiences. Further, the expectation is that as teachers experience the art of learner-focused instruction, they will generalize that skill and apply a learner-centered approach to the instruction they provide not only to their students (Gregson & Sturko, 2007), but also to their paraprofessionals.

If we apply differentiated instruction for children within pedagogy, should we not apply differentiation within andragogy when providing instruction to adults? Devlin (2005) explained that within her study, instructional teams were unfamiliar with the andragogic context and training approach. Chu (2014) suggested that coaches and mentors must understand and apply the difference between andragogy and pedagogy. Although pedagogy focuses on instructional practices that align with young learners who have fewer experiences and whose learning adults control, adult learners have accumulated years of experience that must be accounted for in andragogic systems, along with their values, needs, and interests.

Consistent with an andragogic approach, Odom and Haring (1994) explained that contextualistic theorists promote a training approach that embeds real-time learning. Multiple participants in the current study echoed Odom and Haring's explanation when

they stated that they desired to participate in professional development activities that engaged them in hands-on, real-time practice with actual students and colleagues. As Odom and Haring added,

> Professionals in EI/ECSR place a great emphasis on identifying a child's "functional" skills. The term *functional* means that the skills have relevance for the child's life; that is, they will be useful in the current or future context. By sampling the behavioral requirements (for independence and success) of each of these environmental contexts as well as the developmental and behavioral contexts of the child's current skills, teachers, parents, and other professionals may determine skills (acts in context) that could serve as the basis for interventions programs. (p. 94)

In their defense of qualitative approaches and the notion that qualitative research is not generalizable, Lincoln and Guba (1985) argued that "The trouble with generalizations is that they don't apply to particulars" (p. 110) and that "generalizations are assertions of enduring value that are context-free" (p. 110). These assertions provide overwhelming support for the theoretical applications within this study that are being applied to the professional development project and the consistent contention throughout this study and project that a contextual approach is required. Lincoln and Guba explained their argument quite coherently with the following in their fifth chapter quite appropriately titled, The Only Generalization is: There is no Generalization:

> Local conditions, in short, make it impossible to generalize. If there is a "true" generalization, it is that there can be no generalization. And note that the "working hypotheses" are tentative both for the situation in which they are first

> uncovered and for other situations; there are always differences in context from situation to situation, and even the single situation differs over time. It is said that a Chinese philosopher, upon being asked whether it is possible to cross the same river twice, replied that it is not possible to cross the same river even once! Constant flux militates against conclusions that are always and forever true; they can only be said to be true under such conditions and circumstances. (p. 120)

Several other ideas promote the same premise and support the underlying theme of this study and project. As early as 1849, Thomas Chandler Haliburton wrote, "Circumstances alter cases" (p. 136). Cronbach (1975) stated, "When we give proper weight to local conditions, any generalization is a working hypothesis, not a conclusion" (p. 125). Also, Stake (1978) wrote:

> The other kind [naturalistic] is more intuitive, empirical, based on personal direct and vicarious experience. If you want people to understand better than they otherwise might, provide them information in the form in which they usually experience it. They will be able, both tacitly and propositionally, to derive naturalistic generalization that will prove to be useful extensions of their understandings. (p. 120)

Coaching and Consultation

Bergan and Kratochwill (1990) and Kratochwill and Bergan (1990) defined consultation as a collegial, triadic relationship where consultants assist consultees with fulfilling their professional responsibilities within a supportive and collaborative framework. In 2015, CEC acknowledged the importance of this collegiality in its explanation of its avoidance of imposing the application of any specific EBP. An

approach that combines professional development, which embeds consultation, collaboration, and supportive coaching within its design, is imperative for the development of an EBP approach in schools. In 2014, DEC included professional development coaching and consultation in its recommended practices for improving student outcomes.

Stephenson, Carter, and Arthur-Kelly (2011) investigated the use of consultation to support teachers who were not certified in special education but provided instruction to special education students. Within the professional learning intervention, the authors observed the teachers in their classrooms, either live or via video recordings, then provided face-to-face feedback on their use of strategies to increase student communication. Data showed an increase in the number of opportunities teachers provided for students to communicate.

As Novak and Peláez (2004) explained and Mason (2009) reiterated in the nonlinear model of continuous improvement and sustainability, not only does continuous improvement fuel sustainability, but the change produced is exponential, reciprocal, and dynamic. The change that continuous improvement produces in sustainability also modifies the effect that sustainability has on continuous improvement, which in turn changes the effect that continuous improvement has on sustainability, consistent with the explanations that proponents of complexity theory provide.

Potential Litigation Avoidance

As Vaughn and Dammann (2001) explained, special education professionals may violate special education laws and deprive special education students of a scientifically-validated FAPE when they fail to implement EBP. Federal law (ESSA, 2015; IDEA,

2004) mandates the use of EBP and the provision of the requisite training for providing EBP. Yell (2014) offered some recommendations and explanations that could decrease the potential for special education litigation. A focus on improving student outcomes requires EBP, which fall within the only aspect of special education where professionals have primary control—instructional practices (Yell, 2014). However, professional development activities do not consistently focus on EBP (Yell, 2014), opening the doors for potential litigation. Special education professionals must implement EBP and do so with fidelity. Progress monitoring must also occur to determine effects of implementation of the EBP.

Providing professional development that focuses not only on EBP, but on new and emerging research and EBP, may play a role in lessening the likelihood of litigation. IDEA (2004) mandates that the IEP of special education students include:

> A statement of the special education and related services and supplementary aids and services, based on peer-reviewed research to the extent practicable, to be provided to the child, or on behalf of the child, and a statement of the program modifications or supports for school personnel that will be provided for the child. [§614 (d)(1)(A)(i)(IV)]

The U.S. Department of Education (2006) expanded IDEA's (2004) mandate stated above, with the following explanation:

> States, school districts, and school personnel must, therefore, select and use methods that research has shown to be effective, to the extent that methods based on peer-reviewed research are available. This does not mean that the service with the greatest body of research is the service necessarily required for a child to

> receive FAPE. Likewise, there is nothing in the Act to suggest that the failure of a public agency to provide services based on peer-reviewed research would automatically result in a denial of FAPE. The final decision about the special education and related services, and supplementary aids and services that are to be provided to a child must be made by the child's IEP Team based on the child's individual needs. (U.S. Dept. of Ed. *Fed. Register*, Vol. 71, No 156, pp. 46663-4666)

Special education case law speaks to the importance of the implementation of EBP in avoiding or succeeding in EBP litigation. Consistent with the peer-reviewed mandate stipulated by IDEA in 2004, in 2008, the U.S. District Court for the Southern District of Iowa (Waukee Community School District and Heartland Area Education Agency v. Douglas & Eva L., individually and by and on behalf of Isabel L., a child) found that the Waukee Community School District and Heartland Area Education Agency did not provide FAPE in the LRE. This finding included failure to include EBP in the Positive Behavior Support Plan and the subsequent failure to implement EBP as mandated by IDEA (2004) when designing the program of the student in question. Consistent with the expanded explanation provided by the U.S. Department of Education in 2006, in 2012, the Supreme Court of the United States (Ridley School District v. M.R. and J.R., 2012) found that the Ridley School District did not violate IDEA by proposing an EBP curriculum other than the EBP curriculum the parents requested. The basis of the Court's decision was the fact that IDEA requires schools to implement EBP that is most likely to provide meaningful educational benefit (Losinski, Katsiyannis, Balluch, &

White, 2015; Zirkel & Hetrick, 2017), but does not require schools to choose EBP supported by more extensive research (Losinski et al., 2015).

Based on case law and federal mandates, Losinski et al. (2015) recommended that schools continue to promote and implement EBP, such as using research-based assessments and implementing EBP when educating students, especially students with ASD, given the extended requirements to implement EBP for students with ASD. Zirkel and Hetrick (2017) added that it is important for schools to implement EBP with evidence of effectiveness and legally soundness. All the findings from the literature, federal mandates, and case law indicate the immediate need and requirement for professional development focusing on EBP.

Professional Development Model: Effective Professional Development Characteristics Aligned with Participant Perspectives, the Local Context, and Data Analysis Findings

As has been noted herein, researchers have provided a plethora of information on the need for professional development for special education professionals (Alborz et al., 2009; Azad et al., 2015; Brown & Devecchi, 2013; Clarke & Visser, 2017; Feynmann, 1988; Giangreco, 2009; Hudson et al., 2016; Marder & deBettencourt, 2015; Purper et al., 2016). The professional development model aligns with the literature, the views of the participants in this study, the contextual variables within the local settings, and characteristics of effective professional development.

Contextual considerations. The addition of contextual applications within the professional development package is imperative and indicative of an enlightened professional development (EPD) approach (Odom, 2009). To promote the applicability of

the training and motivation to participate in the training, the professional development project aligns with contextual factors. Klingner et al. (2013) pointed out that foci of supportive professional development include contextual sociocultural school conditions such as collaboration among professionals within CoP, opportunities for active learning among professionals, instructional materials, and administrative support. Devlin (2005) pointed out that collaboration, a contextual factor, was further influenced by subcontextual factors, such as prior knowledge, communication, logistics, time, attitudes, and administrative support. However, collaboration occurred across multidisciplinary team members. Walker and Snell (2017) noted that zero to few opportunities for paraprofessionals to provide input in the selection of interventions coupled with the levels of previous training and experience, influenced buy-in and implementation.

Several researchers found that teachers bypass EBP and choose practices that align with their experiences, preferences, and perceptions (Cook & Cook, 2013; Cook, Tankersley, et al., 2013; Hudson et al., 2016). Purper et al. (2016) explained that practitioner perceptions may influence their willingness or resistance to implement EBP. Further, alignment with contextual considerations is a requirement for sustainability and fidelity of practice (McIntosh & Turri, 2014). Also, as McIntosh et al. (2013) explained, the fact that a multitude of resources are required to provide special education services requires professionals to avoid wasting the limited resources that are available. One approach for maximizing resources is to align the professional development and the EBP included therein with situational and contextual factors such as perceptions of priority, effectiveness, efficiency, and continuous regeneration.

In 2017, Kainz and Metz found that EBP was lacking because of an absence of fit between the EBP and the local contexts, lack of knowledge of how and when to adapt EBP to align with local contexts, and research that limited insight into new possibilities for effective practice. Based on their findings, the researchers recommended a new agenda committed to embedding and integrating adaptations to foster effective practice. Harn et al. (2013), Leko (2015), and Odom (2009) stressed the importance of modifying and adapting practices to meet the contextual setting and students' needs, and bolster student outcomes. Ledford, Zimmerman, Harbin, et al. (2017) found that consideration of the context within which behavior change is expected to occur is important. The authors found that differences in variables (e.g., target behavior), trainee extrinsic attributes (e.g., knowledge, skills, experience), and socioeconomic variables (e.g., membership in minority groups and English as a second language) influenced student and trainee behaviors.

Klingner et al. (2013) explained that practitioners and researchers must collaborate to classify contextual supports for promoting sustainability of EBP. Metz et al. (2013) and Peterson (2013) noted that an organizational climate of empowerment, safety, and absence of stress is critical for the promotion of EBP implementation. Peterson added that cultural beliefs, social systems and relationships, and current and persistent stressors, could make change difficult.

Although cultural variables are often overlooked in contextual applications, Odom & Haring (1994), cautioned against ignorance and omission:

> Practices (responses and contingencies) differ across cultures; therefore, to understand acts in context (or the skills that should be selected for children in

> programs), one must understand practices occurring within the culture. Designing and implementing culturally appropriate interventions has become central to the practice of EI/ECSE. (p. 97)

Metz et al. (2013) and Peterson (2013) explained the importance of considering organizational, contextual, and external influences (e.g., motivation for change, attitudes, norms, beliefs, flexibility). Peterson added that personal characteristics could make change difficult. McIntosh et al. (2013) explained that commitment—a contextual variable—influences EBP implementation. Walker and Snell (2017) noted that zero to few opportunities for paraprofessionals to provide input in the selection of interventions coupled with the levels of previous training and experience influence buy-in and implementation.

Practice-based evidence. Participants in Nelson et al.'s (2009) study expressed their experiences with EBP validated in research failing to align with their local contexts based on the gulf between laboratory research and rea-world practice. As Cook and Smith (2012) explained, many teachers and practitioners do not trust research findings because of misalignment between research findings and practical needs. Therefore, all experimental designs where causality could be inferred are invaluable if educator trust is missing and lack of implementation persists.

Consistent with situated learning theory (Lave & Wenger, 1991; Brown et al., 1989; Leontiev, 1978), Simons, Kushner, Jones, and James (2003) found that teachers engaged in situated generalization, implementing practices when they believed the practice was connected strongly and clearly to their practice situations. Once teachers identified this parallel, their confidence in the practice increased and they were more

likely to implement the practices. Therefore, Cook and Smith (2012) recommended a merger between EBP and practice-based evidence (PBE) through local evidence and support including, (a) piloting the EBP in practice settings; (b) promoting a balance between flexibility and fidelity of implementation; and (c) engaging in a use-inspired, bottom-up approach to research where the perspectives of practitioners are incorporated in research questions and designs rather than the top-down research approach. Smith, Schmidt, Edelen-Smith, and Cook (2013) noted that despite researchers' focus on EBP rooted in rigorous and internally-valid research, practitioners focus on PBE that hinges on relevance and external validity. As Stokes (1997) explained, a balance between rigor and relevance must be sought to form a complementary approach to EBP and PBE. PBE may motivate practitioners to adopt EBP and transition to a culture of EBP implementation (Torres et al., 2012/2014).

Even in other fields, practitioners are promoting PBE and contextual considerations. Corey et al. (2015) discussed the importance of PBE in helping professions such as counseling and mental health therapy. Their explanation of EBP mirrored that of Slocum et al. (2014): best available evidence, clinical expertise, and contextual factors, including contextual characteristics. Corey et al. added, "At this time, EBP does not have much to offer practitioners working with individuals who want to pursue meaning and fulfillment in their lives" (p. 396). The authors argued that treatment manuals focus on EBP but fail to consider the foundational role of the relationship between the professional and client, adding that EBP emphasize empirical evidence and ignore the role of contextual factors in practice. In promoting PBE, the authors explained that social validity data should be collected from clients, via a brief form, at the end of

every session, to modify treatment if needed based on the results of social validity data. Corey et al. explained further that a PBE approach allows clinicians to assess the value of the treatment for the clients and evaluate their experiences throughout the therapeutic process.

As emphasized in the theoretical approach to this study, CoP provide one approach to forming this merger (Klingner et al., 2013; Lave & Wenger, 1991; Torres et al. 2012/2014; Stokes, 1997). A marriage of approaches—laboratory and applied—occurs, where the weakness of one is the strength of the other and where practitioners, researchers, and implementation teams engage in dialogue instead of discussion (Smith et al., 2013). When dialogue occurs, participants engage in shared collegial discourse, such as that purported by Bergan and Kratochwill (1990) and Kratochwill and Bergan (1990) when they explained the collegial requirement and nature of consultative relationships. Such a blended approach would promote the recommendation of EBP that work in typical conditions rather than an overemphasized focus on EBP that have been tested and proven in ideal, controlled, empirical laboratory settings. CoP provide opportunities for binding members of a group through commonalities in purpose, motivation, and participative discourse (Ainscow, 2014; Bourke & Mentis, 2014; Kershner, 2014; Lave & Wenger, 1991; Smith et al., 2013). Hall (2015) and Odom (2009) explained that the strength of CoP is the bolstered support for sustained implementation of EBP.

Consistent with the findings of this study and the perspectives of participants, an approach to EBP that focuses on PBE recognizes the “how” in addition to the “what” as opposed to typical EBP practices that focus solely on the “what” (Smith et al., 2013). As Smith et al. (2013) explained, studies such as the current qualitative case study and action

research, which investigate the effectiveness of strategies in practical settings and within local contexts, are more likely to produce PBE. The same conclusion can be applied to professional development projects, such as the project recommended within this report. Although studies that produce PBE are not recognized by IDEA (2004) and NCLB (2002) as sound and rigorous scientific evidence, their application, relevance, and value to practitioners cannot be overlooked or ignored because as indicated in this study and the literature, EBP that do not align with the contextual needs and realities of practitioners are seldom implemented (Smith et al., 2013). As Odom (2009) explained, the adaptation of EBP by practitioners to align with their values, needs, and contexts, is inevitable.

Even at the research level, Smith et al. (2013) stressed the importance of collaboration between researchers and practitioners via educational design research (EDR) methodology, which merges internal validity with the specific needs of practitioners in local, real-world contexts. The authors noted five general characteristics of EDR, which include (a) pragmatism, (b) grounding in theory and practice, (c) interactive collaboration, (d) integration, and (e) contextualization. EDR maximizes any real-world impact because it accounts for contextual variables that circumscribe the effect of the EBP in the local, practical setting within the study design. Consistent with the exploratory nature of this qualitative case study, EDR allows for ongoing revisions to EBP implementation, design, and other contextual variables.

One of the most critical issues in contemporary special education is the significant and persistent gap between research documenting the effectiveness of practices and the actual instruction that occurs in typical classrooms (Cook & Cook, 2013). Therefore, Peterson (2013) stressed the importance of focusing not only on the implementation of

EBP, but also on other critical aspects such as the "what" and "why" of implementation. Johnson and McMaster (2013) also highlighted the significance of adapting EBP based on external, organizational, intervention, interventionist, and individual variables. These factors may also influence fidelity of implementation. However, caution must be exercised to strike an optimal balance between fidelity and flexibility (Johnson & McMaster, 2013). Detrich, Slocum, and Spencer (2013) recommended that integrating sources of best available evidence—practice elements (large components of EBP), kernels (smaller components of EBP), and basic principles of behavior and instruction—may increase practitioner confidence in EBP.

Social validity. Reliability of implementation of EBP is imperative for increasing student outcomes (Durlak & DuPre, 2008; Odom et al., 2013; Torres et al., 2012/2014). Callahan et al. (2016) pointed out that practitioners are more likely to select EBP solely on reliability, research rigor, soundness, and internal validity. Although reliability and validity are two separate constructs, they cannot be separated in research or practice. In their review of 828 articles, Callahan et al. found that only 221 articles (26.7%) measured social validity directly. Although these 221 articles included direct evidence of social validity measurement, only three of the seven categories analyzed were consistent across all articles. Callahan et al. recommended that a social validation component be added to EBP efforts to make social validation a routine custom in research and practice. This recommendation has been noted and applied to the professional development project proposed in this report.

It must be pointed out that the application of social validation measurements in the recommended professional development project does not ignore the need to establish

EBP as having undergone rigorous empirical testing and validation, as per the clinical judgment of this researcher and per the recommendation of Callahan et al. (2016). Therefore, EBP included in social validation measurements will be those that have been fully established as EBP in research. However, social validation measurements will be applied to determine which EBP, and which aspects of each EBP package are so salient and aligned closely with the contextual variables in each setting that practitioners are most likely to implement them. Consistent with the findings of this study and previous research, social validity data will be paired with contextual variables to determine which EBP should be included in the professional development project. As Baer, Wolf, and Risley (1987) stated quite eloquently:

> It is entirely possible that even quite invalid queries into social validity are better than no queries at all: Giving consumers any opportunity to express complaints and discontents that otherwise would go unnoticed may save at least some programs from fatal backlashes, at least if the offended consumer is moved enough by simply the existence of the otherwise inadequate social-validity assessment form to write in its margins or talk to the appliers. (p. 323)

Odom et al. (2012) described an Evidence-Based, Individualized Program for Students with Autism (EBIPSA), developed in 2015 by the National Professional Development Center on Autism Spectrum Disorders (NPDC) that considers the current and future implementation environments to maximize implementation. In their development of EBIPSA, the authors selected specific EBP from the NPDC report then obtained input from participants regarding EBP within the NPDC report that were

successful in their settings. Odom et al. (2012) and Odom et al. (2013) explained that within EBIPSA, they evaluated their selection of EBP using two methods.

First, they facilitated the completion of an EBP Inventory with a listing of all 24 EBP included in the NPDC (2015) report, where all participants where participants provided information on how often (not at all, sometimes, very often) they used each EBP. Next, they incorporated additional contextual factors into the decision-making process for selecting EBP to include in the EBIPSA professional development project: (a) EBP effectiveness across different students, (b) history of implementation, (c) practitioner motivation, (d) staff implementation capacity, and (e) peer availability. Similarly, Smith et al. (2013) explained that EDR allows for the determination of contextual application of a given EBP through questions related to implementation. These context-specific factors influenced the relevance of the EBP to practitioners.

The professional development project recommended in this report is focused on training special education paraprofessionals and teachers on the role of paraprofessionals and their implementation of EBP. Although it is critical that special education teams be trained in all EBP that have been validated and replicated in research, the professional development plan for this project is focused on EBP that incorporate pre and posttraining social validity data based on the perspectives of trainees. Within the context of this study and project, social validity refers to the alignment between an EBP and the satisfaction of its implementers with its applicability to the goals, programs, and contextual variables within their settings (Alberto & Troutman, 2013; Wolf, 1978).

Researchers have done the same. Fetherston and Sturmey (2014) reported social validity data indicated participants rated the behavior skills training (BST) training

procedures as highly acceptable and effective. Scheeler et al. (2016) collected social validity data via six-item teacher questionnaires. Questions focused on satisfaction with a bug-in-ear (BIE) intervention, likelihood of recommending BIE to colleagues, BIE impact on students and paraprofessionals, and other feedback. A five-item paraprofessional survey focused on satisfaction with BIE, BIE feedback distractions, suggestions for improving BIE, likelihood of recommending BIE, and BIE impact on student behavior or performance. Social validity data revealed participants rated the intervention as beneficial, motivating, and helpful.

Walker and Snell (2017) reported that participants judged both the coaching and workshop training procedures and student intervention strategies as socially valid. O'Keeffe et al. (2013) stated that administrators charged with continuing the training implemented in the study, rated the feasibility of continuing the training as high. Douglas, Light, and McNaughton (2013) noted that paraprofessionals indicated the training was beneficial and teachers noted an improvement in the paraprofessionals' skills relevant to providing opportunities for their students to communicate. Mason et al. (2007) wrote that social validity data revealed all teachers and coaches rated the online training modules as beneficial and their competence increased post module completion. Ledford, Zimmerman, Chazin, et al. (2017) assessed social validity data on their modified BST approach by asking participants. Using a scale of never to almost always, they questioned participants about (a) their perceptions on whether the procedures were helpful, (b) their frequency of encouraging social interactions during small group activities, (c) the frequency with which they encouraged social interactions prior to participating in the study, and (d) how participating in the study changed their behaviors.

Interactive, connected, and ongoing versus one-time, didactic, stand-alone workshops. One-time, didactic, stand-alone workshops do not meet the needs of today's special education professionals (Brown, Stephenson, & Carter, 2014; Odom & Haring, 1994). Mason et al. (2017) explained that one-time workshops, which are common in districts, are ineffective as they do not include the components of effective training such as coaching and performance feedback. Based on the findings of their study, Krick Oborn, and Johnson (2015) stated that stand-alone workshops are insufficient for effecting the level of social change required to improve practice. However, Mason et al. and McCulloch and Noonan (2013) recognized that contextual variables such as resources, time, and qualified personnel limit the ability of districts to move away from stand-alone workshops.

Morrier et al. (2011) explained that most teachers reported they received their EBP training via stand-alone didactic workshops without the hands-on practice that educators need to implement practices effectively and with fidelity. Further, stand-alone workshops do not provide the exposure that special educators need to understand the nuances and subtleties of EBP that may require contextual modifications to meet the needs of special education students in their heterogenous groups. In a 2014 study, Stockall found that practice improved more significantly when coaching was combined with direct instruction during workshops than when stand-alone workshops were provided alone.

Rooted in implementation science. Implementation science caters to the needs of special education teams in the local settings. Franks and Schroeder (2013) and Odom et al. (2013) explained that implementation science is the movement of EBP from the

researcher's laboratory or applied context to the clinician's real-world, everyday practice. Franks and Schroeder and Odom et al. added that implementation science not only considers factors such as materials, technology, participants, and assessment, but also contextual variables such as "culture and ecology" (Franks & Schroeder, 2013, p. 6) that are unique to the professional development setting.

Considering these factors, Franks and Schroeder (2013) defined implementation science as "the scientific investigation of factors associated with effective implementation" (p. 7). Franks and Schroder added that implementation science does not focus only on the components of the EBP to be implemented, but also considers factors within the given setting that can affect implementation, such as (a) training and adoption, (b) monitoring and feedback, (c) data-based decisions, (d) coaching and ongoing support, (e) organizational policies, (f) continuous improvement, and (g) sustainability. Further, Franks and Schroeder added that implementation science considers (a) readiness and capacity for EBP, (b) implementation structure, (c) engagement and buy-in, (d) EBP adoption, and (e) innovation and adaptation required for successful implementation.

As Fixsen, Blase, Metz, and Van Dyke (2013) found, EBP will be effective to the extent that they provide social-significant change, a core component of ABA. This requires an effective combination of empirical and implementation science to promote reliably-valid outcomes and high returns on empirical investments, instead of publishing research on EBP and expecting practitioners to determine how to apply the findings independently. Implementation science is comprised of four stages: (a) exploration, (b) installation, (c) initial implementation, and (d) full implementation (Fixsen et al., 2013; Fixsen et al., 2005; Metz et al., 2013; NIRN, n.d.1; NIRN, n.d.2; Odom et al., 2013).

In exploration, the implementation team assesses readiness for change, which includes consideration of the need to change current practices within the organization (Metz et al., 2013). Readiness for change also includes the availability of resources needed for change, which reiterates the importance of considering contextual variables when designing professional development packages and selecting EBP (Peterson, 2013). Participation is more likely to be sustained when participants are ready. Participants within this study indicated a readiness for change based on their responses when interviewed. Peterson noted that implementation teams must devote the time and effort required to foster readiness for change, adding that part of the job of leaders and implementation teams is to motivate and encourage practitioners to prepare for and embrace change. Peterson recommended strategies for fostering readiness for change, including empathy, collaboration, and reflective listening—showing a genuine interest in the needs and experiences of participants. Other strategies Peterson suggested include open-ended questioning, as was the case during the interview stage of this study; raising practitioner awareness and confidence; and solidifying their conceptualization of the importance of the change efforts, including the implementation of EBP.

When designing the preservice training and professional development activities, the implementation team must assess the readiness of staff for the change process. The team must dedicate the amount of time needed and offer necessary rewards to promote staff motivation and readiness for change (Smith et al., 2013). If the team is not sufficiently ready for change, the implementation team should design the professional development activities in a manner that would boost staff motivation and awareness for change, even if the team needs to dedicate, say, one year, to readiness activities for

boosting staff motivation and confidence. If staff readiness is mixed, different readiness activities should be offered to accommodate the varying readiness levels. Readiness assessments could take the form of a series of small group meetings to invite staff to share and listen to stories, experiences, questions, concerns, and recommendations on how to accommodate the EBP approach being recommended. It is imperative that meeting facilitators possess the experience, skills, and training necessary to facilitate the readiness booster activities (Fixsen et al., 2005). As Kratochwill and Bergan (1990) explained, the success of the preservice training model would depend on the skills of the trainer, the readiness of the trainee, the likelihood of the training being effective, and the cost of the training, including time, materials, and other resources.

Having assessed readiness for change, the implementation team should begin the implementation process paired with coaching and supervision, limiting this transition to those who are ready or almost ready for change (Fixsen et al., 2005). Trainers must differentiate the training to meet all participants on their level to facilitate behavior change—an increase in the implementation of the EBP—and enhancement of participant motivation, confidence, and commitment.

In installation, the implementation team secures the resources needed for implementation, such as materials, fidelity checklists, equipment, space, and personnel. In initial implementation, practitioners are introduced to new skills or plans. Practitioners require external support at all levels, including the coaches at the practice level and the implementation teams at the organization and system levels. The implementation team is tasked with assisting practitioners with demonstrating competence with the EBP, administrators with making organizational changes, and leaders with supporting the

implementation process. In full implementation, at least 50% of the intended practitioners are implementing the EBP with high fidelity and positive outcomes. The new EBP introduced in initial implementation are now routine. However, ongoing support is required from the implementation team to maintain successful outcomes, continuous improvement, and practitioner competency. Implementation teams must conduct ongoing performance assessment, provide continuous feedback, and monitor the effectiveness of the plan (Metz et al., 2013; Peterson, 2013).

Once the implementation process is occurring, the implementation team must conduct performance assessments to determine staff and program progress and competence, using preestablished performance measures selected during the creation of the professional development package. Finally, the implementation team must continue to facilitate ongoing implementation supports and buy-in from administrative and other external teams, including local, state, and federal entities and providers. This ongoing facilitation ensures that resources remain available, relevant, accessible, and collectible (Fixsen et al., 2005) and maintain staff competence and confidence.

Many teachers lack knowledge of EBP and are unaware of the breadth and depth of EBP (Torres et al., 2012/2014). Metz et al. (2013) and Peterson (2013) explained the importance of considering the capacity, skills, and knowledge of practitioners. Regardless of whether implementation is in the initial or full stage, the implementation team is tasked with focusing on practitioner competence and confidence (Metz et al., 2013; Peterson, 2013). To ensure that this occurs, the implementation team must carefully focus on (a) the selection of the EBP, (b) preservice training, (c) coaching and supervision, (d) performance assessment, and (e) the facilitation of administrative supports. When

selecting the EBP, the implementation team must consider skills, expertise, experience, and readiness for change and implementation across coaches and implementers. The implementation team must also provide the supports necessary and apply tools to determine readiness for change. For example, a readiness check that allows participants to indicate how important the impending change is to them (Fixsen et al., 2005) can be applied. Snyder et al. (2015) explained that based on implementation science, where varied implementation support is available, the level of coaching required may decrease.

In alignment with the principles of implementation science, any new model, innovation, or initiative—such as a professional development package focused on the implementation of EBP by special education teams—must meet the following requirements (Fixsen, Blase, Metz, & Van Dyke, 2013; Metz et al., 2013). First, the new initiative must include a clear description, including the philosophical principles, values, and inclusion and exclusion criteria. Second, the program must include a clear explanation of its essential functions. Third, the foundational components of the program must be outlined clearly. Fourth, a mechanism for assessing the performance of practitioners in implementing the EBP must be included. Last, the program must include a component that facilitates the assessment of student outcomes in relation to the EBP being implemented.

Accordingly, Torres et al. (2012/2014) offered a 10-step implementation plan for EBP.

1. Determine the contextual characteristics of the student, teacher, and environment to determine the EBP that is the right fit.
2. Identify EBP and analyze alternatives.

3. Select EBP that align with contextual variables.
4. Identify the essential components of the EBP.
5. Implement the EBP during instruction.
6. Monitor fidelity of implementation.
7. Monitor student progress and outcomes.
8. Adapt the EBP as needed based on data outcomes.
9. Engage in data-based instructional decision-making.
10. Lead and advocate the implementation of EBP through lessons learned and data review.

The NPDC (Wong et al., 2015) and the National Autism Center (2015) provided EBP guidance relevant to students with ASD. The guides are a model of implementation science for building professional development systems to increase the quality and use of EBP (Odom et al., 2013) for any student receiving special education services. These guides provide a foundational resource for structuring professional development activities focused on EBP.

Alignment with BST. Mason et al. (2017) reported that effective paraprofessional training models include BST. Metz et al. (2013) and Peterson (2013) explained that behavioral skills training—comprised of providing information, modeling, and behavior rehearsal—is necessary for transferring knowledge of EBP to practitioners and should be a core component of professional development packages. To facilitate the occurrence and effectiveness of ongoing training and vertical and horizontal integration, there must be an alignment between the components of the training, participants,

performance evaluation measures, and the structures within the organization (Metz et al., 2013; Peterson, 2013).

Ledford, Zimmerman, Chazin, et al. (2017) examined the effect of in situ coaching on the implementation of environmental modifications, prompting, and praise—three EBP—by paraprofessionals. The authors implemented a modified BST approach including three (goal review, modeling, and feedback with answers to paraprofessional questions) of the traditional four components (rehearsal was omitted). The researchers used the typical approach to implement daily in-situ brief sessions rather than the traditional approach requiring repetition until mastery was achieved. However, modeling was implemented in the initial session and thereafter, only when requested. The authors found improvement in the implementation of the EBP, generalization and maintenance of EBP, and student outcomes.

Fetherston and Sturmey (2014) implemented BST and found positive improvements across staff, students, programs, and skills, including generalization of training skills to novel responses and learners. Ledford, Zimmerman, Harbin, et al. (2017) conducted a 3-hour BST on EBP on a prescheduled professional development day. The authors included the following components in the intervention: (a) coaching as with review of one or two daily goals, (b) positive feedback of correct responses, (c) modeling (video and live), and (d) mastery criteria of at least 80% independence in the given skill area. The coach prompted and responded to paraprofessional questions, offered additional modeling, and inquired if the paraprofessional was ready to proceed independently. The coaches assisted the paraprofessionals with some aspects of implementation, such as material prep, reinforcer delivery (token and terminal), and data

collection, to ensure paraprofessionals completed target behaviors successfully. Additionally, the assistance from the coaches possibly reduced the response effort for paraprofessionals during training.

Participating in training and performing in the presence of a coach is an added requirement. Therefore, decreasing the response effort to a level that at least equates to pretraining levels promotes the maintenance of motivation, when one considers the matching law where rates of responding match rates of reinforcement (Cooper et al., 2007). Coaches facilitated paraprofessional reflection via five 10-minute postsession coaching sessions. Coaches honored paraprofessionals' suggestions for instructional changes during upcoming teaching sessions. Coaches or paraprofessionals suggested goals for the next instructional sessions. Paraprofessionals completed a self-assessment questionnaire on their ability to provide instruction and the students' progress.

During their training, Sarokoff and Sturmey (2004) implemented BST (information, modeling, rehearsal, feedback) for discrete trial teaching (DTT). The authors provided written information on procedures and reviewed each step. During baseline, all teachers' performance was low but their performance increased significantly post training. Love, Carr, LeBlanc, and Kisamore (2013) used a modified BST and trainees showed improvements post training. When compared to individual training, BST's efficiency is higher because it facilitates simultaneous presentation of instructions and modeling to large groups. Other advantages of BST include the knowledge group members acquire from each other and enhanced generalization via heterogenous grouping.

Multicomponent. Morrier et al. (2011) explained that multicomponent training (MCT) is more beneficial, particularly when these trainings include collaboration with parents, and EBP, which are still lacking today. Marder and deBettencourt (2015) recommended moving away from didactic instruction and moving toward embedding practice opportunities within professional development packages. Purper et al. (2016) explained that online professional development may provide a viable option, one option that can be incorporated in a MCT professional development package.

The literature provides several examples MCT. Brown, Stephenson, et al., (2014) noted that stand-alone workshops did not meet the professional development needs of practitioners and offered multicomponent training (MCT) as an alternative. In their 2014 study, the authors trained four special education teachers to use simultaneous prompting, an EBP, using MCT comprised of didactic presentations, coaching, roleplays, and specific feedback. Brown, Stephenson, et al. found high acquisition in about 2.5 hours of training and maintenance across all teachers. Koegel et al. (2014) investigated whether training paraprofessionals to provide social interventions would enhance social development in students with ASD in a group setting. Training included didactic training, demonstration videos, video question and answer, observations, and feedback. Results showed that paraprofessionals' increased fidelity and students' outcomes improved. Through MCT, which included two brief workshops, 6 weeks of coaching, video observations, and emailed performance feedback, delivered via email after coaches viewed videotapes of the participants providing home-based interventions, Krick Oborn and Johnson (2015) found that electronic individualized coaching increased practitioners' use of coaching strategies in home settings. In their MCT study, Bishop, Snyder, and

Crow (2015) found that participants increased fidelity of implementation through video self-monitoring, completion of a self-monitoring coding form, and feedback.

Radford et al. (2015) recommended that teachers and paraprofessionals remain in constant communication to improve student outcomes. Stockall (2014) explained that supervising teachers must master basic communication skills and paraprofessional preparation. In the presence of limited resources and sparse administrative support, a training model that meets the constraints of teachers and the needs of paraprofessionals is warranted. Stockall proposed a direct instruction training model (DITM) that includes goal development, instruction, demonstrations, guidance, observation, and feedback. The DITM model progresses from "I do it" to "We do it" to "You do it." Westover and Martin (2014) examined the effects of training, review of videotapes of special education paraprofessionals during literacy instruction, and performance feedback via graphed feedback. Data showed improvement in paraprofessional instructional delivery and student outcomes.

Chopra, Banerjee, DiPalma, Merrill, and Ferguson (2013) discussed a comprehensive, statewide, preparatory training model developed for paraprofessionals in rural areas who have limited access to quality initial training. Training topics included early intervention orientation, IEP processes, teamwork, collaborating with families, social emotional development, instruction, health support, language and early literacy, communication, individualized intervention, ASD, personal growth, interpersonal skills, and instructional and assistive technology. The training also included a field experience practicum for paraprofessionals. Serna et al. (2016) investigated whether naïve learners could implement DTT after receiving asynchronous training via computer that included

simulations with a virtual student and built-in feedback. Data showed that the seven participants implemented DTT accurately and most participants implemented novel tasks during DTT accurately.

McCulloch and Noonan (2013) investigated the effect of online training videos combined with a self-management checklist on mand (i.e., communicating a want or need) training provided by three paraprofessionals. Data showed an increase in mand training implementation accuracy across all paraprofessionals and maintenance over time. Further, student mands increased when paraprofessionals implemented mand training. Garner, Carter McLean, Waajid, and Pittman (2015) facilitated a professional development project that incorporated group and one-on-one mentoring of preschool teacher assistants. In terms of social validity, the authors reported that participants indicated that the collaborative approach and exposure to multiple communication opportunities across home and school environments were valuable.

O'Keefe et al. (2013) conducted fluency training with paraprofessionals and literacy facilitators for 1 hour each day for five days. Daily classroom observations occurred concurrent with training. Trainers provided the rationale, modeled and role-played using simple scripts, focused on one skill at a time including nonexamples of strategies to boost discrimination, and provided positive and corrective verbal feedback. Paraprofessionals acted as students for practice. Small group practice was combined with peer feedback. Paraprofessionals' praise rates and error correction accuracy increased. On-task behavior increased for some students but also decreased for some during the training process. Performance feedback was provided to participants who did not maintain skills after training concluded. The authors reported that participants may have

shown improvements in generalization and maintenance of skills because of the increase in the duration of the training, multiple practice and modeling examples, and the establishment of a mastery criterion.

Ledford, Zimmerman, Harbin, et al. (2017) found that implementation of EBP did not improve after short professional development sessions even with a BST approach. O'Keeffe et al. (2013) tested the effects of a 5-hour fluency training on paraprofessionals' presentation and praise rates, and error correction accuracy. Fluency training included multiple components such as rationales for specific behaviors, modeling, accuracy practice, fluency practice, training probes, and feedback. In addition, multiple skills were taught during the training. The authors found increases in all skills targeted in the intervention. Using description, video demonstrations, questions, and scenarios, Douglas, Light, et al. (2013) investigated the effects of MCT on the number of communication opportunities paraprofessionals provided. Paraprofessionals increased the number of communication opportunities they provided after completing 2 hours of one-on-one training. Students' rate of communication turns between students and paraprofessionals increased.

Enlightened. Odom (2009) discussed a training model that not only moves away from the traditional stand-alone workshops, but also aligns with implementation science, and incorporates contextual considerations. Odom (2009) referred to the model as EPD and noted its connection to implementation science. EPD promotes recurring professional support to ensure that practitioners can implement and continue to implement EBP with fidelity. It is also important to note that within the EPD approach, trainings are incorporated throughout the school year. For example, Devlin's (2005) study included

training of the experimental group in the middle of the year post student acclimation and the creation of routines.

EPD incorporates collaborative team processes, coaching and consultation, CoP, and online instruction (e.g., web-based videos, visuals, and interactive systems). Promoting such an approach in the local context may boost the implementation and maintenance of EBP. In their roles as social change agents, purveyors of EBP or professional development programs may benefit from considering EPD approaches. Summarily, the recommended professional development model will follow an enlightened approach by incorporating all aspects of effective training indicated in the literature.

Coaching. In 1997, Million and Vare explained the concept of authentic partnership, which requires equality in status and mutually-agreed upon goals. The authors explained that status inequality may hinder the growth of professional collaboration. To nurture organic partnerships, Million and Vare explained that a unified focus must be placed on organizational norms and values to inculcate an organizational culture that is sufficiently consistent with those of the members of the organization. Similarly, Rush & Shelden (2011) and Devlin (2005) emphasized the need for and importance of building collaborative coaching partnerships during professional development. As Million and Vare explained, the purposes of schools are not only to educate children, but also to prepare teachers and offer opportunities for reflection and research.

Authentic partnership and acknowledgement are essential for professional development. Such partnerships provide opportunities for enhancing the education of all

students through research-based and reflective inquiries. Thorpe and Clifford (2003) defined coaching as "The process of helping people enhance or improve their performance through reflection on how they apply a specific skill or knowledge" (p. 5). Coaching removes "the difference between current and required (or desired) performance" (Thorpe & Clifford, 2003, p. 6) through "a continuous process of growing and learning" (Thorpe & Clifford, 2003, p. 5) cannot occur in the absence of authentic partnership and acknowledgement, as Million and Vare (1997) and Rush and Shelden (2011) explained.

Effective professional development packages include ongoing feedback support, such as coaching. In a 2014 study, Stockall found that practice improved more significantly when coaching was combined with direct instruction during workshops than when stand-alone workshops were provided without coaching. Spouse (2001) noted that coaching seizes opportunities for practical applications, reflection, and debriefing, as offered in Devlin's (2005) study. Devlin introduced three phases of ongoing coaching support: (a) dissemination of conceptual knowledge, (b) demonstration for skill-building and decision making, and (c) diffusion for application and skill transfer. Coaches remained available for coaching and consultation for 3 consecutive weeks post training completion.

Powell and Diamond (2013) explained that one goal of coaching is the facilitation of EBP adoption by promoting change in performance through reflective practice. One mechanism for facilitating this change is the application of checklists or rating scales to monitor performance, provide feedback, and stimulate reflection. Vince Garland, Holden, and Garland (2016) investigated the effects of individualized clinical coaching (ICC) in a

simulated classroom environment on prompt delivery by novice special educators enrolled in a graduate EBP special education course. The authors found that ICC in the simulated environment increased fidelity of implementation of least prompts. NIRN (n.d.) noted that effective coaching requires mentors to gain input from their mentees, clarify and acknowledge the roles of the mentees, and ensure that their skill sets match the needs of their mentees.

Walker and Snell (2017) evaluated the effects of workshops and coaching on paraprofessional implementation of function-based interventions. Following intervention, students' appropriate behavior increased and challenging behavior decreased. In general, paraprofessionals implemented strategies with high levels of fidelity. Coaches collaborate with mentees to build interpersonal relationships, foster participatory coaching. NIRN (n.d.) noted that successful coaches are experts in the targeted practice. Coaches must also be committed, supportive, flexible, and prepared to embed coaching from the beginning to the end of the professional development process. Spouse (2001) noted that formal knowledge ("episteme") needs to be supplemented with craft knowledge ("phronesis") so practitioners can learn to see the relevance, or the 'why', of what they have learned to their practice setting.

The NIRN (n.d.) also explained that successful coaches respect practitioners. Smith et al. (2013) explained that even within CoP, the collaboration between practitioners promotes understanding and recognition of, and respect for values, goals, and EBP, which are mutually beneficial to researchers and practitioners. Spouse (2001) explained that the four main roles of a coach are to provide (a) supervision, (b) implementation support, (c) assessment and feedback, and (d) emotional support. Odom

et al. (2012) and Odom et al. (2013) added that in their EBIPSA model, their approach to coaching included planning, routine observational visits, fidelity checks, and feedback via internet or phone communication throughout the school year. Odom et al. (2012) and Odom et al. (2013) added that in their EBIPSA model, the EBP selected applied to multiple goals across multiple students; therefore, ongoing coaching was warranted considering the crudeness of the EBP. Otherwise, the implementation process would have been daunting for practitioners.

Within the EBIPSA model, Odom et al. (2012) and Odom et al. (2013) paired coaching with other selected practices, such as strategic planning with school teams, online preparation, and summer workshops. Mason et al. (2017) explained that PBC as an evidence-based approach that supports training for educators when resources are limited. The National Center on Quality Teaching and Learning [NCQTL] (2014) and Snyder et al. (2015) defined PBC as recurrent processes for supporting special educators in implementing EBP and improving student outcomes. NCQTL (2014) and Snyder et al. (2015) explained that PBC focuses on specific EBP with the goal of supporting implementation of EBP. PBC includes a training plan, shared goals, direct observation, ongoing coaching, feedback, and reflection (Mason et al., 2017; NCQTL, 2014; Snyder et al., 2015). PBC is collaborative between coach and coachee, focused on the needs of the trainees, and applicable to EBP training. PBC also facilitates ongoing coaching from teachers and provides teachers with a framework for supervising paraprofessionals. Four main phases of PBC include (a) orientation to PBC; (b) coaching partnership initiation; (c) shared goal setting, action planning, focused observation, reflection, and feedback; and (d) assessment and review of goals and plan for sustained implementation (NCQTL,

2014; Snyder et al., 2015). PBC can occur in various formats including live, online, self, peer, and group (Snyder et al., 2015).

Mason et al. (2017) investigated the effects of online instructional modules and PBC when teachers coached their paraprofessionals on DTT. Coaching occurred twice weekly and followed a PBC protocol. Initial coaching lasted about 60 minutes and successive coaching lasted about 15 to 45 minutes. Coaches reviewed videos of paraprofessionals conducting DTT and scored their fidelity of implementation to guide feedback. Paraprofessional groups participated in PBC within their classrooms. Goals were set for 80% fidelity for three consecutive sessions. Coaches incorporated performance feedback, live and video modeling, role play, and guided practice. Coaches recorded data on all aspects of the sessions; included next steps, goals, and meeting dates; and entertained any paraprofessional questions. Mason et al. found little to no change in paraprofessionals' DTT fidelity after they completed the online training modules; however, they found a clear functional relationship between PBC and paraprofessionals DTT fidelity. Therefore, online training modules should not be implemented alone. They serve to provide foundational knowledge but do not offer the live practice required to master skills. The PBC was modified to include collaborative goal setting, focused observations, and data-based feedback.

Participants in Hemmeter, Hardy, Schnitz, Adams, and Kinder's (2015) study participated in a coaching process where teachers created goals and developed action plans. Coaches provided a 30-60-minute training relevant to the goals and action plans, consisting of PowerPoint presentations, video examples, EBP implementation guides, and discussions of specific classrooms. Booster trainings were provided when needed after

the initial training. The authors found that teachers acquired, generalized, and maintained skills postcoaching. The authors administered a 6-point questionnaire ranging from strongly agree to strongly disagree to measure social validity of usefulness of coaching and its components, adequacy, coaching relationships, and sustainability of EBP. The authors found that the teachers rated that intervention positively.

Collaborative. Given that teachers and paraprofessionals work together to provide instruction and support to students within the classroom, teachers and paraprofessionals will coparticipate in the formal trainings within the recommended professional development project (Giangreco, Doyle, & Suter, 2014; Radford et al., 2015; Takala, 2007). Collaboration with and assistance from others with more experience in the given area of knowledge is critical (Klingner et al., 2013). Metz et al. (2013) and Peterson (2013) stressed the importance of stakeholder involvement, participatory planning, teamwork evolution, and an implementation task force that includes consumers and stakeholders. Peterson (2013) explained that collaborative engagement is not only necessary for meeting practitioners where they are, but also for promoting and securing readiness for change. Examples of real-life experiences within the local settings will be explored during the project as Takala (2007) recommended because "at some point, the learning experience must affect the act in context" (Odom & Haring, 1994, p. 95).

Research Efforts Explained

The review of literature for the project began with relevant peer-reviewed articles accumulated during the proposal literature review, which I stored electronically for use and application during this review. Next, like the proposal literature review and as explained therein, I consulted Giangreco's (2016b) list of Selected Paraprofessional

References from 1990 to present, and included some 2016 and 2017 sources I added after I concluded the proposal literature review. I conducted a search for full-text, peer-reviewed articles and scholarly texts published between 2013 and 2017 using electronic databases at Walden University and other local and national universities, including Google Scholar, ERIC, Education Research Complete, ProQuest, and Academic Search Premier. I also consulted reference lists in the articles I reviewed and found additional peer-reviewed sources relevant to the project literature review. I perused several websites (federal, state, and local government; district, school, and other educational entities; and other professional organizations) for additional information. Search terms used to locate literature sources include *professional development, training, paraprofessional professional development, teacher professional development, special education professional development, special education training, EBP training, organizational contexts, contextual factors, resources for EBP implementation, intrinsic attributes, extrinsic attributes, valuing paraprofessionals, educational partnerships, and CoP.*

Supplementary literature review searches such as reference list reviews resulted in additional resources dated prior to 2013. Although this literature review meets the criterion of at least 25 current sources (between 2013-2017), additional sources dating prior to 2013 were included to (a) emphasize some points, such as theoretical applications, (b) preserve the seminal and primary nature of those research sources, (c) demonstrate the relevance of those findings and assertions to the proposed project and the ongoing need, and (d) highlight the fact that changes proposed several years ago are still relevant and need require dedicated and fervent pursuit. Sources older than 5 years included herein lend support to the professional development project and strongly justify

the historical need for support of paraprofessional and teachers, specifically in relation to EBP.

Based on the need to demonstrate saturation of the literature, the literature review ended when the search terms *professional development, paraprofessional training, and EBP training* demonstrated that sources yielded the same themes and sources, such that I obtained no new information and overlap within information obtained at the end of the review and throughout the review was evident. I obtained adequate support for the professional development project from the literature, strengthening the validation of literature saturation. The most valuable resources acquired during the review were sources that corroborated the study's themes and participant perspectives directly, including digression from stand-alone workshops, the relevance and importance of contextual considerations, and a variety of MCT models. All resources acquired provided a wealth of information for designing the professional development plan for this project. Moreover, an overwhelming majority of the articles identified provide research-based evidence in support of the professional development project and the likelihood of positive outcomes across students, paraprofessionals, teachers, administrators, and school systems. Most important, social change via paraprofessional support systems, EBP, and continuous improvement as outcomes of this project is inevitable.

Project Description

The results of this study indicated a need for collaborative professional development on EBP and paraprofessional support for both paraprofessionals and teachers. Participants also indicated a need for administrative support. Therefore, upon IRB approval, this project will begin with a presentation of the following to

administrators: (a) a summary of the research findings, (b) the proposed professional development plan, and (c) a tentative implementation timeframe. The professional development project will not be implemented without administrative approval.

Potential Needed Resources and Existing Supports

The most critical resources needed for this professional development project include people, time, materials, and a location. Supports exist in all categories, as indicated in the following paragraphs.

People.

Needed resources. The key people required for this comprehensive professional development project are administrators, contractors and providers, paraprofessionals, teachers, other relevant special education professionals, BCBAs, and BCBA supervisees (currently completing supervision or completed supervision but have not yet completed and passed the BACB certification examination).

Existing supports. Of the people that are needed, supports that already exist across all personnel. The contractors and providers work in close collaboration with administrators, so collaborative support already exist in both groups.

Time.

Needed resources. The local school setting provides multiple in-service days throughout the school year. However, trainings are most often preplanned. Therefore, advance notification of this proposed project is needed to ensure incorporation into the calendar, once approved by administrators. In addition, time would be needed from administrators to present the research findings and the proposed project.

Existing supports. As indicated, in-service days for professional development already exist within the annual training calendar.

Materials.

Needed resources. The largest expense of this project will be the creation of training handouts to training participants. Otherwise, the materials needed include the typical materials used at professional development workshops, including a computer, projector, speakers, and internet access. In terms of contracted and substitute staff, additional expenses may be incurred in terms of compensation for their participation in the training.

Existing supports. All the materials needed for training already exist at the local schools. In addition, copiers are available for printing and copying the training materials. The school also owns a print shop where bulk copies of training materials could be created. Ongoing professional relationships exist between each provider agency and the assigned site schools.

Location.

Needed resources. A location that is optimal to participants from each of the participating schools will need to be determined. In addition, a conference room that is adequately sized to accommodate the training participants is necessary.

Existing supports. Multiple training rooms and spaces exist at the local schools. However, as indicated, a determination will need to be made regarding the most optimal training location considering the distance between each training location and the fact that participants who will be trained span multiple schools.

Potential Barriers and Solutions

Barriers. The most significant and ultimate barrier to implementation is resistance from administration. Another barrier is delayed implementation because of the very bureaucratic nature of schools. Potential barriers also include hesitation from BCBAs and BCBA supervisees who have completed or are presently completing supervision. Other barriers include unwillingness from special education staff to travel to the training site or participate in the training and resistance from contractors, providers, and contracted paraprofessionals to participate in the project. Other minor barriers include malfunctioning technology.

Solutions. Considering these potential barriers, potential solutions include a meaningful presentation to administrators that highlight the inherent value in training paraprofessionals, the minimization of high staff costs associated with high rates of attrition, the potential to avoid litigation, the opportunity to improve reputation, and the ability to utilize untapped resources (e.g., BCBA supervisees). In terms of bureaucracy, including all levels of administrators required for the decision-making process in the dissemination of results meeting may remove bureaucratic hierarchical delays. Regarding hesitation from BCBAs and current and past BCBA supervisees, emphasizing the added value they will gain from the following may reduce hesitation: (a) participating in this project (e.g., a boost to their resumes and leadership abilities); (b) the receipt of BCBA supervision hours; (c) the accumulation of BCBA supervision experiences; (d) the opportunity to receive training and BCBA credit; and (e) diversify and expand their opportunities, experiences, and networks, may reduce hesitation. Likewise, stressing the probability of RBT certification and increased income potential may decrease

paraprofessional hesitation. Further, explaining the opportunity to participate in research may be beneficial.

In terms of unwillingness to travel to the training site, one potential solution could be articulating the inherent benefits of participating, such as the opportunity for enhanced BCBA supervision and RBT certification. Another potential solution could be rotating the trainings across schools so that the training occurs at each school at least once. Yet another solution could be implementing the project at one school at a time. For resistance from contractors and providers, a recommended solution is to explain potential for longevity of paraprofessionals, decrease in attrition rates, and the high-quality training that paraprofessionals will receive. However, many of these potential barriers can be avoided if the school made these trainings mandatory for all applicable staff. In terms of malfunctioning technology, having back-ups available may resolve these issues.

Proposal for Implementation: Timetable

The professional development plan is projected to be delivered within at least a 1-year period at one school with the expectation that the pilot plan will continue to be replicated across classrooms and schools. Each presentation will occur during the school day on different nonconsecutive days during the school year. As noted in the literature review and based on participant responses during the interviews, one-time stand-alone workshops do not meet the needs of learners. Therefore, this project is targeted to be interactive, incorporate multiple learning media, and occur across multiple sessions. The following table presents information on the implementation plan for the proposed professional development project.

Table 2
Professional Development Timetable

	Sessions	Hours	Total	Timeframe
Present study results and proposed project	1	3	3	Month 1
Administrators	1	3	3	Month 2
Staff, contractors, providers				
Total	2	6	6	
Paraprofessional (RBT®) training				
Content				
Practice: Conduct, scope, EBP	1	8	8	Month 4
Measurement and assessment	1	8	8	Month 5
Skill acquisition	1	8	8	Month 6
Behavior reduction	1	8	8	Month 7
Documentation and reporting	1	8	8	Month 8
Reflections	1	4	4	Month 12
Total	6	44	44	
Coaching process				
Training	1	3	3	Month 3
Coaching	32	2	64	Months 4-11
Supervision	8	1	8	Months 4-11
Total	41	6	84	

Note. Timetable for each professional development session.

Presentation of study results and proposed project to administrators. Project implementation will begin with a presentation of a summary of the research findings and the project literature review to leaders in the local schools where this study was conducted. Prior to this proposed project receiving approval and before the initiation of the implementation process, head administrators must understand the problem, the research, the findings, and the proposed project. The proposed project and its benefits will also be presented to lead administrators during this meeting, which will most likely be a Directors' meeting. Once the project is approved the administrators at the local schools where this study was conducted, the implementation process will proceed to the next stage, which follows.

Presentation of study results and approved project to staff, contractors, and providers. Prospective participants will be invited to attend the introductory session. The purpose of the introductory session is to (a) provide a truncated version of the research findings, which indicate a need for the professional development project; (b) provide brief information about the approved project; (c) present the goals, expectations, and timeline for implementation; (d) administer a preassessment (see Appendix E) to gauge practitioner perspectives on EBP for their settings and contextual variables that should be accounted for; and (e) score the preassessment and share results.

The preassessment survey will be administered to gauge practitioner perspectives on EBP for their settings and contextual variables that should be accounted for in the professional development package. The survey results will be incorporated in the training content in the successive modules. Although the schedule, outline, and content of each session will be preestablished, obtaining information from participants to adapt the

professional development activities and EBP targeted during the project to the contextual needs of each school aligns with the research findings, the perspectives of participants in the current study, and the results of the project literature review. However, the guiding content, outline, and objectives for each session will remain intact.

During all sessions, I will act as guide on the side instead of sage on the stage, facilitating participant-directed learning in small and large groups. An open environment of learning will be promoted to recognize intrinsic and extrinsic attributes of participants and different yet shared views.

Paraprofessional (RBT®) training. RBT training will occur concurrently with all major trainings. One of the requirements for the RBT credential is completion of at least 40 hours of training on RBT Task List criteria (Behavior Analyst Certification Board [BACB], 2013). Participants pursuing RBT certification will receive credit for any multidisciplinary training they attend that is relevant to the requirements of the RBT Task List. All other trainings for aspiring RBTs will be offered independent of the multidisciplinary trainings and will align with the skill areas listed in the RBT Task List, and the findings of this study, as listed below:

A. Practice: Conduct, scope, and EBP
    a. Resources for EBP implementation
    b. Intrinsic attributes of professionals implementing EBP
    c. Extrinsic attributes of professionals implementing EBP
    d. Acknowledging and valuing the role and importance of paraprofessionals as partners tasked with implementing EBP
B. Measurement and assessment

C. Skill acquisition

D. Behavior reduction

E. Documentation and reporting

Each session will focus on strategies, supports, and expectations for paraprofessionals implementing EBP. For example, during skill acquisition, the expectations for paraprofessionals assisting special education students with acquiring skills will be addressed. Also, paraprofessionals will learn EBP for promoting skill acquisition and supports available to assist them with heling students acquire skills. BCBAs and BCBA supervisees will assist with training and coaching paraprofessionals during the project period. RBT training will follow a MCT model, where multiple modalities will be incorporated during the training. Paraprofessionals will collaborate within assigned PLCs to complete assigned "homework assignments" for extended application of knowledge and skills. Homework assignments will be designed to be completed during one afterschool meeting in the 1-month period. Paraprofessionals will complete pre and posttests to gauge their acquisition of knowledge and will complete formative (see Appendix D) surveys to evaluate the training. The surveys will facilitate acquisition of social validity data and data on the participants' evaluative perceptions of the training sessions.

Coaching process. Senior BCBAs will train coaches on the coaching process and expectations specific to this project. Each major professional development session will be followed by weekly coaching sessions in the participants' practice settings. BCBAs and BCBA supervisees will provide coaching. Weekly coaching sessions will continue in the paraprofessionals' practice settings based on the PBC and BST models. Senior BCBAs

will also provide monthly supervisory support to coaches. Paraprofessional PLCs will be formed for the duration of the project to facilitate continued collaboration throughout the professional development period. Paraprofessionals will also complete formative surveys (see Appendix D) to provide feedback social validity data on their coaching experiences.

Reflections. Paraprofessionals and teachers will reflect on their experiences with the professional development project. Paraprofessionals and teachers will collaborate in their PLCs during one afterschool period prior to attending this session. Paraprofessionals and teachers will share their reflections in their small group PLCs. Paraprofessionals and teachers will also complete summative surveys (see Appendix D) to evaluate the professional development project. The surveys will facilitate acquisition of social validity data and data on their evaluative perceptions. This terminal reflective session will facilitate a PBE approach and allow recommendations of potential modifications to the professional development project.

Roles and Responsibilities of Researcher and Other Professionals

Researcher. As the researcher and project developer, I would be responsible for soliciting administrative support of the plan and presenting the training content.

Other professionals.

Administrators. Given that this training is being recommended for special education professionals at the site schools, the administrators at the school would be responsible for approving the proposed professional development project.

Contractors and providers. Contractors and providers will be invited to participate in the project via their contracted paraprofessionals. Contracted paraprofessionals who participate will earn the opportunity to become RBTs and receive

professional development credit and ongoing supervision—dependent on RBT certification status.

Teachers. Teachers will be invited to participate in the practice and review sessions. They will receive professional development credit for participating.

Employed paraprofessionals. Along with the teachers, paraprofessionals will also function participants. Those who participate will earn the opportunity to become RBTs and receive professional development credit and ongoing supervision—dependent on RBT certification status.

BCBAs and BCBA supervisees. Senior BCBAs may assist with presenting training content. BCBAs and BCBA supervisees would provide supervision and coaching to paraprofessionals. BCBAs would provide RBT supervision to those professionals who move forward with pursuing certification and pass the certification exam. BCBA supervisees will assist with presenting the training content and running the practice and review sessions. BCBAs and BCBA supervisees will receive professional development credit for their participation. BCBA supervisees will also receive supervision credit.

Project Evaluation Plan

The proposed professional development project is intended to improve teacher-paraprofessional relationships, increase training and support for paraprofessionals, and increase awareness of the status of paraprofessionals and EBP. The evaluation of the project is designed to foster a continuous improvement process. Therefore, the evaluation of this project will be implemented formatively and summatively via evaluation surveys (see Appendix D) and pre and posttests (see Appendix E). Pre and posttests will also

facilitate a determination of whether paraprofessionals' and teachers' knowledge increased after attending each training session.

Odom et al. (2012) and Odom et al. (2013) asked five questions in their initial evaluation of the EBIPSA training model. The questions focused on (a) program quality improvements, (b) increase in the use and fidelity of EBP, (c) progress in student outcomes, (d) improvements in family satisfaction, and (e) sustenance of professional development. The authors used the Autism Program Environment Rating Scale to measure the overall quality of the educational program. Similarly, I will distribute a formative evaluation survey (see Appendix D) at the end of each training session to obtain feedback for improving the evaluand and at the end of the professional development project to assess the effectiveness of the evaluand (Mertens & Wilson, 2012). The results of the survey will help me identify what works, what needs to be changed or improved as the project progresses, and the overall effectiveness of the program. I will align the formative and summative surveys (see Appendix D) with the following project goals:

1. Share research findings.
2. Offer recommendations for improving professional development designs specifically relevant to EBP and broadly to social change.
3. Increase the knowledge, skills, efficacy, and confidence of paraprofessionals and teachers on EBP.
4. Effect social change, create PLCs, and improve relationships.
5. Obtain and share outcome data.

The purpose of the evaluation of this project is two-fold: (a) to find areas in need of improvement and change and (b) to assess evaluand effectiveness (Mertens & Wilson, 2012). Considering the first purpose and proposed project goals, a formative evaluation (see Appendix D) is optimal to allow for ongoing and immediate modifications to the project that meet the needs of participants and accommodate for contextual variables, which may impact the project' success. Formative evaluations (see Appendix D) allow for a determination of outcome achievement and reasons for the status of outcome achievement. Also, reporting to the program via formative evaluations (see Appendix D) allows for in-the-moment updates rather than delayed feedback after the program ends, which does not facilitate changes to the program throughout implementation and as needed. Formative evaluation (see Appendix D) of this project is most supportive of ongoing modifications to the program and facilitates immediate reparation.

The purpose of summative and outcomes- or goals-based evaluations is to assess the effectiveness of the evaluand by reporting on the program (Mertens & Wilson, 2012). Thus, they occur at the end of the program. Evaluation of goals or outcomes occur at the end of the goal or outcome period and allows for a determination of whether goals or outcomes of the entire project have been achieved. Further, evaluations that focus on assessing program effectiveness provide data to support any recommended changes; identify differential outcomes; argue for additional funding, materials, and resources; or support replication.

The formative and summative evaluation surveys (see Appendix D) will include a combination of Likert-based and open-ended questions. The formative evaluation surveys (see Appendix D) will be distributed at the end of each training installment. The

summative evaluation surveys (see Appendix D) will be distributed at the completion of the initial pilot project. Pre and posttests will be based on the content of each training installment and will be distributed before and after each training installment to assess learner competence.

The key stakeholders for successful implementation of this project include administrators, contractors and providers, teachers, other special education staff and related services professionals, paraprofessionals, BCBAs, and BCBA supervisees. All key stakeholders will be given formative and summative evaluation surveys (see Appendix D) to be completed as well as pre and posttests for each professional development installment.

Where programs are implemented, evaluation is an inevitable outcome. Accordingly, special education leaders must use their "specialized" training to promote the positive outcomes of evaluations and decrease negative perceptions and reactions. Although program evaluations are necessary components of any education system, designing a plan for execution is even more important. Planning assists leaders with aligning the needs of their systems with the design and execution of a plan. To embrace change and continuous improvement fully, leaders must be prepared not only to support staff in achieving intervention and evaluation outcomes, but also to accommodate lasting change.

Project Implications

This project is expected to have implications for special education on the local and broad levels.

Local Level

On the local level, this project provides an alternative for removing the current gap in practice identified during case study interviews and in the literature (Brown & Devecchi, 2013; Clarke & Visser, 2017; Dynarski, 2010; Feynmann, 1988; Purper, VanderPyl, & Juarez, 2016). Although this pilot project is targeted for one classroom in one school, the project can be extended to other schools in the immediate local setting and district, other practices and procedures such as ABA, and any setting.

Based on the data, data analysis, and the literature reviews, it is very likely that the professional development project could impact the skills and meet the needs (O'Keeffe et al., 2013; Walker & Snell, 2016; Yoon et al., 2007) of all participants. The focus of this project is on participants gaining the knowledge, skills, and tools needed to implement EBP and to support paraprofessionals in their efforts to implement EBP. Further, the project could lead to an increase in meaningfulness, motivation, morale, and collaboration across all participants (Cook & Cook, 2013; Cook, Tankersley, & Landrum, 2013; Devlin, 2005; Harn et al., 2013; Hudson et al., 2016; Kainz & Metz, 2016; Klingner et al., 2013; Ledford, Zimmerman, & Harbin, 2017; Leko, 2015; McIntosh et al., 2013; McIntosh & Turri, 2014; Metz et al., 2013; Odom, 2009; Peterson, 2013; Purper et al., 2016; Walker and Snell, 2017). The need for this professional development project and the potential of this project to effect local social change is stated here and throughout this report.

The likelihood of this project promoting contextualism (Brock, Huber, Carter, Juarez, & Warren, 2014; Cook, Cook, & Landrum, 2013; Cook, Tankersley, & Harjusola-Webb, 2008; Cook, Tankersley, & Landrum, 2013; Dynarski, 2010; Guerin &

de Oliveira Ortolan, 2017; Hudson et al., 2016; Klingner, Boardman, & McMaster, 2013; Sheridan, Edwards, Marvin, & Knoche, 2009; Slocum et al., 2014), PBE, constructivism, and andragogy is high. Further, it is very likely that this project will promote MCT (Banerjee et al., 2013; Bishop et al., 2015; Brown et al., 2014; Chopra et al., 2013; Garner et al., 2015; Koegel et al., 2014; Krick Oborn & Johnson, 2015; Ledford, Zimmerman, & Chazin, 2017; Marder & deBettencourt, 2015; McCulloch & Noonan, 2013; Morrier et al., 2011; O'Keefe et al., 2013; Purper et al., 2016; Radford et al., 2015; Serna et al., 2016; Stockall, 2014; Westover & Martin, 2014), and effective professional development practices. Other effective training frameworks, such as BST (Fetherston & Sturmey, 2014; Ledford, Zimmerman, & Harbin, 2017; Love et al., 2013; Mason et al., 2017; Metz et al., 2013; Peterson, 2013; Sarakoff & Sturmey, 2004) are likely to increase as well. It is expected that knowledge, skills, and bonds gained during project-based PLCs will sustain (Hall, 2015; Odom, 2009) post project completion.

Broad Level

On the broad level, this training can be replicated across school systems. Social change is also inevitable in terms of increased knowledge (O'Keeffe et al., 2013; Walker & Snell, 2016; Yoon et al., 2007), improved student outcomes (Alborz et al., 2009; Duncan et al., 2007; Fetherson & Sturmey, 2014; Giangreco, 2009; Ledford, Zimmerman, Harbin, & Ward, 2017; Wong et al., 2015), and individualized change. Other implications include the opportunity to save money and resources by incorporating BCBA supervisees and potentially decreasing the rate of paraprofessional attrition. Further, BCBA supervisees and paraprofessionals can broaden supervision experiences and receive RBT certification, respectively.

Successful implementation of this professional development project at the local level could lead to project replication at the building, district, state, regional, and national levels. Further, the implications for paraprofessionals pursing BACB certification, other BCBAs, and individuals in other schools are evident. The success of this project could lead to direct collaboration with the BACB. Results from this project, when shared at professional conferences and in research journals could have far-reaching implications throughout the field. Also on the broader level, improvements in participants' intrinsic and extrinsic attributes and large-scale improvements in special education processes are very likely to occur. Summarily, social change (Chopra et al., 2011; Krick et al., 2015) in the special education system is expected to occur.

Conclusion

Section 3 included a description and evaluation of the professional development program. The program is designed to increase knowledge about EBP, increase paraprofessional implementation of EBP, and improve the support paraprofessionals receive via ongoing supervision, training, and support. In addition to improved student outcomes, the professional development process could improve teacher-paraprofessional relationships, build trust, and spark meaningfulness. Further, this project promotes the use of untapped resources (e.g., BCBA supervisees) and the empowerment of paraprofessionals, BCBAs, and BCBA supervisees.

Section 4: Reflections and Conclusions

Introduction

The purpose of this project was to inspire and enact social change by improving current processes relevant to EBP, special education paraprofessionals, paraprofessionals' implementation of EBP, and the supervision and support that paraprofessionals receive. Through exploratory, qualitative interviews and data analysis, I obtained information from special education administrators, teachers, and a paraprofessional on the status of paraprofessional implementation of EBP for special education students and their perspectives on impacting factors.

Research findings indicated that (a) there is a need for training and supporting paraprofessionals, that EBP are not implemented often, (b) knowledge and understanding of EBP require improvement, and (c) there is a need to enhance current professional development design and application. I used the findings and conclusions, along with the knowledge I obtained throughout the study and, most significantly, the results of the literature review, to select and design the project. The recommended professional development project, once implemented, will provide multiple hours of support at the local research sites on preparing and training paraprofessionals, EBP and its implementation, and expanding and improving professional development offered to all special education professionals.

The professional development project could be presented to professionals at the local research sites to stimulate improvement in their processes and may be expanded to other schools and districts locally, regionally, and nationally. Furthermore, the professional development package could be applied to college programs that prepare

undergrad and postgrad students to become qualified special educators and online media where paraprofessionals can access training on the content prior to beginning their roles in local, regional, and national classrooms.

In Sections 1 through 3 of this report, I focused on the problem that existed in the local setting and in the broad field of special education. I also described the methodological approach and provided an analysis of the results of this study, which guided the development of the proposed professional development project I present within this document. In this section—Section 4—I engage in multiple reflections. I reflect on the strengths and limitations of the recommended professional development project and the doctoral study and share knowledge I gained. I offer a reflective analysis of myself as scholar, practitioner, and project developer. I conclude Section 4 with a discussion of implications, applications, and directions for future research, and I provide a strong ending message that emphasizes the importance of the study and its applicability to the field, as well as its potential to stimulate social change.

Project Strengths and Limitations

Project Strengths

In my years as a special education leader, professional, BCBA, LBS, and adjunct professor, I have observed the dissemination of information on EBP. I have yet to observe a smooth transfer of knowledge from the training room and the higher education classroom to the prekindergarten through Grade 12 classroom with high levels of consistence and fidelity. I am also in awe of the lack of preparation and training for paraprofessionals, along with the fact that paraprofessionals are dumped into classrooms without any support and tools prior to or during their roles but are expected to support the

most challenging students with the most challenging needs. Further, I am extremely concerned about the fact that teachers are not adequately prepared to support paraprofessionals, particularly with EBP, and that often, paraprofessionals, teachers, and other professionals do not receive ongoing and supportive coaching. Moreover, I am surprised that despite the level of advancement in the field, these issues remain largely unaddressed, which ultimately and unquestionably impacts student outcomes.

Therefore, the most significant strength of this project lies in its potential to stimulate social change within the local school settings and beyond, specifically in relation to the problem discussed. An additional strength of this project is its ability to inform professionals in the local research setting and beyond of the issues facing paraprofessionals, the gaps in EBP implementation, and the importance of contextual considerations, as well as possible solutions to the problems, issues, and deficiencies noted herein. Considering the findings of this qualitative research study, the project provides the evidence-based ammunition needed to begin the change process in the local setting. It also provides the tools necessary to promote change and propel the system from its current state to one of improved design, particularly in relation to special education paraprofessionals, the teachers who support them, the training and preparation they receive, the classrooms within which they are placed, and the quantity and quality of professional development opportunities afforded to special education professionals. Further, the project facilitates generalizability in terms of the transferability of the sociocultural constructs applicable to the local setting and across multiple special education teams and roles.

The quality and quantity of professional development that this project provides to special education professionals in the local research site undoubtedly represent a strength of this project. The project provides the opportunity to move away from stand-alone, didactic workshops and progress to ongoing, interactive professional development with follow-up and consistent coaching and support within the practice sites, particularly in classrooms. The professional development project offers multiple hours of training on approaches for improving the processes of assigning and supporting paraprofessionals and improving their knowledge, understanding, and implementation of EBP.

Three of the most important strengths of this project are the (a) application of qualitative data obtained from participants, (b) consideration of contextual variables, and (c) application of those variables in its design, making it more likely than not that participants will be motivated to participate meaningfully in the professional development series. Another undeniable strength of this professional development project is the recommendation that training outcomes be presented to supervisors and administrators at the local training sites for incorporation into their multicomponent evaluation systems of their special education professionals. An extension of this strength is the opportunity to share outcomes with partnering agencies that provide paraprofessional staffing for incorporation into their evaluation of their paraprofessionals.

Another strength of this project is its potential to build CoP within the local settings where participants learn from and support each other through sustained interactions, communication, collaborative partnerships, and informed inquiry. Further, I expect this project to stimulate discussions among special education professionals on

creative ways to improve current training practices and make the most efficient use of the limited resources available to them, including time and materials.

This project also adds to the current literature on paraprofessional supports, professional development, and EBP at the local, state, regional, national, and global levels. It provides the opportunity to collect social validity data for future project revisions, modifications, and development.

Project Limitations

Although this professional development project boasts several strengths, it is not without limitations. These limitations may decrease the potential of the project to address the problem reported herein, studied qualitatively, and addressed within the project. The limitations align with the findings of this study, the grounding sociocultural theory, and the contextual variables within the local training settings.

The success of this professional development hinges on the motivation and willingness of staff to participate wholeheartedly and transfer their knowledge to the classroom. As has been demonstrated through two literature reviews—proposal and project—special education professionals who provide direct services to special education students are often hesitant to implement EBP and training recommendations if they do not believe that they are in the best interests of their students, their staff, their contextual conditions, and their own needs. These findings have been the same even when practitioners have been aware of the need for change and improvement. Although consideration has been given to context throughout this study and project development, no guarantee exists that practitioners will participate or implement recommendations. If practitioners are reluctant to implement recommendations when they weigh the response

effort with current levels of reinforcement, the constraints with which they are faced, and administrative bureaucracy, the effectiveness and impact of this professional development project could be reduced. Along this same line of participation, another limitation of this project is that contracted special education paraprofessionals may not be able to or willing to participate because of lack of time, compensation, or both.

Another limitation of this project lies in the fact that it was developed solely based on qualitative findings, despite the push for the use of quantitative measures for informing EBP in accordance with IDEA (2004) and ESSA (2015) and the limited levels of reliability and validity that qualitative research affords. Further, my role as researcher and practitioner within the selected special education school system may have confounded participant responses, which I used to develop this professional development project.

Recommendations for Remediation of Limitations

Despite the limitations that have been identified, consideration must be given to avenues of remediation. One recommendation is to attach an external reward (e.g., discounted movie tickets) for special education professionals who complete the professional development series successfully (i.e., completion of all aspects of the project and satisfactory performance feedback). Another recommendation would be to partner with the local agencies providing special education professionals, either to provide training prior to the onset of paraprofessionals providing services or to provide some form of compensation or reward to paraprofessionals who participate in additional trainings throughout the school year.

As a BCBA supervising professionals pursuing BCBA certification, a valuable recommendation is to incorporate paraprofessional supervision and the delivery of components of this professional development project into the supervision assignments of BCBA supervisees at the local agency. An associated recommendation is to assign paraprofessionals who are RBTs or pursuing RBT certification prior to assigning paraprofessionals who are not RBTs nor pursuing RBT certification. Also, paraprofessionals who are RBTs or pursuing RBT certification could be offered performance-based pay raises.

One recommendation for increasing the likelihood that professionals within the local site will actually implement and participate in the professional development series is to apply the basic principles of implementation science, including (a) preparing the special education professionals for change, (b) implementing ongoing support when it is actually needed or as close as possible in time to when support is needed, (c) ensuring that the professionals are ready for change, and (d) highlighting the connection to or relevance between the training content and the ongoing needs in the classroom and special education setting. Further, explaining to professionals that the training was designed based on the data they provided via interview responses and the needs and concerns they articulated may increase the likelihood of their participation. Providing professionals with the opportunity to participate in research associated with the professional development project is another recommendation.

Moreover, a quick survey of the immediate needs of professionals in the local setting may be warranted to garner support and align the professional development package with the most immediate needs. Further, involving the special educational

professionals who will participate in the professional development series in the design, development, and delivery of the professional development series may increase their willingness to participate because they would be more likely to be invested in the project. A final recommendation is to share the results of this study with all participants and local stakeholders, including contracting and provider agencies, the local school districts, and local partnering universities, to stimulate lasting change and impact the status of paraprofessional training, preparation, support, and EBP implementation.

Recommendations for Alternative Approaches

In investigating the gap in practice related to paraprofessional implementation of EBP, I selected an exploratory, qualitative case study design because this approach aligned best with the research questions I posed during the study (Punch, 2006). Therefore, as I reflect on the study, my belief that the selected approach was the best for this study and held the strongest merit remains firm. The exploratory case study approach allowed for the naturalistic foundation necessary for accumulating descriptive data within the participants' everyday settings (Bogdan & Biklen, 2007). However, because the problem within this study was investigated qualitatively via an exploratory case study, future researchers could expand the results of this study using alternative qualitative approaches.

As Creswell (2012) explained, ethnographers use an extended period to focus on groups bounded by social or cultural norms, grounded theorists develop theories when existing theories do not suffice, and narrative researchers tell historical stories of single lives. Rumrill et al. (2011) explained that phenomenologists engage in extensive and prolonged interactions with participants to find patterns and relationships. None of these

designs were as appropriate for this study as was collective exploratory case study; however, researchers may apply these designs to future research stemming from this study. Future researchers could also apply mixed methods approaches by using the findings from this study to inform a follow-up experimental (cause-effect) or nonexperimental (correlational) quantitative investigations.

If the research questions were modified or the problem redefined, or if the time warranted for these approaches were available, any of the alternative methodological approaches could be implemented. The approach applied to defining the problem in this study was the best alternative, given the issues that professionals in the local setting presented. However, alternative approaches for defining the problem exist. Adopting an alternative definition of the problem could allow for studying the same issues via different approaches. In this study, I defined the problem in terms of the fact that paraprofessionals receive little to none of the training required to support special education students and implement the EBP that federal laws require. However, defining the problem in terms of fidelity of implementation or sustaining practices might have allowed for the adoption of an alternative methodological approach to this study. Additionally, data collection methods could have been modified if the problem had been defined differently, such as by administering surveys or conducting observations instead of collecting data via one-on-one interviews. Further, I defined the problem as a gap in practice. Defining the problem as a gap in research could have rendered an alternative approach, such as a causal or correlational quantitative approach, more appropriate than the current methods.

In terms of the project, multiple alternatives exist. One way to address the need for further training and education in EBP and the role of paraprofessionals in implementing EBP, and their ability to implement those practices with guidance, supervision, support, coaching, and feedback is through professional development sessions where knowledge and practice are dispensed. This alternative was the approach recommended in this report. However, as indicated, it is only one way, albeit perhaps the best way. The fact that it is one method means that alternative approaches exist. However, none of the alternative approaches align as well as the professional development project with the needs of the individuals at the local research site, the immediacy of the need, the methodological structure of the study, and most importantly, perspectives of the participants and the insider knowledge they shared.

One alternative approach that aligns well with my current role as adjunct professor is to create a course to be offered at local universities that would encompass the knowledge and findings this study produced. Another is to complete an evaluation report of the status of affairs. Yet another option is designing a curriculum plan for providing instruction. Writing a position paper focused on policies and procedures provides another option. Although each of these options is feasible, none is as optimal, relevant, appropriate, and as immediately feasible as the professional development project recommended for the local teams.

Scholarship, Project Development, and Leadership and Change

Scholarship

In 1900, Boyer provided an expanded definition of scholarship. The author explained that scholarship is discovery, integration, application, and teaching. Boyer

(1990) added that scholarship goes beyond the boundaries of completing original research by encapsulating research, connections to other worldviews, bridging the gap between theory and practice, and dissemenating knowledge. I say with confidence that in alignment with Boyer's explanation, I exemplify scholarship, which I explain in this section.

As a doctoral student, special education professional, BCBA, and LBS, scholarship is of paramount importance to me. Reflecting on my professional and academic careers, my journey through this doctoral program, and my completion of the doctoral study, I realize that all the activities within which I have been engaged grant me the status of scholar-practitioner. In fact, the alternative would be impossible, untrue, or unfounded, or antinomic because the goal of doctoral programs is to prepare scholars who are ready, willing, able, and equipped to fill various roles and educate others. Therefore, completion of a doctoral program, in and of itself, represents scholarship.

One way that I have demonstrated scholarship in this doctoral program is through consistent scholarly writing from my very first course even to my current writing of this research report. My attendance at the residency conference in Baltimore, MD, contributed to my scholarship as well. The completion of this doctoral study has contributed to my growth as a scholar as well as my completion of this doctoral program in the not-too-distant future and my continued engagement in research activities within my current educational setting and in collaboration with local universities and organizations.

Professionally, my scholarly activities have included daily BCBA and clinical supervision and support to mentees and supervisees, creating and directing mentorship and leadership groups, BCBA consultation to special education teams, families, and other

professionals, presenting multiple and ongoing training to special education staff and parents and other transdisciplinary professionals, and presenting on special education topics in international special education conferences. Further, my current roles as an interdisciplinary instructor (special education, ABA, criminal justice, counseling, business administration, and cardiopulmonary resuscitation and first aid) exemplifies scholarship since I engage in scholarly conversations within multiple and diverse learning communities. My ability to juggle and balance multiple personal, professional, and academic roles, demands, and commitments throughout my doctoral journey speaks to the persistence and multitasking abilities that are necessary to achieve the title of scholar.

I integrate my knowledge to advance the field and effect social change and solve problems across multiple fields. Consistent with sociocultural theory, this integration of knowledge allows me to cross several contextual boundaries by understanding the contexts and realities of individuals across various organizations and finding what works for them within their situations (Brown et al., 1989). This fosters an approach where I can cross social and cultural boundary lines and effect change. My membership in multiple professional associations and my role as Chair of the Association for Behavior Analysis International Crime Delinquency, and Forensic Behavior Analysis Special Interest Group demonstrates scholarship.

In line with sociocultural theory, which formed the foundation of this study, my daily acquisition and transfer of new knowledge, my ability to integrate my knowledge across multiple disciplines, and my knack at engaging with supervisors, supervisees, and other professionals, demonstrated my scholarship. Not only do I engage with professionals, but I also engage with families, stakeholders, and community members,

rendering my service across all levels. My constant involvement in community-based activities where my leadership transcends the walls of the classroom and the office, gender, race, religion, ethnicity, creed, socioeconomic status, education, language, sexual orientation, is indeed indicative of scholarship. After all, scholarship is useless if it remains bound within four walls or in covert entrapment and entanglement within the mind. My willingness to be of service is noted as aligning with scholarship, as I create inroads and opportunities for others who otherwise would not be able to seize those benefits without being members of my professional community.

My professional, academic, and higher education activities produce social change, which demonstrates scholarship. Further, my ability to remain in collegial communication with my doctoral committee demonstrates a level of academic and professional autonomy/independence that is representative of a scholar and an andragogic, self-directed learner. My daily self-reflections indicate my self-learning and scholarship as well. My ability to participate actively in close-knit PLC where knowledge is shared weekly and where each member engages in supportive and collaborative learning and engages in peer-to-peer mentorship and guided reflections demonstrates scholarship.

Throughout my educational pursuits and as a component of my daily routine, I engage in critical reflection and analysis of my cultural, situational, and positional beliefs; assumptions, values, and preferences; theoretical orientations; experiences; and all knowledge shared with me. I continue to question my truths, realities, and opinions, and those of others around me. I continually seek for alternative, plausible explanations instead of simply accepting the first alternative offered or conjectured, conceived, or

imagined. The act of continual reflection and questioning, as demonstrated by the work presented within this report, the investigative research questions, and the constant comparison and analysis of participant responses, exemplifies scholarship.

Although this road to scholarship via my doctoral studies has been a long and arduous one, I feel very accomplished to have succeeded. I am honored to be able to read and digest information representing novel and prior knowledge presented from a multitude of perspectives. Completing multiple complex assignments; reading multitudes of books, articles, and other assigned readings; and completing two literature reviews for this study has been exhausting albeit rewarding. Understanding the value of and relying on peer-reviewed and scholarly literature throughout the doctoral process has been rewarding and contributed to my scholarship. Each professor and my doctoral committee prepared me for this journey, from beginning to end, and offered unwavering support. Every professor and committee member throughout the program and during the Baltimore residency, articulated expectations clearly and indicated the need for scholarly and reflective thinking, writing, and critical analysis throughout my studies.

Other qualities I have developed that demonstrate scholarship include speed-reading, organizing and synthesizing information, limiting my selection and review of literature to only those relevant to the task at hand, and summarizing and presenting information clearly and concisely via economy of expression. The challenge to read, assess, dissect, analyze, synthesize, write, edit, and rewrite was evident but mutually rewarding and indicative of scholarship. The requirement to read, understand, interpret, apply multiple theoretical frameworks and represent information read or received fluently, allowed for scholarship and afforded professional and academic growth and

intellectual stimulation. Learning to read, dissect, and reconnect thoughts and ideas to form new knowledge and experiences was rewarding and broadened my scholarly experiences.

The sum of my experiences contributed to my status as scholar. The experiences broadened and deepened my innate desire to engage in a continuous process of growth, development, and reflection as a professional learner and leader. My assurance in my scholarship and ability to lead, influence, and educate others through authenticity and transformation has been solidified. My confidence in freely sharing my thoughts and ideas without fear of being incorrect or off-base has been reinforced because of this doctoral process and indicates scholarly qualities.

In alignment with the theoretical focus of this study and my sociocultural explanation of EBP, PBE, paraprofessional training and preparation, the lived experiences and realities of participants deepened my understanding of the fact that any information presented, whether in a research study, direct communication, or book, is based on the theoretical assumptions and orientation of the information presenter. Therefore, multiple views and perceptions are bound to exist when one considers the fact that all individuals construct knowledge based on their lived and written realities and contextual similarities and differences. I understand and recognize the need to cater to diverse schools of thought within scholarly communities. I remain open to new and unfettered possibilities and take comfort in the fact that scholars will continue to learn together and remain in a state of continuous improvement. I understand the professional and scholarly value of sharing knowledge in accordnce with my mantraed question: "What's the use of gaining knowledge if you are not going to share it?" As a scholar, I

am responsible for disseminating knowledge and helping others broaden their world views through mutiple perspectives while accepting and applying reflective peer-based or supervisory feedback.

Project Development and Evaluation

Project development. In my opinion, the most influential lesson of the project development process was that it required me to remain in constant thought about the findings of my research and the most appropriate approach to connect the findings to the professionals at the local study sites, given the known and unknown contextual variables. Initially, I considered a very comprehensive professional development plan to include all aspects of the findings of research and that would require permissions from other authors to use materials (e.g., fidelity checks) that they created for public use. However, after giving further thought to the time constraints with which I was faced, I decided to recommend a yearlong professional development plan to describe the research findings, offer recommendations, and model an exemplary professional development session.

One of my goals throughout creating the professional development project was to design a project that would meet the needs of special education professionals and teachers in the local research sites based on the roles of paraprofessionals, their knowledge and implementation of EBP, and their training, preparation, supervision, and support. Once I decided on the professional development plan, I began the process of creating the plan by outlining the information to be presented and the times during the year when professional development activities could occur. Relying heavily on my professional development experiences as a presenter and participant, I created a model outline that would not only meet the goals of the project, but also cater to the most

intricate needs of the recipients. Because my literature review was very extensive and completely exhaustive, I had already secured examples of professional development plans, on which I was able to rely, in conjunction with my professional development experiences in the workplace and academia. Therefore, I created the professional development plan successfully and incorporated descriptions of the activities, materials, and expected outcomes.

My primary goal throughout this process was to provide an amount of detail that would allow for thorough understanding of the project, allow other professionals to present the information in my stead, and facilitate replication. I believe I achieved this goal. Further, in line with the theoretical framework of the study, my aim for this project was to be able to present a project that aligned not only with participant perspectives, but also research findings and the theoretical approach. This desire recalled the following two statements from Guerin (2016): (a) "Social behavior is not simple—it is convoluted, strategic and complex, involves historical events, is intertwined with other parts of life, and relies on people and events outside our control" (p. 15) and (b) "The best way to analyze and change social behavior is by learning through your experience and that of other what contexts give rise to which social behaviors—hence the term *contextual*" (p. 15). To ensure that participants engaged in the expected social behaviors, I aligned the project with the contexts that influence their social behaviors and the probability of securing willing and motivated participation, by considering the following five categories of contexts that influence behavior (Guerin, 2016):

- *Social Context*: Who is involved? Who has a stake in this? What are their relationships? What about those people not currently present?

- *Economic Context*: What economic systems are in place? What money or other transactions might be involved here?
- *Environmental Context/Opportunities*: What does this environment support? What are the opportunities here? What are the opportunities these people have and have had in the past? What prohibitions or limitations might be in place for different groups of people? Is there, for example, a gender prohibition here that might be relevant?
- *Historical Context*: How have these contexts for these people been in the past? What has changed? What has stayed the same and what context has led to that?
- *Cultural Context*: What social features specific to a group with a history and close relationships might be directing behavior here? (p. 21)

Project evaluation. In considering the need to evaluate the project, I immediately recollected the Sustaining and Supporting Effective Practices in Special Education (EDUC 8767) course I completed in the Spring semester of 2016. During that course, we covered content on evaluation and completed and Evaluation Plan assignment. I was also reminded that we learned two major options for evaluating programs such as the recommended professional development project. The two main options were formative (during the project) (see Appendix D) and summative (after the project; see Appendix D) evaluations. I immediately reviewed my notes, assignments, and discussions from the course, including the information Mertens and Wilson (2012) presented in the course text: Program Evaluation Theory and Practice: A Comprehensive Guide.

After reviewing the information critically, I decided to incorporate both formative evaluations (see Appendix D) at the end of each training session and summative evaluations (see Appendix D) once the professional development project ended. I decided to use an online survey, also available in hard copy, to gather both quantitative data via Likert-style responses and qualitative data via open-ended responses. Like the project development, I relied both on my professional development feedback experiences and knowledge I acquired through the literature review and other professional processes to design the evaluation tool and decide on delivery. In alignment with the theoretical framework of my study, I considered contextual variables such as motivation, time, and access when considering the design and delivery approaches. I decided that having attendees complete the survey at the end of the training session would be the best option to facilitate an optimal survey completion and return rate. I intend to use the information gathered from the evaluative surveys to inform remaining professional development installations, future professional development projects, and engage in scholarly discussions with administrators at the local research site regarding the professional development outcomes, and recommendations for future projects and organizational growth. However, most important, I plan to compare pre and postprofessional development data to determine the change in the following outcomes one year post project implementation: (a) student outcomes, (b) rates of paraprofessional and teacher retention and attrition, (c) paraprofessional rates of compensation, (d) sociocultural working conditions of paraprofessionals and teachers, (e) the application of contextualism in the design and implementation of special education practices, including

professional development, and (f) substance of practice, and project interventions and outcomes.

Leadership and Change

Like my recollections on program evaluation, as I began to collect my thoughts to pen this section, I immediately recollected the invaluable information I acquired when I completed the courses Leadership, Advocacy, Policy, and Law (EDUC 8761) and School-Wide Intervention Models (EDUC 8765) in the Spring 2014 and 2015 semesters, respectively. I immediately returned to my notes, discussions, assignments, and book chapters to conduct a quick review, including a review of Northouse's (2009b) definition of leadership.

Northouse (2009b) defined leadership as a "process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). In their explanation of authentic (Northouse, 2009a), transformational (Northouse, 2009b), and distributive (Waldron & McLeskey, 2010) leadership, the authors noted that leaders who involve team members and school staff in developing professional support activities and collaborative planning, strengthen their collaborative capacities via the constructivist approach to andragogy that Waldron and McLeskey (2010) and Wilcox and Angelis (2012) described.

Shepherd and Brody Hasazi (2007) explained that leaders foster goal achievement in diverse learners by creating social justice frameworks that are inclusive and supportive of all special education students, thereby removing barriers (e.g., discrimination) and promoting success for all. Shepherd and Brody Hasazi (2007) further explained that leaders focus on social justice, decreasing any emphasis on differences, and increasing

the focus on diversity. Shepherd and Brody Hasazi also stated that leaders fulfill three critical roles that increase educational opportunities and remove barriers for special education students: are (a) developing a common vision and culture, (b) increasing knowledge and understanding of special education policy and practices, and (c) ensuring that the vision for inclusion transcends throughout the organization.

My entire doctoral journey, coupled with the combination of my professional and academic experiences to date, align with the explanations of leadership provided by the authors. Collaborating with my doctoral committee, questioning the views of participants during interviews, and engaging in ongoing discourse with peers and fellow scholars, allowed me to facilitate a shared authentic and transformational leadership style that transcends boundaries; fosters collaborative learning, input, and planning; garners ownership and trust; secures participation and feedback; channels new leaders; and demonstrates scholarship. I realize that leadership and scholarship must occur in tandem or synchronously. To violate this notion would be to create an avoidable anomaly.

Other important thoughts that I have been able to apply as a change-focused leader are those shared by Maxwell (2008) in his book Leadership Gold, which follow. "All leaders have two characteristics: first, they are going somewhere; second, they are able to persuade other people to go with them" (p. 77). "Good leaders inspire their followers to have confidence in them. But great leaders inspire their followers to have confidence in themselves" (p. 78). "Leaders may impress others when they succeed, but they impact others when their followers succeed" (p. 80). These three thoughts from Maxwell summarize my mantra for leadership and social change, and exemplify my accomplishments to date with respect to leadership and change, and my ability to foster

support when change is introduced. As discussed earlier in this report, I will continue to secure readiness for change across all staff prior to introducing change systems, and support staff with the challenges and pains of change. My desire is to continue along this path and to inspire my followers to strive to become collegial leaders and remain in a state of continuous improvement, and promote a balanced combination of EBP and PBE throughout my role and activities as scholar-practitioner-researcher.

Reflective Analysis of Self as Scholar, Practitioner, and Project Developer

Analysis of Self as Scholar

Based on the results of my reflections, I concluded that my exponential scholarly growth is the result of my doctoral studies and professional experiences. I have identified several self-truths as beliefs from on what encompasses scholarly distinctions. My guidance of my mentees through clinical and leadership supervision, BCBA supervision, observations and feedback, and daily communication, are prefaced and laced with the scholarly knowledge and skills I obtained throughout this process. In a recent clinical supervision meeting, I remarked that my fluency in answering questions, making recommendations, and explaining concepts relevant to EBP was largely because of my ongoing reading, writing, and researching throughout this doctoral study, and most specifically and recently, the result of my completion of my doctoral study and creation of the professional development project.

Considering the scope and focus of my study and the theoretical framework that guided my study, there is no doubt that I could develop, expand, and appreciate multiple perspectives. I understand and value the perspectives of each of the 12 special education professionals that participated in my study. Moreover, I understand that my mentees have

different perspectives. I understand and recognize that each child, teacher, parent, family, special education professional, classroom, school, district, and community will ultimately and inevitably be influenced by contextual variables, which may determine next steps in terms of recommendations, interventions, implementation, practice, schooling, professional development and leadership.

Most significant to me is my scholarly growth in terms of my knowledge and application of systems for supporting paraprofessionals and special education teachers within their assigned classrooms and customizing and supporting the implementation of EBP that are contextually sound and fit and that align with the philosophy of PBE. I value and appreciate the importance and significance of understanding the concept of EBP, its application, and the strength to be gained from educating others in EBP, supporting their implementation of EBP, and assisting with strengthening fidelity and flexibility of implementation. I understand the importance of relying on research that is current and published in peer-reviewed journals. I can say quite definitively that I have unquestionably sharpened my research skills and mastered the art of locating scholarly articles and texts through searches within research databases, and online and local libraries.

My critical thinking and analytical skills have multiplied because of the cumulative doctoral process. I understand how to analyze an article, including strengths and limitations, reliability and validity, and applicability to the setting. In reflecting on my level of scholarship prior to beginning my doctoral degree and now that I have completed years of doctoral study and applications, I consider myself as a scholar in the field, charged with knowledge that can propel others and the field into a knowledge-filled

abyss. My knowledge as a scholar is exemplified throughout this report and each academic task I completed, validating my self-belief as scholar and recipient of an unlimited array of profound knowledge and education. Focusing on paraprofessionals and EBP throughout my doctoral journey has allowed me to add substantial knowledge and develop my understanding of both topics. My successful defense of my proposal, final study, and professional development project to my scholarly doctoral committee also solidify my status of a scholar. Throughout this process, I experienced the constructs that comprise sociocultural theory through personal and professional growth and acquisition of new knowledge.

My ability to not only gather relevant data and synthesize information has sharpened my right-brain, big-picture thinking, my aptitude for synthesizing information and understanding how prior knowledge applies and connects to new knowledge, and my ability to determine how to apply my knowledge professionally and clinically. Regarding scholarly writing, academic writing has always been my forte. However, my completion of this entire journey has sharpened my scholarly writing and organization skills even more so than when I began this journey and has brought me to a juncture in my professional and academic journey where I could not be any prouder. I am satisfied with my achievements in terms of completing the lengthy task of qualitative research, including data collection, analysis, and reporting. I understand that qualitative research is not attributed much value in terms of empirical valor that meets the rigor and scientific validation IDEA (2004) and ESSA (2015) require. However, I recognize and value the meaning of allowing participants tasked with delivering special education services to tell

their stories, and the worth they assign to the events in their lives, their lived experiences, and their realities.

I treasure the development of my scholarly understanding of the contextual conditions that shape the lives of special education professionals my adeptness at determining how experiences shape realities, meanings, and thoughts. It is my belief that one of the reasons for the research to practice gap quantitative approaches often fail to meet people where they are and do not connect with the everyday, contextual, and situational realities of special educational professionals. My scholarly belief is that qualitative approaches, such as the one applied to this study that allow for an understanding of the perspectives of practitioners within their everyday settings, are more meaningful and valuable to participants and practitioners. I also believe that qualitative research may achieve much in terms of expanding practitioner knowledge and transferring research from the lab to the classroom by catering to the intrinsic attributes of special education professionals, such as inherent motivation and desire to implement EBP that meet their needs and align with their situational realities. At the same time, I understand the value of and need for quantitative research; however, as a qualitative and quantitative scholar, I also understand and appreciate the value of conducing mixed-methods studies, following up a qualitative study with quantitative exploration, or conducting a qualitative study based on the findings of a quantitative project.

Analysis of Self as Practitioner

Currently, and throughout the study, I maintained several practitioner roles, including administrator at a local early intervention preschool, BCBA, LBS, and adjunct professor at local universities. The most significant aspects of my self-analysis are the

perseverance, determination, and motivation required to complete my doctoral degree, my study, and the professional development project. My experiences throughout this entire process have shaped me into a stronger and more skilled practitioner. I strengthened self-belief by encouraging myself constantly throughout the project. Although this process was overwhelming, I reminded myself that "this too shall pass" and that if I "hung in there," the process was bound to end at some point. Having matured professionally because of this educational journey, I am now able to help the professionals I support and the students I instruct develop and strengthen those skills.

As practitioner-researcher, I have acquired a clearer understanding of gathering and analyzing data. I have transferred the skills and knowledge I obtained in my role as researcher to my everyday role as practitioner, including interviewing, analyzing, and reflecting. I continue to consult the literature to increase my ability to offer research-based recommendations and defend my clinical decisions. I continuously review instructional programs to determine levels of fidelity, effectiveness, and student outcomes. Having mastered the art of reflection and reflexion, I constantly guide my mentees in doing the same. In my role as practitioner, I have acquired knowledge and experiences that will continue to benefit not only me, but also the professionals to whom I provide leadership. I am extremely proud of my accomplishments and it is my intention to continue to support other professionals with achieving their goals and remaining in a status of continuous learning and improvement.

Analysis of Self as Project Developer

As developer of the professional development project based on the findings of this study, my knowledge has increased. Throughout the process, I remained in constant

contact with the recommendations provided in the literature regarding effective and appropriate professional development. Having completed the process, I realize that developing and planning the project is much like developing and providing instruction to my staff and students. Although developing the project was a long and laborious project, I learned that I must identify the goals of before developing the project. Constant review of the literature produced a wealth of information on effective professional development designs, which I referred to when designing this professional development project. Although this is my first experience creating a multiday professional development project, I have created, presented, and attended multiple trainings and workshops. Therefore, I relied on those experiences when developing the project and incorporated them into the finalized product to meet the needs of participants in the local setting. Summarily, I will continue to draw on my experience as scholar, practitioner, and project developer throughout project implementation and beyond.

The Project's Potential Impact on Social Change

The potential for this professional development project to impact social change is unlimited. The overarching premise for potential impact is a decrease in the research-practice gap. Social change may also occur through increased knowledge and expanded experiences within PLC. In addition to increasing the extant knowledge on paraprofessional training and preparation, EBP, and EBP implementation, I expect this study to increase understanding of the importance and application of contextual variables in professional settings. Further, social change may occur in the form of improved student outcomes.

This professional development project may provide a framework for future professional development projects. In addition, the professional development project could lead to social change by preparing paraprofessionals for their roles prior to the initiation of services via face-to-face or online training media. In addition, professional development offerings could be extended to parents and families, other professionals, and higher education students and professionals. Ultimately, social change may occur via a movement away from stand-alone workshops to training models that include follow-up coaching.

It is worth reiterating the social change this project could effect for students, paraprofessionals, teachers, schools, and districts. On the local level, this project has the potential to decrease the current gap in practice, and extend to other schools, districts, fields, and settings. In addition to the knowledge and skills paraprofessionals and teachers may gain, the level of administrative support may increase. The financial aspect of social change impact is noted. This project provides money-saving opportunities to decrease costs of professional development by incorporating BCBA supervisees in the coaching and training process. Given that paraprofessionals can earn a recognized certification and increase their earning potential, knowledge, skills, and preparedness, they may ultimately become more motivated to increase their longevity as paraprofessionals. At the same time, teacher retention may also increase because their paraprofessionals' knowledge, skills, and preparedness may increase thus decreasing their frustration and providing them with "true" additional supports. Successful implementation and outcomes could result in replication via research and direct collaboration with the BACB. Cumulatively, the impact of potential social change stemming from this project extends beyond the

building and district levels, and enters the realm of regional, national, and international special education processes.

Reflection on the Importance of the Work

I am beginning to see the light at the end of the tunnel. As I approach the end of this journey, I have gained incredible knowledge and insight on my practices as special educator, BCBA, LBS, adjunct professor, scholar, practitioner, and researcher. I undoubtedly understand and have experienced the impact of time and effort on the quality of research. My appreciation and understanding of the value of qualitative research is unquestionable. The experiences I have gained from meeting participants, interacting with them during interviews, and listening to their reflections will remain indelibly etched on my mind. I remain eternally grateful and indebted to everyone who contributed to the completion of this study in one way or another, but most importantly, to all participants. They were willing to forsake their very limited time to meet with me to participate in the study. Their actions speak volumes regarding their dedication and commitment to social change. As I reflect on the importance of this work, I am more challenged to continue to pursue social change when I consider that the number of special education students is increasing, including those with autism. I also ponder on the fact that although number of paraprofessionals and their level of experience and training should increase parallelly, this is not occurring. The discrepancy between what should occur and what is occurring indicates a problem exists and that change is warranted.

At a minimum, the proposed professional development plan will bring to light the issues facing special education paraprofessionals, students, teachers, administrators, and other special education and multidisciplinary team members. Given my understanding

and belief that this professional development plan will bring added value to the local research sites, my goal is to knock down walls, share knowledge, and inspire others via social change. I intend to achieve this goal by sharing the professional development plan at the local research sites, within the local school district, and across school systems at the state, regional, and national levels. Further, I intend to investigate the effects of the professional development plan through a valid and reliable research study. I also plan to seek publication of this study in a peer-reviewed journal.

My honest and simplest desire is to help those who need help. I hope to achieve this desire by providing a plethora of information and resources to special education professionals, families, and other cross-disciplinary team members. I intend for this professional development project to be replicated not only across school systems at the prekindergarten to grade 12 level, but also in tertiary education and multidisciplinary fields, including ABA, general education, counseling, psychology, criminal justice, and business administration. Further, I hope to transfer the findings and resources on the international level, beginning with my home country, Grenada, located in the Eastern Caribbean. Although change across the United States is good, world change is better.

My personal, professional, and academic growth throughout this doctoral process cannot be understated. Despite my growth, I remain sincere to myself as demonstrated through my authenticity. At the same time, I continue to be remain true to the field by appreciating the multitude of epistemologies that pervade the field. I am honored to label myself a special education scholar-practitioner-researcher and remain proud of all my accomplishments.

Implications, Applications, and Directions for Future Research

Paraprofessionals require effective preparation and training to fulfil their roles effectively and implement EBP. Coupled with the results from this study, the professional development project designed for the local setting offers insight into specific applications that should be targeted in future professional development activities. The benefit to be gained from special education paraprofessionals, teachers, administrators, directors, and other relevant and related special education professionals in the local setting, are evident even when unspoken. These benefits are expected to transfer to special education professionals in other local, regional, national, and global settings.

The focus of the generalizability of the findings from this study is on transferability based on sociocultural conditions and the applicability of the findings to the local setting. The results of the study and the professional development project may aid in narrowing the research-practice gap in terms of paraprofessional training and preparation, EBP implementation, and professional development designs. The implications of the professional development project include a potential increase in relationship building, communication development, problem-solving skills, and CoP across professional development participants and special education teams.

The results of this study and the recommended professional development project could be expanded to other methodological approaches, including quantitative, action research, single-subject designs, and mixed methods approaches. Moreover, the results of this study and the professional development project could be tested empirically within schools in the local school district. The results and recommendations of this study and the proposed project could also be expanded to other districts, schools, researchers,

practitioners, research organizations, community-based educational agencies, parents, and families. The most significant application of this study and project in future research would be to conduct a follow-up study with those who participated in or were influenced by the professional development project to determine their perceptions of the project and its outcomes. Further, an important area for future research would be for local settings to define EBP in terms of their supports and needs, essentially, coining a PBE definition that applies specifically and individually.

Furthermore, research and findings from this study indicated that in addition to paraprofessionals receiving training on EBP, other special education professionals, such as teachers, should participate in these trainings collaboratively. In fact, in 2017, Britton, Collins, Ault, and Bausch included a classroom teacher, paraprofessional, and peer tutor in the constant time delay training procedure they implemented. Given that the focus of the professional development project that resulted from the findings of this study was on paraprofessionals and teachers, future research and projects could investigate and focus on collaborative trainings for paraprofessionals, teachers, and other special education professionals. Upon completion of my doctoral degree, I intend to create mini professional development projects focused specifically on EBP that align with contextual conditions with the intent of increasing the knowledge and implementation of EBP in various settings. My conviction of my role as a BCBA and special education leader in disseminating this knowledge is very strong.

Conclusion

The opportunity to combine my expertise as a practitioner and my novelty as a researcher has truly been rewarding. It is my hope that the results of this study and the

content of this comprehensive report continue to fuel social change throughout the field of special education but specifically in terms of paraprofessional training, preparation, and support, and EBP implementation. I would be dishonest if I said this study and project were not challenging and sacrificial. However, at the same time, the rewards I received and will continue to receive because of this project by far outweigh those challenges and sacrifices.

The art of being a reflective-reflexive practitioner is now engrained in me and an innate part of my being. I mastered the skill of seeking support and assistance from those who have accumulated more knowledge and experience than me as well as my doctoral Chair, committee members, peers, and colleagues. The support and feedback were very instrumental in my completion of this doctoral study and the finalization of this report.

My current and past experiences with the completion of this doctoral study have triggered a renewed interest in me to pursue additional research and disperse information on paraprofessionals and EBP. Of the most interest to me is continuing in the field as a practitioner focused on training, coaching, and supporting paraprofessionals. The data I collect from the formative and summative evaluations (see Appendix D) included within the project, will provide valuable information in terms of future applications of the same or similar projects. As a BCBA, I eagerly look forward to applying my knowledge and applying basic principles of behavior and other aspects of the field of ABA.

My hope is to continue to apply sociocultural theory and andragogic principles to provide meaningful professional development to those charged with implementing pedagogy for special education students. The social change that may result from this project is limitless. Moreover, the completion of my doctoral studies in special education,

which culminated with this doctoral study and professional development project have certainly shaped me it into an influential, authentic, and transformational leader. The fields of special education and ABA—local and broad—await my guidance and fortitude.

References

Aarons, G. A., & Palinkas, L. A. (2007). Implementation of evidence-based practice in child welfare: Service provider perspectives. *Administration and Policy in Mental Health and Mental Health Services Research, 34*, 411–419.

Ainscow, M. (2014). From special education to effective schools for all: Widening the agenda. In L. Florian (Ed.), *The Sage handbook of special education* (pp. 171–185). Thousand Oaks, CA: SAGE. doi:10.4135/9781446282236.n12

Alberto, P. A., & Troutman, C. A. (2013). *Applied behavior analysis for teachers* (9th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Alborz, A., Pearson, D., Farrell, P., & Howes, A. (2009, April). *The impact of adult support staff on pupils and mainstream schools* (EPPI-Centre Report No. 1702T). London, England: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Retrieved from http://eppi.ioe.ac.uk/cms/Portals/0/PDF%20reviews%20and%20summaries/Support%20staff%20TRweb.pdf?ver=2009-04-30-145002-863

Allen, M., & Ashbaker, B. Y. (2004). Strengthening schools: Involving paraprofessionals in crisis prevention and intervention. *Intervention in School & Clinic, 39*(3), 139–146.

Alquarini, T., & Gut, D. (2012). Critical components of successful inclusion of students with severe disabilities: Literature review. *International Journal of Special Education*, *27*(1), 1–18.

AnnLand, L., Creech, B., Clayton, J., Wright, S., Wright, Z. D., Hurte, M., . . . Batton, B. J. (2001). *Exploring the role of special education paraeducators*. Lexington, KY:

Kentucky Educational Television. Retrieved from https://education.ket.org/wp-content/uploads/2016/09/paraeducators_programs1-3.pdf

Appl, D. (2006). First-year early childhood special education teachers and their assistants: "Teaching along with her." *TEACHING Exceptional Children*, *38*(6), 34–40.

August, G. J., Gewirtz, A., & Realmuto, G. M. (2010). Moving the field of prevention science to service: Integrating evidence-based preventative interventions into community practice through adapted and adaptive models. *Applied & Preventative Psychology*, *14*(1), 72–85.

Azad, G. F., Locke, J., Downey, M. M., Xie, M., & Mandell, D. S. (2015). One-to-one assistant engagement in autism support classrooms. *Teacher Education and Special Education*, *38*(4), 337–346. doi:10.1177/0888406415603208

Baer, D. M., Wolf, M. M., & Risley, T. R. (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, *20*(4), 313–327.

Barnes, M. E. (2016). The student as teacher educator in service-learning. *Journal of Experiential Education*, *39*(3), 238–253. doi:10.1177/1053825916643831

Bays, D. A., & Crockett, J. B. (2007). Investigating instructional leadership for special education. *Exceptionality*, *15*(3), 143–161.

Behavior Analyst Certification Board. (n.d.1). *About the credential.* Retrieved from https://bacb.com/rbt/

Behavior Analyst Certification Board. (n.d.2). *Maintaining the RBT credential.* Retrieved from https://bacb.com/maintaining-rbt/

Behavior Analyst Certification Board. (2013). *Registered Behavior Technician™ task list.* Retrieved from https://bacb.com/wp-content/uploads/2016/10/161019-RBT-task-list-english.pdf

Bergan, J. R., & Kratochwill, T. R. (1990). *Behavioral consultation and therapy.* New York, NY: Plenum Press.

Biggs, E. E., Gilson, C. B., & Carter, E. W. (2016). Accomplishing more together: Influences to the quality of professional relationships between special educators and paraprofessionals. *Research and Practice for Persons with Severe Disabilities*, *41*(4), 256–272. doi:10.1177/1540796916665604

Billingsley, B., Carlson, E., & Klein, S. (2004). The working conditions and induction support of early career special educators. *Exceptional Children, 70*(3), 333–347.

Bingham, M. A., Spooner, F., & Browder, D. (2007). Training paraeducators to promote the use of augmentative and alternative communication by students with significant disabilities. *Education and Training in Developmental Disabilities, 42*(3), 339–352. Retrieved from http://www.daddcec.org/Portals/0/CEC/Autism_Disabilities/Research/Publications/Education_Training_Development_Disabilities/2007v42_Journals/ETDD_200709v42n3p339-352_Training_Paraeducators_Promote_Use_Augmentative_Alternative.pdf

Bishop, C. D., Snyder, P. A., & Crow, R. E. (2015). Impact of video self-monitoring with graduated training on implementation of embedded instructional learning trials. *Topics in Early Childhood Special Education*, *35*(3), 170–182. doi:10.1177/0271121415594797

Blanton, L.P., Sindelar, P.T., & Correa, V. I. (2006). Models and measures of beginning teacher quality. *The Journal of Special Education, 40*(2), 115–127.

Blatchford, P., Russell, A., & Webster, R. (2012). *Reassessing the impact of teaching assistants: How research challenges practice and policy*. New York, NY: Routledge.

Boardman, A., G., Arguelles, M. E., Vaughn, S., Hughes, M. T., & Klingner, J. (2005). Special education teachers' views of research-based practices. *The Journal of Special Education, 39*(3), 168–180.

Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theories and methods* (5th ed.). Los Angeles, CA: SAGE.

Bolton, G. (2010). Reflection and reflexivity: What and why. In *Reflective practice: Writing and professional development* (pp. 1–24). Thousand Oaks, CA: SAGE.

Bosworth, K., Gingiss, P., Pothoff, S. J., & Roberts-Gray, C. A. (1999). A Bayesian model to predict the success of the implementation of health and education innovations in school centered programs. *Evaluation and Program Planning, 22*(1), 1–11.

Bourke, R., & Mentis, M. (2014). Self-assessment as an 'insider' lens for learning. In L. Florian (Ed.), *The Sage handbook of special education*, 2nd ed. (pp. 537–552). Thousand Oaks, CA: SAGE. doi:10.4135/9781446282236.n34

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Lawrenceville, NJ: Princeton.

Breton, W. (2010). Special education paraprofessionals: Perceptions of preservice preparation, supervision, and ongoing developmental training. *International*

Journal of Special Education, 25(1), 34–45. Retrieved from http://files.eric.ed.gov/fulltext/EJ890564.pdf

Britton, N. S., Collins, B. C., Ault, M. J., & Bausch, M. E. (2017). Using a constant time delay procedure to teach support personnel to use a simultaneous prompting procedure. *Focus on Autism and Other Developmental Disabilities, 32*(2), 102–113. doi:10.1177/1088357615587505

Brock, M. E., & Carter, E. W. (2013). A systematic review of paraprofessional-delivered educational practices to improve outcomes for students with intellectual and developmental disabilities. *Research and Practice for Persons with Severe Disabilities, 38*(4), 211–221. doi:10.1177/154079691303800401

Brock, M. E., & Carter, E. W. (2015). Effects of a professional development package to prepare special education paraprofessionals to implement evidence-based practice. *The Journal of Special Education, 49*(1), 39–51. doi:10.1177/0022466913501882

Brock, M. E., & Carter, E. W. (2016). Efficacy of teachers training paraprofessionals to implement peer support arrangements. *Exceptional Children, 82*(3), 354-371. doi:10.1177/0014402915585564

Brock, M. E., Huber, H. B., Carter, E. W., Juarez, A. P., & Warren, Z. E. (2014). Statewide assessment of professional development needs related to educating students with autism spectrum disorder. *Focus on Autism and Other Developmental Disabilities, 29*(2), 67–79. doi:10.1177/1088357614522290

Brown, J., & Devecchi, C. (2013). The impact of training on teaching assistants' professional development: Opportunities and future strategy. *Professional Development in Education, 39*(3), 369–386. doi:10.1080/19415257.2012.762720

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18*(1), 32–42. Retrieved from http://www.johnseelybrown.com/Situated%20Cognition%20and%20the%20culture%20of%20learning.pdf

Brown, P., Stephenson, J., & Carter, M. (2014). Multicomponent training of teachers of students with severe disabilities. *Teacher Education and Special Education, 37*(4), 347–362. doi:10.1177/0888406414546873

Brown, T. L., Gatmaitan, M., & Harjusola-Webb, S. M. (2014). Using performance feedback to support paraprofessionals in inclusive preschool classrooms. *Young Exceptional Children, 17*(2), 21–31. doi:10.1177/1096250613493189

Brown, T. S., & Stanton-Chapman, T. L. (2015). Experiences of paraprofessionals in US preschool special education and general education classrooms. *Journal of Research in Special Educational Needs, 17*(1), 18–30. doi:10.1111/1471-3802.12095

Bruder, M. B., Mogro-Wilson, C., Stayton, V. D., & Dietrick, S. L. (2009). The national status of in-service professional development systems for early intervention and early childhood special education practitioners. *Infants and Young Children, 22*(1), 13–20.

Bryan, R. R., McCubbin, J. A., & van der Mars, H. (2013). The ambiguous role of the paraeducator in the general physical education environment. *Adapted Physical Activity Quarterly, 30*(2), 164–183.

Burgess, H., & Mayes, A. S. (2009). An exploration of higher level teaching assistants' perceptions of their training and development in the context of school workforce reform. *Support for Learning, 24*(1), 19–25.

Burns, M. K., & Ysseldyke, J. E. (2009). Reported prevalence of evidence-based instructional practices in special education. *The Journal of Special Education, 43*(1), 3–11.

Butt, R., & Lowe, K. (2012). Teaching assistants and class teachers: Differing perceptions, role confusion and the benefits of skills-based training. *International Journal of Inclusive Education, 16*(2), 207–219. doi:10.1080/13603111003739678

Callahan, K., Hughes, H. L., Mehta, S., Toussaint, K. A., Nichols, S. M., Ma, P. S., ... & Wang, H. T. (2016). Social validity of evidence-based practices and emerging interventions in autism. *Focus on Autism and Other Developmental Disabilities*, 00(0), 1–11. Advance Online Publication. doi:10.1177/1088357616632446

Cancio, E. J., Albrecht, S. F., & Johns, B. H. (2014). Combating the attrition of teachers of students with EBD: What can administrators do? *Intervention in School and Clinic, 49*(5), 306–312. doi:10.1177/1053451213513953

Carter, E., O'Rourke, L., Sisco, L. G., & Pelsue, D. (2009). Knowledge, responsibilities, and training needs of paraprofessionals in elementary and secondary

schools. *Remedial and Special Education, 30*(6), 344–359. doi:10.1177/0741932508324399

Carter, M., Strnadová, I., & Stephenson, J. (2012). Reported prevalence of evidence-based instructional practices by special educators in the Czech Republic. *European Journal of Special Needs Education*, *27*(3), 319–335. doi:10.1080/08856257.2012.691229

Chopra, R., Banerjee, R., DiPalma, G., Merrill, L., & Ferguson, A. (2013). Colorado's model for preparing paraprofessionals for rural early intervention programs. *Rural Special Education Quarterly*, *32*(1), 20.

Chopra, R. V., & French, N. K. (2004). Paraeducator relationships with parents of students with significant disabilities. *Remedial and Special Education, 25*(4), 240–251.

Chopra, R. V., Sandoval-Lucero, E., & French, N. K. (2011). Effective supervision of paraeducators: Multiple benefits and outcomes. *National Teacher Education Journal*, *4*(2), 15–26.

Chopra, R. V., Sandoval-Lucero, E., Aragon, L., Bernal, C., De Balderas, H. B., & Carroll, D. (2004). The paraprofessional role of connector. *Remedial and Special Education*, *25*(4), 219–231.

Chopra, R., & Westland, C. (2015). *Quick Q&A: Effective supervision of paraeducators: Convention workshop.* Retrieved from https://www.cec.sped.org/News/Special-Education-Today/Effective-Supervision-of-Paraeducators

Chu, M. (2014). *Developing mentoring and coaching relationships in early care and education: A reflective approach* (1st ed.). Boston, MA: Pearson.

Clarke, E., & Visser, J. (2017). How do teaching assistants view their role in managing behaviour and cultivate their learning and understanding in relation to managing behaviour? *Teacher Education Advancement Network Journal*, *9*(1), 66–79.

Coleman, M. R., Gallagher, J. J., & Job, J. (2012). Developing and sustaining professionalism within gifted education. *Gifted Child Today*, *35*(1), 27–36.

Cook, B. G., Cook, L., & Landrum, T. J. (2013). Moving research into practice: Can we make dissemination stick? *Exceptional Children, 79*(2), 163–180.

Cook, B. G., & Cook, S. C. (2013). Unraveling evidence-based practices in special education. *The Journal of Special Education, 47*(2), 71–82.

Cook, B. G., & Odom, S. L. (2013). Evidence-based practices and implementation science in special education. *Exceptional Children, 79*(2), 135–144.

Cook, B. G., & Smith, G. J. (2012). Leadership and instruction: Evidence-based practices in special education. In J. B. Crockett, B. S. Billingsley, & M. L. Boscardin (Eds.), *Handbook of leadership and administration for special education* (pp. 281–296). New York, NY: Taylor & Francis.

Cook, B. G., Tankersley, M., & Harjusola-Webb, S. (2008). Evidence-based special education and professional wisdom: Putting it all together. *Intervention in School and Clinic, 44*(2), 105–111. doi:10.1177/1053451208321566

Cook, B. G., Tankersley, M., & Landrum, T. J. (2013). Evidence-based practices in learning and behavioral disabilities: The search for effective instruction. *Advances in Learning and Behavioral Disabilities, 26,* 1–19. doi:10.1108/S0735-004X(2013)00000026003

Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.

Corey, G., Corey, M. S., Corey, C., & Callanan, P. (2015). *Issues and ethics in the helping professions* (9th ed.). Stamford, CT: Cengage.

Correa, V. I., & Wagner, J. Y. (2011). Principals' roles in supporting the induction of special education teachers. *Journal of Special Education Leadership, 24*(1), 17–25.

Council for Exceptional Children. (2011). *Special education paraeducator common core specialty set for PSPC.* Retrieved from https://www.cec.sped.org/~/media/Files/Standards/Paraeducator%20Sets/Paraeducator%20%20Common%20Core%20Specialty%202011.docx

Council for Exceptional Children. (2015). *What every special educator must know: Professional ethics & standards* (7th ed.). Arlington, VA: Council for Exceptional Children.

Creswell, J. W. (2012*). Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (Laureate Education Inc. custom ed.). Boston MA: Pearson.

Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist, 30*(2), 116–127.

Da Fonte, M. A., & Capizzi, A. M. (2015). A module-based approach: Training paraeducators on evidence-based practices. *Physical Disabilities: Education and Related Services, 34*(1), 31–54. doi:10.14434/pders.v34i1.13823

Detrich, R., Slocum, T. A., & Spencer, T. D. (2013). Evidence-based education and best available evidence: Decision-making under conditions of uncertainty. *Advances in Learning and Behavioral Disabilities, 26,* 21–44. doi:10.1108/S0735-004X(2013)00000026004

Devlin, P. (2005). Effect of continuous improvement training on student interaction and engagement. *Research and Practice for Persons with Severe Disabilities*, *30*(2), 47–59.

Division for Early Childhood. (2014). *DEC recommended practices in early intervention/early childhood special education*. Retrieved from http://www.dec-sped.org/recommendedpractices

Douglas, S. N., Chapin, S. E., & Nolan, J. F. (2016). Special education teachers' experiences supporting and supervising paraeducators: Implications for special and general education settings. *Teacher Education and Special Education, 39*(1), 60–74. doi:10.1177/0888406415616443

Douglas, S. N., Light, J. C., & McNaughton, D. B. (2013). Teaching paraeducators to support the communication of young children with complex communication needs. *Topics in Early Childhood Special Education*, *33*(2), 91–101. doi:10.1177/0271121412467074

Douglas, S. N., McNaughton, D., & Light, J. (2013). Online training for paraeducators to support the communication of young children. *Journal of Early Intervention*, *35*(3), 223–242. doi:10.1177/1053815114526782

Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology*, *41*(3-4), 327–350.

Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research*, *18*(2), 237–256.

Dynarski, M. (2010). Connecting Education Research to Practitioners—and Practitioners to Education Research. *Phi Delta Kappan*, *92*(1), 61–65.

Elliott, D., & Mihalic, S. (2004). Issues in disseminating and replicating effective prevention programs. *Prevention Science*, *5*(1), 47–53.

Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualiza*tion. Journal of Education and Work, 14*(1), 133–156.

Etscheidt, S. (2005). Paraprofessional services for students with disabilities: A legal analysis of issues. *Research and Practice for Persons with Severe Disabilities, 30*(2), 60–80.

Every Student Succeeds Act of 2015, Pub. L. 114-95, § 2101 *et set*, 1177 Stat. 120 (2015). Retrieved from https://www.congress.gov/114/bills/s1177/BILLS-114s1177enr.pdf

Feldman, E. K., & Matos, R. (2013). Training paraprofessionals to facilitate social interactions between children with autism and their typically developing peers. *Journal of Positive Behavior Interventions, 15*(3), 169–179. http://dx.doi.org/10.1177/1098300712457421

Fetherston, A. M., & Sturmey, P. (2014). The effects of behavioral skills training on instructor and learner behavior across responses and skill sets. *Research in Developmental Disabilities*, *35*(2), 541–562. doi:10.1016/j.ridd.2013.11.006

Feynman, R. (1988). *The value of science* (No. CBPF-CS-88-10). Retrieved from http://www.faculty.umassd.edu/j.wang/feynman.pdf

Fisher, M., & Pleasants, S. L. (2012). Roles, responsibilities, and concerns of paraeducators: Findings from a statewide survey. *Remedial and Special Education*, *33*(5), 287–297. doi:10.1177/0741932510397762

Fixsen, D. L., Blase, K., Metz, A., & Van Dyke, M. (2013). Statewide implementation of evidence-based programs. *Exceptional Children, 79*(2), 213–230.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. and Wallace, F. (2005). *Implementation research: A synthesis of the literature* (FMHI Publication #231). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network. Retrieved from http://nirn.fpg.unc.edu/sites/nirn.fpg.unc.edu/files/resources/NIRN-MonographFull-01-2005.pdf

Flores, B. B., & Clark, E. R. (2004). A critical examination of *normalistas* self-conceptualization and teacher-efficacy. *Hispanic Journal of Behavioral Sciences, 26*(2), 230–257.

Franks, R. P., & Schroeder, J. (2013). Implementation science: What do we know and where do we go from here? In T. Halle, A. Metz, & I. Martinez-Beck (Eds.), *Applying implementation science in early childhood programs and systems* (pp. 5–19). Baltimore, MD: Brookes.

Freeman, J., & Sugai, G. (2013). Identifying evidence-based special education interventions from single-subject research. *TEACHING Exceptional Children, 45*(5), 6–12.

French, K. (2001). Supervising paraprofessionals: A survey of teacher practices. *The Journal of Special Education, 35*(1), 41–53.

French, N. K., & Cabell, E. A. (1993). Are community college training programs for paraeducators feasible? *Community College Journal of Research and Practice*, *17*(2), 131–140.

French, N. K., & Chopra, R. V. (2006). Teachers as executives. *Theory Into Practice*, *45*(3), 230–238.

French, N. K. (1997). A case study of a speech-language pathologist's supervision of assistants in a school setting: Tracy's story. *Journal of Children's Communication Development, 18*(1), 103–110.

Gable, R. A., Tonelson, S. W., Sheth, M., Wilson, C., & Park, K. L. (2012). Importance, usage, and preparedness to implement evidence-based practices for students with emotional disabilities: A comparison of knowledge and skills of special education and general education teachers. *Education and Treatment of Children, 35*(4), 499–519.

Garner, P. W., Carter McLean, M., Waajid, B., & Pittman, E. R. (2015). Mentoring and professional development in rural Head Start classrooms. *Mentoring & Tutoring: Partnership in Learning*, *23*(4), 293–310. doi:10.1080/13611267.2015.1099868

Ghere, G., & York-Barr, J. (2007). Paraprofessional turnover and retention in inclusive programs: Hidden costs and promising practices. *Remedial and Special Education*, *28*(1), 21–32.

Giangreco, M. F. (2009). *Critical issues brief: Concerns about the proliferation of one-to-one paraprofessionals*. Arlington, VA: Council for Exceptional Children, Division on Autism and Developmental Disabilities.

Giangreco, M. F. (2010). One-to-one paraprofessionals for students with disabilities in inclusive classrooms, is conventional wisdom wrong? *American Association of Intellectual and Developmental Disabilities*, *48*(1), 1–13.

Giangreco, M. F. (2016a, November 28). *Paraeducator support: Recent dissertation abstracts on paraprofessional topics*. Retrieved from http://www.uvm.edu/~cdci/parasupport/?Page=dissert.html

Giangreco, M. F. (2016b, November 28). *Selected paraprofessional references: 1990–2016 (arranged chronologically)*. Retrieved from http://www.uvm.edu/~cdci/?Page=parasupport/chrono.html

Giangreco, M. F., Backus, L., CichoskiKelly, E., Sherman, P., & Mavropoulos, Y. (2003). Paraeducator training materials to facilitate inclusive education: Initial field-test data. *Rural Special Education Quarterly*, *22*(1), 17–27. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.574.6805&rep=rep1&type=pdf

Giangreco M. F., & Broer, S. M. (2005). Questionable utilization of paraprofessionals in inclusive schools: Are we addressing symptoms or causes. *Focus on Autism and Other Developmental Disabilities 20*(1), 10-–. Retrieved from

https://www.gvsu.edu/cms4/asset/64CB422A-ED08-43F0-F795CA9DE364B6BE/questionable_utilization_of_paras.pdf

Giangreco, M. F., Broer, S. M., & Suter, J. C. (2011). Guidelines for selecting alternatives to overreliance on paraprofessionals: Field-testing in inclusion-oriented schools. *Remedial and Special Education, 32*(1), 22–38.

Giangreco, M. F., Doyle, M. B., & Suter, J. C (2012). Constructively responding to requests for paraprofessionals: We keep asking the wrong questions. *Remedial and Special Education, 33(6),* 362–373.

Giangreco, M. F., Doyle, M. B., & Suter, J. C. (2014). Teacher assistants in inclusive classrooms. In L. Florian (Ed.), The SAGE handbook of special education (2nd ed., pp. 691–702). London: SAGE. doi:10.4135/9781446282236.n51

Giangreco, M. F., Edelman, S. W., Broer, S. M., & Doyle, M. (2001). Paraprofessional support of students with disabilities: Literature from the past decade. *Exceptional Children, 68*(1), 45–63. Retrieved from http://www.uvm.edu/~cdci/parasupport/EC01%2068(1),%2045-63.pdf

Giangreco, M. F., Smith, C. S., & Pinckney, E. (2006). Addressing the paraprofessional dilemma in an inclusive school: A program description. *Research and Practice for Persons with Severe Disabilities, 31*(3), 215–229.

Giangreco, M. F., Suter, J. C., & Doyle, M. B. (2010). Paraprofessionals in inclusive schools: A review of recent research. *Journal of Educational and Psychological* Consultation, *20*(1), 41–57. doi:10.1080/10474410903535356

Gilbertson, D., Witt, J.C., Singletary, L.L., & VanDerHeyden, A. (2007). Supporting teacher use of interventions: Effects of response dependent performance feedback

on teacher implementation of a math intervention. *Journal of Behavior Education, 16*(4), 311–326.

Goe, L., & Matlach, L. (2014). *Supercharging student success: Policy levers for helping paraprofessionals have a positive influence in the classroom*. Washington, DC: Center on Great Teachers and Leaders at American Institutes for Research. Retrieved from http://www.gtlcenter.org/sites/default/files/Snapshot_Paraprofessional.pdf

Goldbloom, J. (2016, September). *Paraprofessionals 2016-2017 special education paraprofessional online training series brochure now available*! Retrieved from http://www.pattan.net/category/Educational%20Initiatives/Paraprofessionals/blog/20152016_Special_Education_Paraprofessional_Online_Training_Series_Brochure_Now_Available_.html

Greenway, R., McCollow, M., Hudson, R. F., Peck, C., & Davis, C. A. (2013). Autonomy and accountability: Teacher perspectives on evidence-based practice and decision-making for students with intellectual and developmental disabilities. *Education and Training in Autism and Developmental Disabilities, 48*(4), 456–468.

Gregson, J. A., & Sturko, P. A. (2007). Teachers as adult learners: Reconceptualizing professional development. *Journal of Adult Education, 36*(1), 1–18.

Gresham, F. M. (1989). Assessment of treatment integrity in school consultation and prereferral intervention. *School Psychology Review, 18*(1), 37–50.

Griffin-Shirley, N., & Matlock, D. (2004). Paraprofessionals speak out: A survey. *RE:View, 36*(3), 127–136.

Guerin, B. (2016). *How to rethink human behavior: A practical guide to social contextual analysis.* London: Routledge.

Guerin, B., & de Oliveira Ortolan, M. (2017). Analyzing domestic violence behaviors in their contexts: Violence as a continuation of social strategies by other means. *Behavior and Social Issues, 26,* 5–26.

Guerin, B., & Guerin, P. (2014). "Mental illness" symptoms as extensions of strategic social behaviour: The case of multicultural mental health. *Rivista di Psicologia Clinica, 1,* 67-81. Retrieved from http://www.rivistadipsicologiaclinica.it/ojs/index.php/rpc/article/view/438/554

Hagermoser Sanetti, L. M., & Kratochwill, T. R. (2009). Toward developing a science of treatment integrity: Introduction to the special series. *School Psychology Review*, *38*(4), 445–459.

Hall, L. J. (2015). Sustaining evidence-based practices by graduated special educators of students with ASD creating a community of practice. *Teacher Education and Special Education*, *38*(1), 28–43. doi:10.1177/0888406414558883

Haliburton, T. C. (1849). *The old judge, or life in a colony*, 2. London: Henry Colburn.

Hamilton, J. D., Kendall, P. C., Gosch, E., Furr, J. M., & Sood, E. (2008). Flexibility within fidelity. *Journal of the American Academy of Child & Adolescent Psychiatry*, *47*(9), 987–993.

Han, S. S., & Weiss, B. (2005). Sustainability of teacher implementation of school-based mental health programs. *Journal of Abnormal Child Psychology*, *33*(6), 665–679.

Harn, B., Parisi, D., & Stoolmiller, M. (2013). Balancing fidelity with flexibility and fit: What do we really know about fidelity of implementation in schools? *Exceptional Children, 79*(2), 181–193.

Harper, C. B., Symon, J. B. G., & Frea, W. D. (2008). Recess is time-in: Using peers to improve social skills of children with autism. *Journal of Autism and Developmental Disorders*, *38*(5), 815–826.

Harris, L. R., & Aprile, K. T. (2015). 'I can sort of slot into many different roles': Examining teacher aide roles and their implications for practice. *School Leadership & Management*, *35*(2), 140–162. doi:10.1080/13632434.2014.992774

Hemmeter, M. L., Hardy, J. K., Schnitz, A. G., Adams, J. M., & Kinder, K. A. (2015). Effects of training and coaching with performance feedback on teachers' use of Pyramid Model practices. *Topics in Early Childhood Special Education*, *35*(3), 144–156. doi:10.1177/02711214155949

Hicks, T. B., Shahidullah, J. D., Carlson, J. S., & Palejwala, M. H. (2014). Nationally Certified School Psychologists' use and reported barriers to using evidence-based interventions in schools: The influence of graduate program training and education. *School Psychology Quarterly, 29*(4), 469–487. doi:10.1037/spq0000059

Hudson, R. F., Davis, C. A., Blum, G., Greenway, R., Hackett, J., Kidwell, J., . . . Schulze, M. (2016). A socio-cultural analysis of practitioner perspectives on implementation of evidence-based practice in special education. *The Journal of Special Education, 50*(1), 27–36. doi:10.1177/0022466915613592

Hughes, M. T., & Valle-Riestra, D. M. (2008). Responsibilities, preparedness, and job satisfaction of paraprofessionals: Working with young children with disabilities. *International Journal of Early Years Education*, *16*(2), 163–173.

Individuals with Disabilities Education Improvement Act of 2004, Pub. L. 108–446, § 616 *et seq*, 118 Stat. 2647 (2004). Retrieved from http://www.gpo.gov/fdsys/pkg/PLAW-108publ446/html/PLAW-108publ446.htm

Jarvis, P. (1999). *The practitioner-researcher: Developing theory from practice.* San Francisco, CA: Jossey-Bass.

Jenkins, J. R., Vadasy, P. E., Firebaugh, M., & Profilet, C. (2000). Tutoring first-grade struggling readers in phonological reading skills. *Learning Disabilities Research and Practice, 15*(2), 75–84.

Johnson, L. D., & McMaster, K. L. (2013). Adapting research-based practices with fidelity: Flexibility by design. *Advances in Learning and Behavioral Disabilities, 26*, 65–91. doi:10.1108/S0735-004X(2013)00000026006

Johnson, L. D., Wehby, J. H., Symons, F. J., Moore, T. C., Maggin, D. M., & Sutherland, K. S. (2014). An analysis of preference relative to teacher implementation of intervention. *The Journal of Special Education, 48*(3), 214–224. doi:10.1177/0022466913475872

Jones, C. R., Ratcliff, N. J., Sheehan, H., & Hunt, G. H. (2012). An analysis of teachers' and paraeducators' roles and responsibilities with implications for professional development. *Early Childhood Education, 40*(1), 19–24.

Jones, M. L. (2009). A study of novice special educators' views of evidence-based practices. *Teacher Education and Special Education: The Journal of the Teacher*

Education Division of the Council for Exceptional Children, *32*(2), 101–120. doi:10.1177/0888406409333777

Kainz, K., & Metz, A. (2017). Causal thinking for embedded, integrated implementation research. *Evidence & Policy: A Journal of Research, Debate and Practice,* 1–17. doi:10.1332/174426416X14779418584665

Kearney, S. (2015). Reconceptualizing beginning teacher induction as organizational socialization: A situated learning model. *Cogent Education, 2*(1), 1–11.

Kershner, R. (2014). What do classroom teachers need to know about meeting special education needs? In L. Florian (Ed.), *The Sage handbook of special education*, (2nd ed., pp. 841–857). Thousand Oaks, CA: SAGE. doi:10.4135/9781446282236.n51

Klingner, J. K. & Boardman, A. G. (2011). Addressing the 'research gap' in special education through mixed methods. *Learning Disability Quarterly, 34*(3), 208–218.

Klingner, J. K., Boardman, A. G., & McMaster, K. L. (2013). What does it take to scale up and sustain evidence-based practices? *Exceptional Children, 79*(2), 195–211.

Koegel, R. L., Kim, S., & Koegel, L. K. (2014). Training paraprofessionals to improve socialization in students with ASD. *Journal of Autism and Developmental Disorders, 44*(9), 2197–2208. doi:10.1007/s10803-014-2094-x.

Koelsch, L. E. (2013). Reconceptualizing the member check interview. *International Journal of Qualitative Methods, 12*(1), 168–179. Retrieved from https://ejournals.library.ualberta.ca/index.php/IJQM/article/download/12327/15117

Kratochwill, T. R., & Bergan, J. R. (1990). *Behavioral consultation in applied settings: An individual guide.* New York: Plenum.

Krick Oborn, K. M., & Johnson, L. D. (2015). Coaching via electronic performance feedback to support home visitors' use of caregiver coaching strategies. *Topics in Early Childhood Special Education*, *35*(3), 157–169. doi:10.1177/0271121415592411

Landrum, T. J., Cook, B. G., Tankersley, M., & Fitzgerald, S. (2002). Teacher perceptions of the trustworthiness, usability, and accessibility of information from different sources. *Remedial and Special Education*, *23*(1), 42–48.

Lane, K. L., Barton-Arwood, S. M., Nelson, J. R., & Wehby, J. H. (2008). Academic performance of students with emotional and behavioral disorders served in a self-contained setting. *Journal of Behavioral Education, 17*(1), 43–62.

Lane, K. L., Wehby, J. H., Little, M. A., & Cooley, C. (2005). Academic, social, and behavioral profiles of students with emotional and behavioral disorders educated in self-contained classrooms and self-contained schools: Part I—Are they more alike than different? *Behavioral Disorders, 30*(4), 349–361.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, MA: Cambridge.

Ledford, J. R., Zimmerman, K. N., Chazin, K. T., Patel, N. M., Morales, V. A., & Bennett, B. P. (2017). Coaching paraprofessionals to promote engagement and social interactions during small group activities. *Journal of Behavioral Education*, 1–23. doi:10.1007/s10864-017-9273-8

Ledford, J. R., Zimmerman, K. N., Harbin, E. R., & Ward, S. E. (2017). Improving the use of evidence-based instructional practices for paraprofessionals. *Focus on Autism and Other Developmental Disabilities*, 00(0), 1–11. Advance Online Publication. doi.10.1177/1088357617699178

Leech, N. L., & Onwuegbuzie, A. J. (2007). An array of qualitative data analysis tools: A call for data analysis triangulation. *School Psychology Quarterly, 22*(4), 557–584. doi:10.1037/1045-3830.22.4.557

Leko, M. M. (2015). To adapt or not to adapt. *TEACHING Exceptional Children*, *48*(2), 80–85. doi:10.1177/0040059915605641

Leontiev, A. N. (1978). *Activity, consciousness, and personality* (M. J. Hall, Trans.). Englewood Cliffs, NJ: Prentice Hall. Retrieved from https://www.marxists.org/archive/leontev/works/activity-consciousness.pdf

Leugi, G. B., & Guerin, B. (2016). To spark a social revolution behavior analysts must embrace community-based knowledge. *Revista Brasileira de Terapia Comportamental e Cognitiva*, *18,* 73–83.

Likins, M., Zaleski, D., & Gross, L. (2016, April 12). *The Every Student Succeeds Act (ESSA): Implications for paraeducators, administrators, and teachers*. Teamwork Makes the Dreamwork! 33rd Annual NRCP Conference, April 1–3, 2016. Oak Brook. Retrieved from http://www.slideshare.net/nrcpara/essa-implications-for-paraeducators-administrators-and-teachers

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: SAGE.

Locke, J., Kratz, H., Reisinger, E., & Mandell, D. (2014). Implementation of evidence-based practices for children with autism spectrum disorders in public schools. In

R. Beidas & P. Kendall (Eds.), *Child and adolescent therapy: Dissemination and implementation of empirically supported treatments* (pp. 261-276). New York, NY: Oxford University.

Locke, L. F., Spirduso, W. W., & Silverman, S. (1993). *Proposals that work: A guide for planning dissertations and grant proposals* (3rd ed.). Newbury Park, CA: SAGE.

Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational research: From theory to practice* (2nd ed.). San Francisco, CA: John Wiley & Sons.

Losinski, M., Katsiyannis, A., Balluch, F., & White, S. (2015). Litigation and students with disabilities: An overview of cases from 2013. *Journal of Special Education Leadership*, *28*(1), 25–37.

Love, J. R., Carr, J. E., LeBlanc, L. A., & Kisamore, A. N. (2013). Training behavioral research methods to staff in an early and intensive behavioral intervention setting: A program description and preliminary evaluation. *Education and Treatment of Children*, *36*(1), 139–160.

Luria, A. R. (1974, 1974). *Ob istoricheskom razvitii poznavatel'nykh protessov* (*Cognitive development: Its social and cultural foundations*). Moscow: Nauka.

Maggin, D. M., Fallon, L. M., Sanetti, L. M. H., & Ruberto, L. M. (2012). Training paraeducators to implement a group contingency protocol: Direct and collateral effects. *Behavioral Disorders*, *38*(1), 18–37.

Mandell, D. S., Stahmer, A. C., Shin, S., Xie, M., Reisinger, E., & Marcus, S. C. (2013). The role of treatment fidelity on outcomes during a randomized field trial of an autism intervention. *Autism*, *17*(3), 281–295. doi:10.1177/1362361312473666

Marder, T., & deBettencourt, L. U. (2015). Teaching students with ASD using evidence-based practices: Why is training critical now? *Teacher Education and Special Education, 38*(1), 5–12. doi:10.1177/0888406414565838

Mason, M. (2009). Making educational development and change sustainable: Insights from complexity theory. *International Journal of Educational Development*, *29*(2), 117–124.

Mason, R. A., Schnitz, A. G., Wills, H. P., Rosenbloom, R., Kamps, D. M., & Bast, D. (2017). Impact of a teacher-as-coach model: Improving paraprofessionals fidelity of implementation of discrete trial training for students with moderate-to-severe developmental disabilities. *Journal of Autism and Developmental Disorders*, *47*(6), 1–12. doi:10.1007/s10803-017-3086-4

Maxwell, J. A. (2005). *Qualitative research design. An interactive approach* (2nd ed.). Thousand Oaks, CA: SAGE.

Maxwell, J. C. (2008). *Leadership gold: Lessons I've learned from a lifetime of leading.* Nashville, TN: Thomas Nelson.

McCulloch, E. B., & Noonan, M. J. (2013). Impact of online training videos on the implementation of mand training by three elementary school paraprofessionals. *Education and Training in Autism and Developmental Disabilities*, *48*(1), 132–141.

McGrath, M. Z., Johns, B. H., & Mathur, S. R. (2010). Empowered or overpowered? Strategies for working effectively with paraprofessionals. *Beyond Behavior, 9*(2), 2–6.

McIntosh, K., Mercer, S. H., Hume, A. E., Frank, J. L., Turri, M. G., & Mathews, S. (2013). Factors related to sustained implementation of schoolwide positive behavior support. *Exceptional Children, 79*(3), 293.

McIntosh, K., & Turri, M. G. (2014). Positive behavior support: Sustainability and continuous regeneration. In C. R. Reynolds, K. J. Vannest & E. Fletcher-Janzen (Eds.), *Encyclopedia of special education: A reference for the education of children, adolescents, and adults with disabilities and other exceptional individuals* (4th ed., pp. 2061-2064). Hoboken, NJ: Wiley. Retrieved from http://files.eric.ed.gov/fulltext/ED562561.pdf

McLellan, E., MacQueen, K. M., & Neidig, J. L. (2003). Beyond the qualitative interview: Data preparation and transcription. *Field Methods, 15*(1), 63–84.

Mertens, D. M., & Wilson, A. T. (2012). *Program evaluation theory and practice: A comprehensive guide*. New York, NY: Guilford.

Metz, A., Halle, T., Bartley, L., & Blasberg, A. (2013). The key components of successful implementation. In T. Halle, A. Metz, & I. Martinez-Beck (Eds.), *Applying implementation science in early childhood programs and systems* (pp. 21–42). Baltimore, MD: Brookes.

Million, S. K., & Vare, J. W. (1997). The collaborative school: A proposal for authentic partnership in a professional development school. *Phi Delta Kappan, 78*(9), 710–713.

Mirenda, P. (2014). Revisiting the mosaic of supports required for including people with severe intellectual or developmental disabilities in their communities. *Augmentative and Alternative Communication*, *30*(1), 19–27.

Montana Office of Public Instruction. (2012, January). *Paraprofessionals in Montana: A resource guide for administrators, educators, and paraprofessionals.* Retrieved from http://www.opi.mt.gov/pdf/CSPD/Para/ParaGuide.pdf

Morrier, M. J., Hess, K. L., & Heflin, L. J. (2011). Teacher training for implementation of teaching strategies for students with autism spectrum disorders. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, *34*(2), 119–132. doi:10.1177/0888406410376660

Morris, E. K. (1988). Contextualism: The world view of behavior analysis. *Journal of Experimental Child Psychology, 46*(3), 289–323.

Murphy, A., Robinson, S. E., Cote, D. L., Karge, B. D., & Lee, T. (2015). A teacher's use of video to train paraprofessionals in pivotal response techniques. *The Journal of Special Education Apprenticeship, 4*(2), 1–18.

National Autism Center. (2015). *Findings and conclusions: National standards project, phase 2.* Retrieved from http://www.nationalautismcenter.org/national-standards-project/results-reports

National Center on Quality Teaching and Learning. (2014, Spring). *Practice-based coaching.* Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/docs/pbc-handout.pdf

National Education Association of the United States. (2005). *NEA paraeducator handbook.* Washington, DC: The National Education Association of the United States. Retrieved from http://www.nea.org/assets/docs/05espparahandbook.pdf

National Implementation Research Network. (n.d.1). *Additional evidence for consultation & coaching.* Retrieved from http://nirn.fpg.unc.edu/sites/nirn.fpg.unc.edu/files/resources/NIRN-AdditionalEvidence-ConsultationCoaching.pdf

National Implementation Research Network. (n.d.2). *Implementation stages.* Retrieved from http://nirn.fpg.unc.edu/learn-implementation/implementation-stages

National Professional Development Center on Inclusion. (2008). *What do we mean by professional development in the early childhood field?* Chapel Hill: The University of North Carolina, FPG Child Development Institute, National Professional Development Center on Inclusion. Retrieved from http://npdci.fpg.unc.edu/sites/npdci.fpg.unc.edu/files/resources/NPDCI_ProfessionalDevelopmentInEC_03-04-08_0.pdf

Nelson, S. R., LeFfler, J. C, & Hansen, B. A. (2009). *Toward a research agenda for understanding and improving the use of research evidence.* Portland, OR: Northwest Regional Educational Laboratory. Retrieved from http://educationnorthwest.org/sites/default/files/toward-a-research-agenda.pdf

Niesz, T., Koch, L., & Rumrill, P. D. (2008). The empowerment of people with disabilities through qualitative research. *Work: Journal of Prevention, Assessment, and Rehabilitation, 31*(1), 113–125.

No Child Left Behind Act of 2001, Pub. L. 107–110., § 6301 *et seq,*115 Stat. 1425 (2002). Retrieved from http://www2.ed.gov/policy/elsec/leg/esea02/107-110.pdf

Northouse, P. G. (2009a). Authentic leadership. *Leadership: Theory and practice* (5th ed., pp. 205–240). Thousand Oaks, CA: SAGE.

Northouse, P. G. (2009b). Introduction. In *Leadership: Theory & Practice* (5th ed., pp. 1–14). Thousand Oaks, CA: SAGE.

Northouse, P. G. (2009c). Transformational leadership. *Leadership: Theory and practice* (5th ed., pp. 171–203). Thousand Oaks, CA: SAGE.

Novak, G., & Peláez, M. (2004). C*hild and adolescent development: A behavioral saystems approach.* Thousand Oaks, California: SAGE.

Odom, S. L. (2009). The tie that binds evidence-based practice, implementation science, and outcomes for children. *Topics in Early Childhood Special Education*, *29*(1), 53–61. doi:10.1177/0271121408329171

Odom, S. L., Cox, A. W., & Brock, M. E. (2013). Implementation science, professional development and autism spectrum disorders. *Exceptional Children*, *79*(2), 233–251.

Odom, S. L., & Haring, T. G. (1994). Contextualism and applied behavior analysis: Implications for early childhood special education. In R. Gardner, D. Sainato, W., Heward, J. Cooper, & T. Herron (Eds.), *Behavior analysis in education* (pp. 87–100). San Francisco, CA: Brooks/Cole.

Odom, S. L., Hume, K., Boyd, B., & Stabel, A. (2012). Moving beyond the intensive behavior treatment vs. eclectic dichotomy: Evidence-based and individualized programs for learners with ASD. *Behavior Modification, 36,* 270–297. doi:10.1177/0145445512444595

O'Keeffe, B. V., Slocum, T. A., & Magnusson, R. (2013). The effects of a fluency training package on paraprofessionals' presentation of a reading intervention. *The Journal of Special Education*, *47*(1), 14–27. doi:10.1177/0022466911404072

Onwuegbuzie, A. J., & Collins, K. M. T. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report, 12*(2), 281–316. Retrieved from http://www.nova.edu/ssss/QR/QR12-2/onwuegbuzie2.pdf

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: SAGE.

Peck, C. A., & McDonald, M. A. (2014). What is a culture of evidence? How do you get one? and... should you want one? *Teachers College Record, 116*(3), 1–27.

Pennsylvania Code, 22 PA Code § 14.102 (a) (2) (vii) (2008). Retrieved from http://www.pacode.com/secure/data/022/chapter14/s14.102.html

Peterson, S. M. (2013). Readiness to change: Effective implementation processes for meeting people where they are. In T. Halle, A. Metz, & I. Martinez-Beck (Eds.), *Applying implementation science in early childhood programs and systems* (pp. 21–42). Baltimore, MD: Brookes.

Pisacreta, J., Tincani, M., Connell, J. E., & Axelrod, S. (2011). Increasing teachers' use of a 1:1 praise-to-behavior correction ratio to decrease student disruption in general education classrooms. *Behavioral Interventions*, *26*(4), 243–260. doi:10.1002/bin.341

Pickett, A. L. (1999). *Strengthening and supporting teacher/paraeducator teams: Guidelines for paraeducator roles, supervision and supervision*. National Resource Center for Paraprofessionals in Education and Related Services. Center for Advanced Study in Education, Graduate Center, City University of New York. Retrieved December 1, 2016, from http://files.eric.ed.gov/fulltext/ED440506.pdf

Powell, D. R., & Diamond, K. E. (2013). Studying the implementation of coaching-based professional development. In T. Halle, A. Metz, & I. Martinez-Beck (Eds.), *Applying implementation science in early childhood programs and systems* (pp. 97–116). Baltimore, MD: Brookes.

Punch, K. F. (2006). *Developing effective research proposals* (2nd ed.). Thousand Oaks, CA: SAGE.

Purper, C. J., VanderPyl, T., & Juarez, S. W. (2016). Resources to increase practitioners' knowledge and use of evidence-based practices. *Young Exceptional Children*, *19*(4), 35–47. doi:10.1177/1096250615598814

Radford, J., Bosanquet, P., Webster, R., & Blatchford, P. (2015). Scaffolding learning for independence: Clarifying teacher and teaching assistant roles for children with special educational needs. *Learning and Instruction*, *36*, 1–10.

Ridley School District v. M.R. and J.R. ex rel. E.R, No. 13-1547. (3rd Cir. 2012). Retrieved from https://www.justice.gov/sites/default/files/crt/legacy/2015/04/16/ridleymrbrief.pdf

Riggs, C. G., & Mueller, P. H. (2001). Employment and utilization of paraeducators in inclusive settings. *The Journal of Special Education, 35*(1), 54–62.

Rispoli, M., Neely, L., Lang, R., & Ganz, J. (2011). Training paraprofessionals to implement interventions for people with autism spectrum disorders: A systematic review. *Developmental Neurorehabilitation, 14*(6), 378–388. Retrieved from https://www.researchgate.net/profile/Russell_Lang/publication/51848366_Training_paraprofessionals_to_implement_interventions_for_people_autism_spectrum_d

isorders_A_systematic_review._Developmental_Neurorehabilitation_14(6)_378-388/links/55ae47b608aee079922075e3.pdf

Robinson, S. E. (2011), Teaching paraprofessionals of students with autism to implement pivotal response treatment in inclusive school settings using a brief video feedback training package, *Focus on Autism and Other Developmental Disabilities, 26*(2), 105–118.

Rogoff, B., Baker-Sennett, J., Lacasa, P., & Goldsmith, D. (1995). Development through participation in sociocultural activity. *New Directions for Child and Adolescent Development, 1995*(67), 45–65.

Ross, P., & Sliger, B. (2015). The current state of evidence-based practices with classroom management. *National Social Science Journal, 43*(2), 76–80.

Rueda, R., & DeNeve, C. E. (1999). How paraeducators build cultural bridges in diverse classrooms. *Community Circle of Caring Journal, 3*(2), 53–55. Retrieved from http://cmmr.usc.edu//paraed/Rueda_DeNeve_article.html

Ruef, M. B., Nefdt, N., Openden, D., Elmensdorp, S., Harris, K., & Robinson, S. (2009). Learn by doing: A collaborative model for training teacher-candidate students in autism. *Education and Training in Developmental Disabilities*, *44*(3), 343–355.

Rumrill, P. D., Cook, B. G., & Wiley, A. L. (2011). *Research in special education: Designs, methods, and applications* (2nd ed.). Springfield, IL: Charles C. Thomas.

Rush, D. D., & Shelden, M. L. (2011). *The coaching handbook*. Baltimore, MD: Paul H. Brooks.

Sandoval-Lucero, E. (2006). Recruiting paraeducators into bilingual teaching roles: The importance of support, supervision, and self-efficacy. *Bilingual Research Journal, 30*(1), 195–218.

Sarokoff, R. A., & Sturmey, P. (2004). The effects of behavioral skills training on staff implementation of discrete trial teaching. *Journal of Applied Behavior Analysis, 37*(4), 535–538.

Sayeski, K. (2014). A mirror and a map. *TEACHING Exceptional Children, 47*(2), 79–80. doi:10.1177/0040059914551525

Scheeler, M. C., Morano, S., & Lee, D. L. (2016). Effects of immediate feedback using bug-in-ear with paraeducators working with students with autism. *Teacher Education and Special Education: Journal of the Teacher Education Division of the Council for Exceptional Children*, 1–15. doi:10.1177/0888406416666645

Serna, R. W., Foran, M. M., Cooke, C., Hurd, K. E., Tello, A. J., Vangapalli, R., & Hamad, C. D. (2016). Teaching discrete trial training: the effects of asynchronous computer-based instruction on live implementation. *Journal of Special Education Technology, 31*(1), 39–49. doi:10.1177/0162643416633334

Serna, R. W., Lobo, H. E., Fleming, C. K., Fleming, R. K., Curtin, C., Foran, M. M., & Hamad, C. D. (2015). Innovations in behavioral intervention preparation for paraprofessionals working with children with Autism Spectrum Disorder. *Journal of Special Education Technology, 30*(1), 1–12.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information, 22*(2), 63–75. Retrieved from http://www.crec.co.uk/docs/Trustworthypaper.pdf

Shepherd, K., & Hasazi, S. B. (2011). Leadership for social justice and inclusion. In L. Florian (Ed.), *The Sage handbook of special education* (pp. 475–485). Thousand Oaks, CA: SAGE.

Sheridan, S. M., Edwards, C. P., Marvin, C. A., & Knoche, L. L. (2009). Professional development in early childhood programs: Process issues and research needs. *Early Education and Development*, *20*(3), 377–401. doi:10.1080/10409280802582795

Simons, H., Kushner, S., Jones, K., & James, D. (2003). From evidence-based practice to practice-based evidence: the idea of situated generalisation. *Research Papers in Education*, *18*(4), 347–364.

Skinner, B.F. (1968). *The technology of teaching*. New York, NY: Appleton-Century-Crofts.

Slavin, R. E (2008). What works? Issues in synthesizing educational program evaluations. *Educational Researcher, 37*(1), 5–14. doi:10.3102/0013189X08314117

Slocum, T. A., Detrich, R., Wilczynski, S. M., Spencer, T. D., Lewis, T., & Wolfe, K. (2014). The evidence-based practice of applied behavior analysis. *The Behavior Analyst*, *37*(1), 41–56. doi:10.1007/s40614-014-0005-2

Smith, G. J., Schmidt, M. M., Edelen-Smith, P. J., & Cook, B. G. (2013). Pasteur's quadrant as the bridge linking rigor with relevance. *Exceptional Children*, *79*(2), 147–161.

Snyder, P. A., Hemmeter, M. L., & Fox, L. (2015). Supporting implementation of evidence-based practices through practice-based coaching. *Topics in Early Childhood Special Education, 35*(3),133–143. doi:10.1177/0271121415594925

Spencer, T. D., Detrich, R., & Slocum, T. A. (2012). Evidence-based practice: A framework for making effective decisions. *Education and Treatment of Children, 35*(2), 127–151.

Spouse, J. (2001). Bridging theory and practice in the supervisory relationship: a sociocultural perspective. *Journal of Advanced Nursing, 33*(4), 512–522.

Stake, R. E. (1978). The case-study method in social inquiry. *Educational Researcher 7*(2), 5–8.

Stake, R. E. (1995). *The art of case study research.* Thousand Oaks, CA: SAGE.

Stockall, N. S. (2014). When an aide really becomes an aid: Providing professional development for special education paraprofessionals. *Teaching Exceptional Children, 46*(6), 197–205.

St. George, C. A. S., & Robinson, S. B. (2011). Making mentoring matter: Perspectives from veteran mentor teachers. *Delta Kappa Gamma Bulletin, 78*(1), 24–28.

Steinbrecher, T. D., Fix, R., Mahal, S. A., Serna, L., & McKeown, D. (2015). All you need is patience and flexibility: Administrators' perspectives on special educator knowledge and skills. *Journal of Special Education Leadership, 28*(2), 89–102.

Stephenson, J., Carter, M., & Arthur-Kelly, M. (2011). Professional learning for teachers without special education qualifications working with students with severe disabilities. *Teacher Education and Special Education: The Journal of the*

Teacher Education Division of the Council for Exceptional Children, *34*(1), 7–20. doi:10.1177/0888406410384407

Stockall, N. S. (2014). When an aide really becomes an aid: Providing professional development for special education paraprofessionals. *Teaching Exceptional Children*, *46*(6), 197–205. doi:10.1177/0040059914537202

Stokes, D. E. (1997). *Pasteur's quadrant: Basic science and technological innovation.* Washington, DC: Brookings.

Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, *10*(2), 349–367.

Sulkowski, M. L., Wingfield, R. J., Jones, D., Coulter, W. A. (2011). Response to intervention and interdisciplinary collaboration: Joining hands to support children's healthy development. *Journal of Applied School Psychology*, *27*(2), 118–133. doi:10.1080/15377903.2011.565264

Swain, K., Whitley, R., McHugo, G. J., & Drake, R. E. (2010). The sustainability of evidence-based practices in routine mental health agencies. *Community Mental Health Journal*, *46*(2), 119–129. doi:10.1007/s10597-009-9202-y

Takala, M. (2007). The work of classroom assistants in special and mainstream education in Finland. *British Journal of Special Education, 34*(1), 50–57.

Thorpe, S., & Clifford, J. (2003). *The coaching handbook: An action kit for trainers and managers.* Sterling, VA: Kogan Page.

Tompkins, R. H., Ratcliff, N., Jones, C., Vaden, S. R., Hunt, G., & Sheehan, H. C. (2012). The myth of the foolproof script: Can paraprofessionals effectively improve kindergarten student achievement using a scripted phonics program?

Early Years: An International Journal of Research and Development, 32(3), 313–323. doi:10.1080/09575146.2011.651712

Torres, C., Farley, C. A., & Cook, B. G. (2012/2014). A special educator's guide to successfully implementing evidence-based practices. *TEACHING Exceptional Children, 45(1),* 64–73.

Trent, J. (2014). 'I'm teaching, but I'm not really a teacher': Teaching assistants and the construction of professional identities in Hong Kong schools. *Educational Research*, *56*(1), 28–47.

Tseng, V. (2012). The uses of research in policy and practice. *Social Policy Report, 26(2).* Retrieved from http://files.eric.ed.gov/fulltext/ED536954.pdf

U.S. Department of Education. (2006, August 1). Assistance to states for the education of children with disabilities and preschool grants for children with disabilities: Part II: 34 CFR Parts 300 and 301. Final Rule. U.S. Dept. of Ed. *Fed. Register, 71*(156), 46663-4666.

U.S. Department of Education Office of Special Education and Rehabilitative Services. (2015). *Thirty-seventh annual report to Congress on the implementation of the Individuals with Disabilities Education Act, Parts B and C.* Retrieved from http://www2.ed.gov/about/reports/annual/osep/2015/parts-b-c/37th-arc-for-idea.pdf

van Diggelen, M., den Brok, P., & Beijaard, D. (2013). Teachers' use of a self-assessment procedure: The role of criteria, standards, feedback and reflection. *Teachers and Teaching*, *19*(2), 115–134. doi:10.1080/13540602.2013.741834

VanDerHeyden, A., & Harvey, M. (2012). Using data to advance learning outcomes in schools. *Journal of Positive Behavior Interventions, 15*(4), 205–213.

Vargas, J. S. (2013). *Behavior analysis for effective teaching* (2nd ed.). New York, NY: Routledge.

Vaughn, S., & Dammann, J. E. (2001). Science and sanity in special education. *Behavioral Disorders, 27*(1), 21–29.

Vince Garland, K. M., Holden, K., & Garland, D. P. (2016). Individualized clinical coaching in the TLE TeachLivE lab: Enhancing fidelity of implementation of system of least prompts among novice teachers of students with autism. *Teacher Education and Special Education, 39*(1), 47–59. doi:10.1177/0888406415600769

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, UK: Harvard. Retrieved from http://www.ulfblanke.com/downloads/activity_theory/vygotsky1978.pdf

Waldron, N. L., & McLeskey, J. (2010). Establishing a collaborative school culture through comprehensive school reform. *Journal of Educational and Psychological Consultation, 20*(1), 58–74.

Walker, J. M., Shenker, S. S., & Hoover-Dempsey, K. V. (2010). Why do parents become involved in their children's education? Implications for school counselors. *Professional School Counseling, 14*(1), 27–41.

Walker, V. L., & Snell, M. E. (2017). Teaching paraprofessionals to implement function-based interventions. *Focus on Autism and Other Developmental Disabilities, 32*(2), 114–123. doi:10.1177/1088357616673561

Waukee Community School District & Heartland Area Education Agency v. D.L. and E.L. ex rel. I.L., No. 4-07 (S. D. Io. 2008). Retrieved from https://www.educateiowa.gov/sites/files/ed/documents/book25dec88.pdf

Webster-Stratton, C., Reinke, W. M., Herman, K. C., & Newcomer, L. L. (2011). The Incredible Years Teacher Classroom Management training: The methods and principles that support fidelity of training delivery. *School Psychology Review*, *40*(4), 509–529.

Wehby, J. H., Maggin, D. M., Partin, T. C., & Robertson, R. (2012). The impact of working alliance, social validity, and teacher burnout on implementation fidelity of the Good Behavior Game. *School Mental Health*, *4*(1), 22–33. doi:10.1007/s12310-011-9067-4

Westover, J. M., & Martin, E. J. (2014). Performance feedback, paraeducators, and literacy instruction for students with significant disabilities. *Journal of Intellectual Disabilities*, *18*(4), 364–381. doi:10.1177/1744629514552305

Wilcox, K. C., & Angelis, J. I. (2012). From "muddle school" to middle school: Building capacity to collaborate for higher-performing middle schools. *Middle School Journal*, *43*(4), 40–48.

Williams, A. R. (2016). Becoming a positive and effective special educator: lessons learned from a special education mentor. *Journal of Thought*, *50*(1/2), 49–62.

Wong, C., Odom, S. L., Hume, K. Cox, A. W., Fettig, A., Kucharczyk, S., … Schultz, T. R. (2015). *Evidence-based practices for children, youth, and young adults with Autism Spectrum Disorder.* Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence-Based Practice

Review Group. Retrieved from http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/2014-EBP-Report.pdf

Wright, P. M., White, K., & Gaebler-Spira, D. (2004). Exploring the relevance of the personal and social responsibility model in adapted physical activity: A collective case study. *Journal of Teaching in Physical Education, 23*(1), 71–87. Retrieved from http://www.naspspa.org/AcuCustom/Sitename/Documents/DocumentItem/2662.pdf

Yell, M. L. (2014, January 2). *Evidence-based interventions for children and youth with disabilities.* Presentation at the Tri-State Regional Special Education Law Conference. Retrieved from https://www.educateiowa.gov/sites/files/ed/documents/EBPs%20in%20special%20education_NE.pptx

Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007–No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from http://files.eric.ed.gov/fulltext/ED498548.pdf

Zients, J. D. (2012). Memorandum to the heads of executive departs. From: Jeffrey D. Zients, Acting Director. Subject: *Use of evidence and evaluation in the 2014*

Budget. Retrieved from https://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-14.pdf

Zirkel, P. A., & Hetrick, A. (2017). Which procedural parts of the IEP process are the most judicially vulnerable? *Exceptional Children*, *83*(2) 219–235. doi:10.1177/0014402916651849

Appendix A: The Project

Evidence-Based Practice and Paraprofessional Development Workshop

A Professional Development Plan

for

Special Education Professionals

Developed by Esther Bubb-McKinnie

Table of Contents

Introduction

The purpose of this professional development project is to address the problem investigated in this study and meet the needs that participants indicated during the study. These needs include increased knowledge, understanding and application of paraprofessional support and supervision, and expansion of EBP implementation and student outcomes. The purpose of this professional development project is also to promote social change by creating a cultured atmosphere where paraprofessionals are respected and included. Further, the project is purposed to implement the creation of PLC where individuals share ideas, knowledge, skills, and EBP; learn from each other; and continue to advance the special education field, locally, regionally, nationally, and globally.

Indicators of Success

Success would be indicated when progress toward attainment of the following project goals is realized:

1. Share research findings.
2. Offer recommendations for improving professional development designs specifically relevant to EBP and broadly to social change.
3. Increase the knowledge, skills, efficacy, and confidence of paraprofessionals and teachers on EBP.
4. Effect social change, create PLC, and improve relationships.
5. Obtain and share outcome data.

Description of Attendees

This professional development workshop is designed to meet the continuing education and training needs of all special education paraprofessionals and teachers. Initially and specifically, this project is intended to meet the needs of special education paraprofessionals and teachers in the local setting.

Professional Development Learning Components and Timelines

Table A1

Professional Development Timetable

	Sessions	Hours	Total	Timeframe
Present study results and proposed project	1	3	3	Month 1
Administrators	1	3	3	Month 2
Staff, contractors, providers				
Total	2	6	6	
Paraprofessional (RBT®) training				
Content				
Practice: Conduct, scope, EBP	1	8	8	Month 4
Measurement and assessment	1	8	8	Month 5
Skill acquisition	1	8	8	Month 6
Behavior reduction	1	8	8	Month 7
Documentation and reporting	1	8	8	Month 8
Reflections	1	4	4	Month 12
Total	6	44	44	
Coaching Process				
Training	1	3	3	Month 3
Coaching	32	2	64	Months 4-11
Supervision	8	1	8	Months 4-11
Total	41	6	84	

Note. Timetable for each professional development session.

Section 1 – Presentation of Summary of Research Findings and Presentation of Proposed Project to Administrators

Introductory Session I

Special education administrators in the local research setting will be invited to attend the initial introductory workshop.

Purpose

The purpose of the initial introductory workshop is to provide the information special education administrators need to approve the project, including the research study, findings, and the proposed project.

Goals

- Increase special education administrators' understanding of the current literature, study findings, and conclusions on Paraprofessional Implementation of Evidence-Based Practices for Special Education Students.
- Obtain approval from special education administrators for project implementation.

Materials Needed

- Laptop
- Overhead projector
- Sign-in/sign out sheet
- Pens
- Handouts: Report of Study Findings and Recommendations

    Title of Study
        Executive Summary
        Brief Findings
    Introduction
        Problem Statement
        Purpose Statement
        Research Question
        Rationale
    Procedures
        Design
        Rationale
        Sampling
        Participants
        Setting
        Access
        Permissions

- Data Collection
- Data Analysis

Findings

- Themes

Discussion

- Conclusions
- Significance

Implications, Applications, and Directions for Future Research

Recommendations

- Professional Development Project
  - Rationale
  - Goals
- Professional Development Timetable
- Conclusion

Estimated Duration – 3 hours

Section II – Presentation of Summary of Research Findings and Presentation of Proposed Project to Staff, Contractors, and Providers

Introductory Session II

Special education staff, contractors, and providers in the local research setting will be invited to attend the second introductory workshop.

Purpose

The purpose of the second introductory workshop is to provide an opportunity for participants to understand the research study, findings, and the proposed project.

Goals

- Increase special education staff, contractors, and providers' understanding of the current literature, study findings, and conclusions on Paraprofessional Implementation of Evidence-Based Practices for Special Education Students.
- Obtain completed preassessments from participants.

Materials Needed

- Laptop
- Overhead projector
- Sign-in/sign out sheet
- Pens
- Pencils
- Handouts: Report of Study Findings and Recommendations

    - Title of Study
        - Executive Summary
        - Brief Findings
    - Introduction
        - Problem Statement
        - Purpose Statement
        - Research Question
        - Rationale
    - Procedures
        - Design
        - Rationale
        - Sampling
        - Participants
        - Setting
        - Access
        - Permissions

- Data Collection
- Data Analysis

Findings

- Themes

Discussion

- Conclusions
- Significance

Implications, Applications, and Directions for Future Research

Recommendations

- Professional Development Project
  - Rationale
  - Goals
- Professional Development Timetable
- Conclusion

Estimated Duration – 3 hours

Section II – Presentation of Summary of Research Findings and Presentation of Proposed Project to Staff, Contractors, and Providers

Preassessment

Goals: The preassessment will be administered to obtain contextual data from participants on EBP that align most with their practice or that they are most interested in receiving more knowledge on during the year-long professional development project, thus promoting a merger of EBP, PBE, EDR, and EPD approaches.

Activities: Participants will complete the preassessment. BCBA supervisees currently in supervision, BCBA supervisees who have completed supervision, BCBAs, and/or I will score the assessments and share the results with participants prior to beginning the training sessions, exclusive of the RBT training series.

Materials Needed: Preassessment

Estimated Duration: 30 minutes

Section III – Face-to-Face Training – RBT

Day I – V: AM/PM: Pre/Post Test

Goals: The pretest will be administered to obtain data on participants' knowledge of core concepts in the BACB™ RBT® Task List (BACB, 2013) prior to participating in each training session. The posttest will be administered to obtain data on participants' knowledge of core concepts in the BACB™ RBT® Task List (BACB, 2013) after participating in each training session and determine whether participants gained knowledge because of the training and where knowledge was gained. The results of the pre and posttests will be compared to determine the effectiveness of each training.

Activities: Participants will complete the pre and posttests. BCBA supervisees currently in supervision, BCBA supervisees who have completed supervision, BCBAs, and/or I will score the assessments and share the results with participants during the successive training session.

Materials Needed: Pre/post test

Estimated Duration: 10 minutes

Section III – Face-to-Face Training – RBT

Month 3 – 11: PM: Formative Evaluation

Goals: The formative evaluation will be aligned with project goals and will be administered to gauge participants' perceptions on their learning and experiences during the training. Participants will also provide feedback on instruction, activities, and quality and provide suggestions for future training sessions. Specific goals of the formative evaluation include:

- Assess evaluand effectiveness.
- Identify areas in need of improvement.
- Implement ongoing and immediate changes where/when needed.
- Meet the needs of participants.
- Accommodate for contextual variables that may impact project outcomes.
- Determine reasons for outcome progress and the status of progress.

Activities:

- Formative evaluation completion.

Materials Needed:

- Formative evaluation
- Pens
- Pencils

Estimated Duration: 15 minutes

Section III – Face-to-Face Training – RBT

Day I – AM: Practice: Conduct, Scope, and EBP

Goals: Participants will gain knowledge and skills in the following areas as required by the BACB and listed in the BACB™ RBT® Task List (BACB, 2013, p.1) and based on research findings:

BACB™ RBT® Task List

- F-01 Describe the role of the RBT in the service delivery system.
- F-02 Respond appropriately to feedback and maintain or improve performance accordingly.
- F-03 Communicate with stakeholders (e.g., family, caregivers, other professionals) as authorized.
- F-04 Maintain professional boundaries (e.g., avoid dual relationships, conflicts of interest, social media contacts).
- F-05 Maintain client dignity.

Research Findings

- Resources for EBP Implementation.
- Intrinsic attributes of professionals implementing EBP.
- Extrinsic attributes of professionals implementing EBP.
- Acknowledging and valuing the role and importance of paraprofessionals as partners tasked with implementing EBP.

Activities:

- Didactic instruction.
- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.

Materials Needed:

- Overhead projector
- Computer
- Poster paper
- Markers
- Writing paper
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day I – PM: Practice and Review

Goals: Participants will demonstrate knowledge and skills gained through practice and review of core concepts.

Activities:

- BST/DITM:
  - Training goal review,
  - EBP explanation,
  - Modeling,
  - Guided Rehearsal,
  - Feedback.
- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.

Materials Needed:

- Scenarios for role playing and modeling.
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day II – AM: Measurement and Assessment

Goals: Participants will gain knowledge and skills in the following areas as required by the BACB and listed in the BACB™ RBT® Task List (BACB, 2013, p. 2):

Measurement

- B-01 Describe the behavior and environment in observable and measurable terms.
- B-02 Conduct preference assessments.
- B-03 Assist with individualized assessment procedures (e.g., curriculum-based, developmental, social skills).
- B-04 Assist with functional assessment procedures.

Assessment

- A-01 Prepare for data collection.
- A-02 Implement continuous measurement procedures (e.g., frequency, duration).
- A-03 Implement discontinuous measurement procedures (e.g., partial & whole interval, momentary time sampling).
- A-04 Implement permanent product recording procedures.
- A-05 Enter data and update graphs.

Activities:

- 10-item pretest.
- Didactic instruction.
- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.
- 10-item posttest.

Materials Needed:

- Overhead projector
- Computer
- Internet
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day II – PM: Practice and Review

Goals: Participants will demonstrate knowledge and skills gained through practice and review of core concepts.

Activities:

- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.
- Role-plays.
- Modeling.

Materials Needed:

- Scenarios for role playing and modeling
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day III – AM: Skill Acquisition

Goals: Participants will gain knowledge and skills in the following areas as required by the BACB and listed in the BACB™ RBT® Task List (BACB, 2013, p. 2):

- C-01 Identify the essential components of a written skill acquisition plan.
- C-02 Prepare for the session as required by the skill acquisition plan.
- C-03 Use contingencies of reinforcement (e.g., conditioned/unconditioned reinforcement, continuous/intermittent schedules).
- C-04 Implement discrete-trial teaching procedures.
- C-05 Implement naturalistic teaching procedures (e.g., incidental teaching).
- C-06 Implement task analyzed chaining procedures.
- C-07 Implement discrimination training.
- C-08 Implement stimulus control transfer procedures.
- C-09 Implement stimulus fading procedures.
- C-10 Implement prompt and prompt fading procedures.
- C-11 Implement generalization and maintenance procedures.
- C-12 Assist with the training of stakeholders (e.g., family, caregivers, other professionals).

Activities:

- 10-item pretest.
- Didactic instruction.
- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.
- 10-item posttest.

Materials Needed:

- Overhead projector
- Computer
- Internet
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day III – PM: Practice and Review

Goals: Participants will demonstrate knowledge and skills gained through practice and review of core concepts.

Activities:

- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.
- Role-plays.
- Modeling.

Materials Needed:

- Scenarios for role playing and modeling.
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day IV – AM: Behavior Reduction

Goals: Participants will gain knowledge and skills in the following areas as required by the BACB and listed in the BACB™ RBT® Task List (BACB, 2013, p. 3):

- D-01 Identify the essential components of a written behavior reduction plan.
- D-02 Describe common functions of behavior.
- D-03 Implement interventions based on modification of antecedents such as motivating/establishing operations and discriminative stimuli.
- D-04 Implement differential reinforcement procedures (e.g., DRA, DRO).
- D-05 Implement extinction procedures.
- D-06 Implement crisis/emergency procedures according to protocol.

Activities:

- 10-item pretest.
- Didactic instruction.
- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.
- 10-item posttest.

Materials Needed:

- Overhead projector
- Computer
- Internet
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day IV – PM: Practice and Review

Goals: Participants will demonstrate knowledge and skills gained through practice and review of core concepts.

Activities:

- Large group discussions.
- Interactive small group activities.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Role-plays.
- Modeling.

Materials Needed:

- Scenarios for role playing and modeling.
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day V – AM: Documentation and Reporting

Goals: Participants will gain knowledge and skills in the following areas as required by the BACB and listed in the BACB™ RBT® Task List (BACB, 2013, p. 3):

- E-01 Report other variables that might affect the client (e.g., illness, relocation, medication).
- E-02 Generate objective session notes by describing what occurred during sessions.
- E-03 Effectively communicate with supervisor.
- E-04 Comply with applicable legal, regulatory and workplace reporting requirements (e.g., mandatory abuse and neglect reporting).
- E-05 Comply with applicable legal, regulatory and workplace requirements for data collection, storage, and transportation.

Activities:

- Didactic instruction.
- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.

Materials Needed:

- Overhead projector
- Computer
- Internet
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section III – Face-to-Face Training – RBT

Day V – PM: Practice and Review

Goals: Participants will demonstrate knowledge and skills gained through practice and review of core concepts.

Activities:

- Large group discussions.
- Interactive small group activities with participants acting as students and combined with peer feedback.
- Small group presentations and information sharing combined with peer feedback.
- Question and answer sessions.
- Role-plays.
- Modeling.

Materials Needed:

- Scenarios for role playing and modeling.
- Poster paper
- Markers
- Writing paper
- Pens
- Pencils
- Sign-in/sign out sheet
- Reinforcers

Estimated Duration: 4 hours

Section IV – Coaching

Coaching: Months 4 – 11

Goals: Coaching will occur on a weekly basis, in alignment with PBC, to provide active and ongoing supervision and support to participants, and improve performance and outcomes.

Activities:

- PBC orientation.
- Coaching initiation.
- Participant observations.
- Modeling.
- 10-minute post coaching feedback session.
    - Coaching goal review.
    - Positive feedback for correct implementation.
    - Corrective feedback for incorrect implementation.
    - Questions and answers.
    - Determine goals and plans for next coaching session.
- Participant reflective self-assessment.

Materials Needed:

- Notepad
- Fidelity checklist
- Pen

Estimated Duration: 2 hours

Section V – Reflections

Professional Development Review and Discussion: Month 12

Goals: Participants will reflect on each Section to discuss the impact of the professional development project and contextual variables.

Activities:

- Large and small group discussion on knowledge and skills gained.
- Large and small group discussions on application of the knowledge and skills gained and peer feedback.
- Large and small group discussions on what went well, what could be done differently, and thoughts on future professional development projects and research.
- PLC collaboration on reflective experiences—sharing experiences with the larger group.
- PLC presentation of student outcome data: pre (baseline) and postprofessional development project.

Materials Needed:

- Worksheets
- Writing paper
- Poster Paper
- Markers
- Pens
- Pencils
- Reinforcers

Estimated Duration: 2 hours

Section V – Reflections

Postassessment

Goals: The postassessment will be administered to obtain contextual data from participants on EBP that align most with their practice or that they are most interested in receiving more knowledge on during the year-long professional development project, thus promoting a merger of EBP, PBE, EDR, and EPD approaches. The postassessment results will be compared to the preassessment results to determine variances in participant perceptions pre and postparticipation in the professional development project.

Activities: Participants will complete the postassessment. BCBA supervisees currently in supervision, BCBA supervisees who have completed supervision, BCBAs, and/or I will score the assessments, compare the results with preassessment data, and share the results with participants.

Materials Needed: Postassessment

Estimated Duration: 30 minutes

Section V – Reflections

Summative Evaluation

Goals: The summative evaluation will be aligned with project goals and will be administered to gauge participants' perceptions on their learning and experiences during the professional development project. Participants will also provide feedback on instruction, activities, and quality, and provide suggestions for future projects. Specific goals of the formative evaluation include:

- Assess evaluand effectiveness.
- Identify areas in need of improvement.
- Implement ongoing and immediate changes where/when needed.
- Meet the needs of future participants.
- Accommodate for contextual variables that may impact future projects.
- Determine whether goals have been achieved and reasons for outcomes.
- Identify differential outcomes and reasons.
- Obtain data to support recommended changes to future projects or support the need for project replication and obtaining associated resources.

Activities:

- Summative evaluation completion

Materials Needed:

- Summative evaluation
- Pens
- Pencils

Estimated Duration: 30 minutes

Appendix B: Confidentiality Agreement

Name of Signer:

During my activity in collecting or transcribing data for this research—"Paraprofessional Implementation of Evidence-Based Practices for Special Education Students" —I will have access to information, which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement, I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge, copy, release, sell, loan, alter or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification or purging of confidential information.
5. I will only access or use systems or devices I'm officially authorized to access and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.
6. I will keep all information related to this study in secure, locked locations accessible only to me to avoid loss of or unauthorized access to data.
7. I agree that my obligations under this agreement will continue after termination of the job that I will perform.
8. I understand that violation of this agreement will have legal implications.

By signing this document, I acknowledge that I agree with and will comply with all the terms and conditions stated above.

Signature: **Date:**

Appendix C: Interview Protocol

Time of Interview:

Date of Interview:

Place of Interview:

Interviewer:

Interviewee:

Interview Process:

1. Build rapport.
2. Introduce the interview process.
3. Explain the study and plan for results.
4. Explain the type of interview and its nature
5. Indicate how long the interview may take.
6. Inquire if the interviewee has any questions before the interview begins.
7. Begin interview process.
8. Ask questions.
9. Probe (e.g., *Who*? *What*? *When*? *Where*? *Why*? *How*? *Elaborate*? *Tell me more*?)
10. Support participants and recognize their responses (e.g., *You've been providing me with very useful information*. *You're helping me learn about your perspectives*. *How's the interview going for you*?)
11. End interview process.
12. Thank participant.

Opening Remarks:

Thank you for taking the time to meet with me today. How are you? I look forward to learning from you today. You were invited to take part in this research interview of Paraprofessional Implementation of Evidence-Based Practices for Special Education Students. Results will be included in a research report and may inform a project for implementation at your agency. You were invited to participate in this one-on-one interview because you were recommended by either the Director of your school or an administrator, among others, as someone who has the knowledge and experience needed to provide valuable information on the implementation of evidence-based practices (EBP) by special education paraprofessionals.

For this study, I'll be asking a series of questions on Paraprofessional Implementation of Evidence-Based Practices for Special Education Students. I'd begin by asking you a few background questions, followed by some general questions, then some specific questions, then I have just a few closing questions. The interview will be

audio-recorded if you agree to be audio-recorded. If you do not want to be audio-recorded, I will type your responses. All your responses during this interview will remain confidential. Remember to use an alternative name for any staff or student you may refer to during the interview. Remember, you may skip any question or end the interview at any time. The interview should take between 45-60 minutes to be finished.

Thanks for consenting to participate in the study. Do you have any questions for me before we begin? Shall we begin?

I will now begin the audio-recording. Do you consent to the audio-recording? [State if participant agrees to audio recording].

Interview Questions for Administrators, Teachers, and Paraprofessionals

Background Questions:

1. Describe your current role as a special education professional.
2. Next, can you tell me about yourself in terms of your current role. For example, basic demographical background information and educational and training experiences that you are comfortable sharing. The purpose of this question is to help me learn how sociocultural factors might influence perspectives and EBP implementation. If you would prefer not to answer this question, you are free to choose not to answer. Just let me know.

Transition Statement:

We've been talking about your role and background. Thanks for sharing the information you provided so far. You are really helping me learn about your role. Now, I'd like to ask you some more specific questions related to paraprofessionals and EBP. If at any time you need to take a break, please let me know. Are you okay to proceed?

Broad (Context-Specific) Questions:

Paraprofessionals and EBP:

3. Explain what the term 'paraprofessional' means to you.
4. What is your understanding of the role of paraprofessionals?
5. I'm interested in learning about the perspectives of participants as they relate to EBP. Describe what EBP means to you?

Transition Statement:

You've told me about your understanding of EBP and the role of paraprofessionals. Now I'd like to ask your opinions about paraprofessional training and preparation relevant to your workplace conditions. Shall we proceed?

Specific (Focused) Questions:

Perspectives on Paraprofessional Training and Preparation Relevant to Workplace Conditions:

6. Suppose I was a new paraprofessional who just started working at your agency and I asked you what is it about this workplace that would help me succeed? What would you tell me in terms of factors in the workplace that would prepare me to provide services as a paraprofessional?
7. Now, tell me what you would say if I asked you the same question but in terms of the training. What factors in the workplace would you say would influence the training I would receive as a paraprofessional?

Transition Statement:

You are doing great. Next, I am going to ask you a two-part question about your recent training experiences on implementing EBP.

8. Describe your most recent training experience on implementing EBP.
    a. *For administrators*:
        i. Describe an EBP training session you provided so I can experience it. This could include professional or feedback-based training you provided to teachers.
        ii. Now, describe an EBP training session you participated in so I can experience it.
    b. *For teachers*:
        i. Describe an EBP training session you provided so I can experience it. This could include professional or feedback-based training you provided to paraprofessionals.
        ii. Now, describe an EBP training session you participated in so I can experience it.
    c. *For paraprofessionals*:
        i. Describe an EBP training session you participated in so I can experience it. This could be professional training or feedback-based training a teacher provided to you.
9. Continuing with the same training experience(s) you just described, how do you think factors and conditions within your workplace influenced the training experience(s)?

Transition Statement:

Thanks for sharing your perspectives on paraprofessional training and preparation. You are doing very well. We will now proceed to discussing your thoughts on the need for training. Should we move forward?

Perspectives on the Need for Training:

10. In terms of training and paraprofessional effectiveness, describe your thoughts on the need for training to improve the ability or paraprofessionals to fulfill their roles effectively.
11. If you were to design a training program to meet the needs of paraprofessionals, what would it look like? Can you describe it?
12. How would factors within your workplace influence your design of the training program?

Transition Statement:

Okay. You are almost done. We are going to move forward with questions related to your thoughts on factors that influence paraprofessional implementation of EBP. Are you okay to move forward?

Role of Experience, Preparation, and Training in Paraprofessional Implementation of EBP:

13. I'm also interested in understanding your beliefs on factors that may influence EBP implementation. Can you tell me your thoughts on the role that experience plays in the implementation of EBP?
14. Let's talk about preparation. How do you think preparation for implementing EBP affects the implementation of EBP?
15. Tell me about your thoughts on training and its effect on EBP implementation. Specifically, describe your beliefs on the link between training and EBP implementation.

Transition Statement:

We are all done with the main part of the interview process and I will now proceed to end the interview with a few closing questions. Thanks for your participation so far.

Closing Questions:

16. Is there any question you believe I should have asked you that I did not think to ask?
17. Is there any other general or specific information you would like to add now?
18. How was it talking about your experiences with paraprofessional implementation of EBP and supervision/support in your current environment?

Closing Remarks

Thank you again for taking the time to participate in this interview. If you do not have anything additional to add at this point, we are all done for today. I'd be contacting you once data analysis is done to provide you with a copy of my analysis so that you can give me feedback on whether my transcription and coding accurately represent what you communicated to me today. You are not required to provide me with feedback. This is optional. If you would like to opt out of providing feedback, it is totally okay for you to opt out. Just let me know.

Is it okay for me to contact you to provide feedback on my analysis of the responses you provided to my questions?

Thanks again for consenting to participate in this study and to be audio-recorded during this interview.

Appendix D: Formative and Summative Training Evaluation

Evidence-Based Practice and Paraprofessional Development Workshop Evaluation Form						
Select the evaluation being completed: **Formative** OR **Summative**						
Name:			Date:			
Work Location:			Role:			
Title of Workshop:			Presenter(s):			
Name:			Date:			
Please rate the following questions aimed at improving the current or future sessions:						
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	This training resulted in social change.					
2.	This training improved relationships.					
3.	I will continue to collaborate within my PLC.					
4.	I understand the research study that informed this professional development opportunity.					
5.	I acquired knowledge on status of paraprofessional implementation of EBP.					
6.	I understand the role and impact of contextual factors in EBP implementation.					
7.	My knowledge of EBP resources and implementation skills has					

	increased.					
8.	The EBP focused on during this training can be implemented in my setting.					
9.	My confidence and motivation have increased because of this training.					
10.	I am now more prepared to implement EBP because of this training.					
11.	I will recommend this training to colleagues and other professionals.					
12.	I am satisfied with this training.					
13.	Student outcomes improved because of this training.					
Please respond to the following questions aimed at improving the current or future sessions:						
1.	How can this training be improved?					
2.	How can the presenters' effectiveness be improved?					
3.	What other modalities can be applied in this training (e.g., online content, dyad and triad groups?					
4.	State two new pieces of information you gained from this training.					
5.	State two EBP you will implement in your setting.					

Appendix E: Pre and Post Assessment

Evidence-Based Practice and Paraprofessional Development Workshop Pre and Post Assessment						
Select the assessment being completed: **Pre** OR **Post**						
Please rate the following questions aimed at targeting the training to meet your needs:						
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	Contextual variables affect EBP implementation in my setting.					
2.	Staff in my setting are very motivated to implement EBP.					
3.	I am very knowledgeable about EBP.					
4.	Systems are in place for monitoring EBP fidelity of implementation.					
5.	I am aware that EBP can be adapted to align with contextual factors within my work setting.					
Please respond to the following questions aimed at targeting the training to meet your needs:						
1. What are some contextual variables (e.g., lack of staff expertise, time, funding, materials) that one should consider when designing EBP training or recommending EBP for your setting?						
2. Circle the EBP that you are knowledgeable of: Antecedent-based intervention (ABI) Differential reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O) Exercise (ECE) Extinction (EXT)						

Functional communication training (FCT) Modeling (MD) Naturalistic intervention (NI) Parent-implemented intervention (PII) Peer-mediated instruction and intervention (PMII) Prompting (PP) Reinforcement (R+) Response interruption/ redirection (RIR) Scripting (SC) Self-management (SM) Social narratives (SN) Task analysis (TA) Technology-aided instruction and intervention (TAII) Time delay (TD) Video modeling (VM) Visual support (VS)
2. Circle the EBP that you have implemented: Antecedent-based intervention (ABI) Differential reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O) Exercise (ECE) Extinction (EXT) Functional communication training (FCT) Modeling (MD) Naturalistic intervention (NI) Parent-implemented intervention (PII) Peer-mediated instruction and intervention (PMII) Prompting (PP) Reinforcement (R+) Response interruption/ redirection (RIR) Scripting (SC) Self-management (SM) Social narratives (SN) Task analysis (TA) Technology-aided instruction and intervention (TAII) Time delay (TD) Video modeling (VM) Visual support (VS
3. Circle the EBP that can be implemented in your setting when contextual variables (e.g., time, materials, staff expertise) are considered: Antecedent-based intervention (ABI) Differential reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O) Exercise (ECE) Extinction (EXT)

Functional communication training (FCT) Modeling (MD) Naturalistic intervention (NI) Parent-implemented intervention (PII) Peer-mediated instruction and intervention (PMII) Prompting (PP) Reinforcement (R+) Response interruption/ redirection (RIR) Scripting (SC) Self-management (SM) Social narratives (SN) Task analysis (TA) Technology-aided instruction and intervention (TAII) Time delay (TD) Video modeling (VM) Visual support (VS
4. Circle the EBP that you would like to receive training on for implementation in your setting: Antecedent-based intervention (ABI) Differential reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O) Exercise (ECE) Extinction (EXT) Functional communication training (FCT) Modeling (MD) Naturalistic intervention (NI) Parent-implemented intervention (PII) Peer-mediated instruction and intervention (PMII) Prompting (PP) Reinforcement (R+) Response interruption/ redirection (RIR) Scripting (SC) Self-management (SM) Social narratives (SN) Task analysis (TA) Technology-aided instruction and intervention (TAII) Time delay (TD) Video modeling (VM) Visual support (VS)