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Professional Development for Special Education Paraeducators:
How to Effectively Train Classroom Staff to Support Students with Complex Instructional and
Behavioral Needs

by
Cara Olson-Sawyer

A dissertation submitted in partial fulfillment of the
requirements for the degree of

Doctor of Education
in
Educational Leadership: Special and Counselor Education

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Abstract

According to data from U.S. Bureau of Labor and Statistics in 2018, it is estimated that there are 1,308,100 paraeducators employed in public schools in the United States.

Despite the prevalence of paraeducators, these employees receive limited opportunity for training. In addition, there is little guidance from the Department of Education or Individuals with Disabilities Education Act (IDEA) for effective professional development (Brock & Carter, 2013) and there are no standardized job qualifications or job descriptions across states and school districts. This lack of uniformity, combined with vague job descriptions often result in paraeducators entering the education field with no formal education and training, despite the fact that these are the employees who are most likely to work with the most challenging students (Brock & Carter, 2013; Giangreco, Doyle & Suter, 2012). To work with students with disabilities more successfully, there needs to be a concerted effort to identify and develop comprehensive and effective training options for paraeducators, including components of adult learning theory and self-monitoring measurement tools. This quantitative, pre/post design study examined the impact of professional development model, TEACH (Training to Evidence- and Assessment-based Classroom Habits; Borgmeier, Simonsen, & Freeman, 2014) on a group of eight paraeducators' implementation of pre-correction and active supervision and disruptive, off-task student behavior. The results of all of these measures were mixed, showing that TEACH had a positive impact on self-efficacy, active supervision, and out of classroom referrals for students while the opposite was true for pre-correction and on-

task student behavior. Based on the results, recommendations are made for future research in this area.

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Chapter 1 – Problem Statement

The term “paraeducator” refers to the educational support staff who work with students under the supervision of licensed teachers. Although the roles and daily duties of paraeducators vary significantly, these employees are often utilized to support students with disabilities. The role of paraeducators has become integral to the delivery of special education services and instruction. As Carter, O’Rourke, Sisco, and Pelsue (2009) note, “...schools have increasingly become reliant on paraprofessionals to assist in meeting the multifaceted needs of students with disabilities; for many students with low-incidence disabilities, the presence of these support staff is both obvious and pervasive” (p. 344-345). Therefore, students with the highest needs receive much of their daily instruction and support from paraeducators.

Problem

When paraeducators are not trained in evidence-based practices, the students they work with can miss out on important strategies that could hinder progress. This is a legitimate concern, especially considering the legal implications of implementing a student’s Individualized Education Plan (IEP) and complying with special education law spelled out in the Individuals with Disabilities Education Act (IDEA, 2004). Carter, O’Rourke, Sisco, and Pelsue (2009) further describe that:

...concerns have been raised about assigning the least trained staff to students evidencing the greatest support needs, paraprofessionals assuming responsibilities more appropriate to certified teachers, and the limited direct training and guidance paraprofessionals typically receive from school staff. In sum, calls have been issued for a closer examination

of how paraprofessionals are utilized, the tasks they perform, and the knowledge they hold. (p. 345)

The lack of training and knowledge on the part of paraeducators can have legal implications. Students in special education are entitled to a free and appropriate public education (FAPE) and if their primary instruction and behavior support is provided by untrained staff, schools can open themselves up to litigation (Etscheidt, 2005). In addition, the variability of roles paraeducators are asked to take on can place paraeducators in roles that are inappropriate given their education, experience, and training. For instance, paraeducators sometimes fill the role of primary instructor for individual students and small groups, where they are creating lessons and making instructional decisions without input from licensed teachers (Brock & Carter, 2013).

Etscheidt (2005) suggests that in these circumstances, there is a risk of violation of FAPE, and this can present an equity issue when some students are receiving instruction from properly trained and licensed educators and others are not. It is vitally important to ensure that school staff working with special education students who have the most complex needs are competent in providing these services. As Etscheidt (2005) succinctly points out, "Paraprofessionals must be qualified to provide the agreed-upon services" (p. 74). Unfortunately, the current practice in the field of education is that, generally, paraeducators are *not* provided training or professional development to be qualified to fulfill the various aspects of a complex role.

Furthermore, not only are paraeducators at a disadvantage in their roles if they are not properly trained in evidence-based practices, but the students that they work with are also at a disadvantage. Students with disabilities, complex needs, and challenging behaviors require instruction by properly trained teachers who properly supervise paraeducators (Brock & Carter, 2013; Brock, Seaman & Downing, 2017; Walker, et al., 2021). If paraeducators are trained and provided with clear direction and supervision, they can have significantly impact student outcomes in a positive way (Walker, et al., 2021; Brock & Carter, 2013; Brock, Seaman & Downing, 2017); conversely, if paraeducators are *not* adequately trained and supervised, they can provide ineffective instruction and negatively impact a student's progress and access to FAPE.

Current Context

According to data from U.S. Bureau of Labor and Statistics in 2018, it is estimated that there are 1,308,100 paraeducators employed in public schools in the United States, with a projected 8% growth from 2016 to 2026. The number of paraeducators in education is only going to grow, which means that more students will be interacting with paraeducators and receiving a variety of instructional and behavioral supports from them.

It is not an easy task to recruit, hire, and employ paraeducators due to the relatively low rate of pay and the difficult and variable nature of the job, especially given the lack of support and resources for training and preparing this group of school staff. In addition, candidates for these positions are often inexperienced in education with little or no supervision in the area of research-based strategies and best practices.

Range of Tasks and Responsibilities. Paraeducators work in dynamic, changing settings with students who can present with a variety of challenges. Depending on the context, a paraeducator's specific daily tasks and duties can vary widely from one paraeducator to another, despite the having the same job title. French (2001) conducted a survey including 321 paraeducators and their supervising teachers to identify common responsibilities. The areas indicated on the surveys were 1) personal attention to students (e.g. toileting, feeding, grooming); 2) planning for instruction; 3) activity preparation and follow-up and general supervision. These three categories were further broken down into sub-categories resulting in 30 job related tasks. The most frequent tasks identified in this survey were providing personal care to students; lesson and material preparation; taking data, such as attendance; and clerical/organizational tasks. In another survey by Giangreco and Broer (2005), 153 paraeducators were given a list of seven tasks and asked how they routinely spend their time. This survey indicated that about half of the respondents spend the majority of their time delivering instruction, followed by providing behavior support.

The results of these two surveys illustrate the variability in roles, both in the number of possible tasks listed in the surveys and the wide-ranging responses. This variation in role and lack of clarity complicate the development of a meaningful professional development model for all paraeducators because skills needed in one context may not be the skills needed in another. For instance, a paraeducator working in an elementary general education setting may primarily work to promote inclusion, moving to different classrooms to support special education students and the general education teacher in implementing individualized behavior plans and instructional

strategies. This is a strikingly different role than paraeducators who work in more restrictive school placements that serve special education students with significant behavioral issues in specialized classrooms or schools to address these needs.

If a paraeducator who worked in an inclusive general education setting went to work in a more restrictive setting, they would likely be surprised at the differences in the characteristics of the student population, the daily tasks, and the priority of student skills that are emphasized. Despite these major differences, the job title is the same for both settings and the job description is likely identical or, at least, very similar. It is also clear that in both circumstances, paraeducators will need to receive specialized training to most effectively execute the assigned tasks for the student populations with whom they are working.

Training and Supervision of Paraeducators. Federal education laws, such as the Every Student Succeeds Act (ESSA) and Individuals with Disabilities Education Act (IDEA), mandate higher accountability in schools. Despite a focus on increased quality and accountability, there is a lack of clarity on what this means for paraeducator training from both the federal and state guidelines. Giangreco & Doyle (2002) illustrate this lack of clarity in the following:

The IDEA does not expound upon that provision. How should paraprofessionals assist? What does "appropriately trained and supervised" really mean? This is up to states and local school districts to determine within the boundaries of the IDEA requirement to ensure that *all* children and youth with disabilities receive a free, appropriate, public education. (p. 3-4)

In other words, while administrators and school officials are being tasked to provide quality training for paraeducators to ensure FAPE for students receiving special education services, there is no discussion about what that training looks like, what skills are to be taught, and how to provide it. Every state, district, and school implements IDEA through their lens of interpretation, therefore there is no consistency within special education law, including guidance specific to paraeducators.

Currently, the majority of a paraeducator's training is on-the-job and is the responsibility of the supervising teacher. Given the nature of on-the-job training, tasks and duties are often learned by watching others, receiving verbal or written directions, asking questions, and receiving performance feedback or correction. Although receiving performance feedback from supervising teachers is shown to have a positive impact on the instructional skills of paraeducators (Hall, et al., 2010), this is often not a sustainable solution given the demands on teachers and the variability of teachers' pre-service training in supervision. Furthermore, pairing modeling of evidence-based practices, either in person or through video, with performance feedback has proven to be an effective training model (Brock, Seaman & Downing, 2017; Brock & Carter, 2017). The addition of performance feedback after modeling strategies for paraeducators allows for continued support and supervision to promote fluency of these skills for those learning them (Brock, Seaman & Downing, 2017). Lastly, it is vital that the professional development for paraeducators be presented by highly trained staff, such as supervising teachers, who are experts in evidence-based strategies so that they can competently train, model, and provide feedback to paraeducators (Brock & Carter, 2013).

The effectiveness of performance feedback relies on several factors, including

environmental factors, interpersonal factors, and situational factors (Wilkinson, et al., 2013). As Wilkinson et al. (2013) point out, feedback is most effective when provided in a neutral setting, in a timely manner (as close to the event as possible), with specificity, and in a way that is not perceived as overly negative. Therefore, providing on-going and effective feedback to shape paraeducator behavior is a labor-intensive task for teachers, especially given the constraints of the educational setting.

At present, the most common form of training is didactic, one-time “drive-by” sessions despite the fact that stand-alone workshops are largely ineffective (Zepeda, Parylo, & Bengston, 2014; Brock & Carter, 2015; Carter, et al., 2009; Simonsen, Myers, & DeLuca, 2010). Walker and Smith (2015) point out:

It also will be necessary for researchers to determine which components of didactic, experiential, and follow up training methods yield the most significant outcomes for paraprofessionals and the students they support, as this information will contribute to the development of effective and practical paraprofessional training programs (p. 185).

This is a crucial point because paraeducators are often providing the majority of instruction for students with disabilities resulting in less teacher engagement with the student and little supervision of the paraeducator. As Etscheidt (2005) states, "Although the literature is filled with statements suggesting that paraprofessionals work under the direction and supervision of qualified professionals, self-report data suggest that paraprofessionals operate independently and autonomously, isolated from direction and supervision" (p. 77). If special education and general education teachers are clear about their roles regarding paraeducator supervision, they are less likely to rely on

paraeducators to “manage” one student and put paraeducators in the position of providing services outside of their purview or skill set. Etscheidt also suggests, not only is this bad practice, but it could result in the denial of FAPE if a student is being taught by a person who does not have the adequate training or skill to provide specially designed instruction.

Turnover. A lack of training of paraeducators can affect students and access to FAPE, but it can also impact paraeducators’ sense of effectiveness when working with challenging students in difficult situations. Although this phenomena has only been explored in research on *teacher* self-efficacy (Skaalvik & Skaalvik, 2007; Zee, Jong, & Koomen, 2016), the same case can be made for paraeducators. As Zee, Jong, and Koomen (2016) note, “Whereas obliging and hardworking students will most likely raise teachers’ self-efficacy, instances of misconduct may seriously undermine teachers’ student-specific capability beliefs” (p. 1014). In addition, unsuccessful interventions with individual students exhibiting challenging behaviors can lead to feeling of exhaustion, helplessness, and ineffectiveness (Zee, Jong, & Koomen, 2016). As mentioned previously, if a person feels confident and equipped to deal with a difficult situation he or she is much more likely to be successful. On the other hand, if one feels untrained and inexperienced, success is much less likely; in fact, many people will avoid situations they feel ill equipped to handle.

It is no mystery, in this case, why paraeducator often report that they feel overwhelmed and ineffective; as Bandura (1991) states, “People form beliefs about what they can do, they anticipate the likely consequences of prospective actions, they set goals for themselves, and they otherwise plan courses of action that are likely to produce desired outcomes” (p. 248). If paraeducators have beliefs about what they are *or* are not

capable of, their actions will follow in kind and the outcome will largely depend on the training and support they have received to bolster their self-confidence.

All of the information mentioned above leads to the question of how paraeducators are trained to provide educational opportunities to students. Paraeducators are important in the public education system, though they are too often misused, undervalued, and thrown into a job without proper training. As Giangreco and Doyle (2002) state, "When well-conceived and implemented, paraprofessional support can be an appropriate service to offer" (p. 2). If educational policy is going to continue to value accountability measures and demand high standards and expectations, educational leaders will need to ensure that our teachers, related service personnel, and paraeducators are skilled and trained. There are competing priorities in current policy and all school staff must be mobilized to meet the sophisticated needs of our students in the complex political environments that exist in our public schools; this includes showing paraeducators that they are valued members of the school by investing in them through professional training and recognition. The challenge is that paraeducator training models are few and they have not worked consistently across settings and roles. Despite the difficulty of tackling this issue educators and educational leaders desperately need to progress in this area because, ultimately, it is the students who suffer from our lack of knowledge and skill.

Statement of the Research Problem

The need to provide training for paraeducators in special education is undeniable given the prevalence of paraeducators in public education and the need to provide equitable access for all students. The issue of professional development for paraeducators is a universal problem and has an impact in every state, district and school. There are

increased accountability measures in education and not having well-trained staff can have very real implications on schools and students. While being compliant with laws is important, there is deeper ethical reason for providing high quality training for paraeducators; if we purport that paraeducators are important in public education and to students that they support, how are we showing it when we do not provide resources and support necessary for professional growth and development? Paraeducators are the school employees that are most often “in the trenches,” carrying out the day-to-day tasks required to educate our most challenging students, all while receiving the least amount of job-related benefits such as release time for training, participation in professional learning teams, and leadership opportunities.

We have a responsibility to professionalize the paraeducator role to honor the importance of the work that they do. Of course, many barriers and challenges have made this difficult, resulting in very little literature on effective professional development for paraeducators. Despite the challenges there needs to be a concerted effort to identify professional development models that incorporate evidence-based strategies, concepts of adult learning theory, and the flexibility to differentiate according to the needs of individual contexts and paraeducators.

The need to both identify a sustainable and effective professional development model and to provide the needed skills for paraeducators working with challenging students is at the heart of this study. It has been clearly established in the literature that the majority of paraeducators working in public education do not enter the job with the skills to be effective. It has also been established that once paraeducators begin working, professional development to gain those skills is limited or non-existent. It is the aim of

this study to adapt a professional development model called TEACH (Training to Evidence- and Assessment-based Classroom Habits; Borgmeier, Simonsen & Freeman, 2014) to train and support paraeducators who work in a restrictive special education setting for students with challenging behaviors, and to identify aspects of this model that can be generalized to other settings.

Situating the Research Problem in the Local Context

This study will train paraeducators working in a public, separate school that is run by a regional program. This program serves multiple school districts who refer students to this program because the students have been unable to maintain placement in their neighborhood schools due to challenging behaviors as a result of mental health and behavioral disorders. The school is a small setting with 45 to 55 students and 25 staff, including teachers, behavior specialists, and paraeducators.

Due to the nature of the school, paraeducators who work in this setting are providing services to some of the most challenging students in the region who have not responded to multiple interventions and placement options within their home school districts. In this setting paraeducators are required to implement behavioral interventions individualized to meet the needs of each student, as well as lead instruction and implement evidence-based classroom management strategies for a challenging group of students.

Due to the significant role that paraeducators play in supporting students in this context, an effective training model is critical to the success of the program. Despite the size of the school, all of the challenges that have been touched on previously also manifest in this specialized paraeducator population.

Range of tasks and responsibilities. Within the school, there are five classrooms and each teacher has slightly different expectations of the paraeducators. The result of these varying expectations is that paraeducators must adjust their style and role according to the teacher and students they are supporting. The tasks that are required of paraeducators in this context include collecting behavior data, grading student work, inputting grades into the grading system, providing academic support in a variety of subject areas (including high school level reading, writing, and math), implementing behavioral interventions, managing behavioral crises, creating instructional materials, consulting with teachers and behavior specialists, and maintenance and upkeep of the physical environment.

This list is not exhaustive, but the day-to-day responsibilities of each paraeducator largely depend on the teacher, classroom, and students they are supporting. This is a challenging aspect of the job because the support that the paraeducators provide in one classroom can be significantly different than in another classroom. While some paraeducators exhibit the flexibility to adapt quickly from one classroom and style to another, it can prove to be difficult for others, especially if the tasks in a given classroom do not align with an individual paraeducator's strengths. Essentially, teachers have the ability to establish the culture of their classroom that suits their particular teaching style and paraeducators have to adjust to those various styles, sometimes multiple times per day.

Training and supervision. Although the paraeducators in this school are working with a challenging and complex student population, there is no established training program for new staff or consistent, on-going training for veteran staff. One of the main

reasons for this is simply the lack of time. While teachers are scheduled to work a 40-hour work week, the paraeducators work 33.5 hours per week. This limited schedule presents difficulty in creating a training schedule that provides the time for paraeducators to fully understand concepts and master skills. In addition, the difference in teacher and paraeducator schedules makes it hard for meaningful collaboration between classroom teams.

Given the absence of an established training program in this particular context, it falls mainly to the teachers to train and supervise the paraeducators in their classroom. This model is haphazard, inconsistent, and ineffective, especially depending on each individual teacher's comfort and skill level in supervision. In general, teachers receive very little, if any, pre-service training in supervision (French, 2001) and if supervision does not include frequent observations and performance feedback, it is essentially meaningless (French & Chopra, 2006). The teachers and paraeducators in the context of the study face the same issues and the teachers do not have the time and/or expertise to provide consistent, meaningful feedback.

Turnover. The inability to retain paraeducators in schools is an issue that effects the consistency and quality of services for students in special education settings. This is an issue that is complex and the result of multiple factors, all of which are true in the special education context of the study. The first factor that contributes to the challenge of retention is, along with less work hours and a limited schedule in contrast to teachers and other licensed school staff, paraeducators in this school receive low pay for a job that is both demanding and stressful. In addition, paraeducators are not well trained, which means that they are not provided with the required tools and strategies to intervene

successfully with students in crisis or students exhibiting challenging behavior. The last compounding factor that influences retention rates of paraeducators in the context of the study is that they have very little control over their daily tasks and schedule. The daily schedule and tasks of paraeducators are determined by the teachers and the administrator, and they are required to follow all instructional and behavioral plans developed by licensed staff. All of these factors are directly related to one's sense of self-efficacy, and when combined with low pay, it is no surprise that absence rates and turnover are high.

Significance of training for paraeducators in the current context. The issues that face paraeducators in this school mirror the issues that are faced by paraeducators nationwide, which underscores the urgency of finding a solution to this problem. The paraeducators in this study are the school employees who spend the most time with students and know them best; they are also the primary implementers of students' behavior plans. The amount of direct interactions with students means that these paraeducators are positioned to have the biggest impact on whether or not students are successful.

Another factor unique to this particular setting is that, as a regional education program that supports school districts, the students we serve have complex behavioral profiles that require nuanced strategies and approaches. This nuance requires that staff have a repertoire of strategies and the ability to apply the appropriate strategy to the situation. In order to develop fluency and comfort with a variety of strategies necessitates on-going training, practice, and feedback.

Finally, from a more practical perspective, the school districts that refer students to this program invest a significant amount of their resources to support these students.

As a specialized program, districts are assured that the students that are placed there will receive a high level of support, instruction, and behavior management in order for them to be successful. These students have not experienced success in the various placement options within the district, so this placement is often the last attempt for some of these students to receive their education in a public school before moving to the most restrictive educational placements (e.g. day treatment, residential programs, home instruction). Districts pay approximately \$45,000 for each student placed in this program, therefore the expectation for services is understandably high. If the paraeducators in this setting, who spend the most time with the students are not trained and prepared to support the students, that is a significant amount of funding and resources that are not being maximized, especially in a climate in which schools and educational initiatives are often underfunded.

Presentation of Methods

This study will adapt a professional development model called TEACH (Training to Evidence- and Assessment-based Classroom Habits; Borgmeier, Simonsen & Freeman, 2014) for paraeducators in a restrictive special education for students with challenging behaviors. TEACH provides a structure and framework that can be tailored to various training topics for educators working across various roles and settings. TEACH can also address many of the previously identified issues that face paraeducators', which will be described in the following paragraphs that were previously mentioned.

Range of tasks and responsibilities. TEACH as a professional development framework provides the flexibility to train a variety of different classroom and

intervention practices that paraeducators may need to implement which is helpful for addressing the variability of paraeducators' tasks and responsibilities. TEACH begins with a focus on prioritizing and selecting the specific skills to focus on for training. An adaptation of TEACH for paraeducators will be increased collaboration between the administrator, teachers, and paraeducators to identify specific classroom practices to train and develop. This model gives paraeducators an opportunity to have a voice in their own learning. Another feature of TEACH is that it specifically requires that the paraeducator and teacher work together to adapt the specific classroom practice being trained to fit the classroom implementation context and the personal style of the paraeducator. The training will provide guidance around the critical features of implementation, but the paraeducator, in collaboration with their partner teacher, will develop an implementation plan that fits their style, the student(s) they are serving, and the classroom context.

Training and supervision. Although the TEACH model cannot remedy the issue of time, it does provide a consistent structure for training and built-in opportunities for feedback and collaboration. TEACH is designed to be implemented in brief (45 minute) training sessions that are focused on a specific practice or intervention. Ongoing follow-up support to encourage sustained implementation is linked with daily self-monitoring by the paraeducator. While formal opportunities for observation and feedback can be restrictive due to the time required, TEACH encourages brief follow-up based on a quick review of self-monitoring data that can be integrated in to existing meeting times and quick check-ins during the day. The simplicity of the self-monitoring system also provides an implementation support that alleviates some of the supervision responsibility of the teachers.

Turnover. Once again, the TEACH model cannot increase wages, but it provides training for staff who greatly need it. Training is a way to increase paraeducators' sense of value and it provides them with tools to use when working with students who require a lot of support.

Components of TEACH

The benefit of the TEACH model is flexibility that allows it to be used with a range of different classroom practices, and emphasizes that paraeducators and teachers tailor implementation of the classroom practice to match the needs of the implementation context. The TEACH model includes multiple components, including a) identification of evidence-based practice, b) training, c) development of personalized implementation plans, and d) implementation supports, including staff self-monitoring and collaborative support and feedback. These four components are briefly described below and will be later detailed in-depth.

Identification of evidence-based classroom practice. Within TEACH, identification of the evidence-based practices can be matched to the needs of the paraeducator. Identified evidence-based practices will serve as the content for professional development. Given the limited professional development opportunities often provided to paraeducators it is critical that we maximize professional development by merging the specific needs of the paraeducator with evidence-based practices proven to support student success.

Training. The training component of TEACH combines didactic instruction with hands-on, experiential learning. Information on the identified evidence-based practice will be presented as a big idea, then broken down into steps and taught discretely with

examples and opportunities for practice and discussion. The training will clearly articulate the core features essential to the fidelity of the identified classroom practice or intervention. During a training session, the paraeducators will work with their partner teacher to develop an individualized plan for implementing the evidence-based practice being trained that is tailored to the specific needs of the context and the students with whom they work, as well as matching to their personal styles and preferences for implementation. Participants will be guided to use the critical features of the classroom practice to ensure they are maintaining fidelity of the practice as they tailor the practice to fit their context and style. Time to develop this plan in collaboration with their teacher will be built into the scheduled training time. Trainings can be brief (about 45 minutes) because each training focuses on a single high-leverage classroom practice. Within 45 minutes, participants should be able to finish developing their individual implementation plan.

Training will also introduce self-monitoring as a strategy for supporting implementation of the evidence-based practice when they return to their work setting. Participants will receive training in the features and different options for self-monitoring and then select a self-monitoring strategy that best aligns with their personal preferences and implementation context.

Self-monitoring. Research suggests that self-monitoring can increase the implementation fidelity of behavioral interventions in the classroom (Kalis, Vennest, & Parker, 2007; Simonsen, MacSuga, Fallon, & Sugai, 2013; Simonsen et al., 2014). Following training, paraeducators will collect daily self-monitoring data on their implementation of the classroom practice in their implementation plan. Self-monitoring

data will only be collected for the portion of the day that was the focus of the implementation plan. As an additional support, the partner teacher or other school professionals can conduct periodic observations of the identified classroom practice to pair with paraeducator self-monitoring data. The opportunity for paraeducators to be active participants in their own learning, should serve to build self-efficacy and benefit students through the increased implementation of evidence-based practices.

Collaborative support. Paraeducators will participate in data review and discussion with their peers, as well as with their partner teacher. This collaborative support will be integrated into existing meeting times. For example, the school in this study uses professional learning communities (PLC) as a regular meeting time. PLCs function as data teams in which colleagues work together to implement a specific initiative or intervention, set goals toward achievement, and regularly review data to measure progress toward that goal. Although PLCs are common among teachers and other educational professionals, paraeducators do not often have the opportunity to participate in professional learning groups and gain knowledge from their colleagues. The collaborative support component of TEACH will expose paraeducators to this collegial experience and give them the time and opportunity to review their individualized plans, self-monitoring data, and progress toward their implementation goals.

In addition to the collaboration between paraeducators, teachers will also serve as an ongoing collaborative support to the paraeducator. Teachers are in the position to observe paraeducators more regularly than anyone else in the school setting. Collaborative participation in TEACH training will provide a clear focus on a specific classroom practice that creates opportunities for efficient, specific and meaningful

feedback. Paraeducators are uniquely situated in schools to have multiple levels of support and supervision, with teachers being the primary support. TEACH could serve as an even more effective tool for the paraeducator population when teachers are incorporated into the model as collaborative participants. This is an important adaptation of the original TEACH framework to better meet the needs of paraeducators.

Research Questions

The purpose of this study is to examine the impact that professional development using an adaptation of the TEACH model (Borgmeier, Simonsen & Freeman, 2014) has on increasing paraeducators' implementation of identified classroom practices and sense of self-efficacy. A secondary research question will examine the impact of paraeducator participation in TEACH on student behavioral incidents and classroom engagement. Given the limited research on paraeducator training in a feasible, real-world context and the largely absent literature on paraeducator self-efficacy and professional development, the following research questions were posed:

1. Does professional development for paraeducators using the TEACH model increase paraeducators' implementation of the targeted evidence-based practice in the classroom, specifically active supervision and use of precorrection?
2. Does professional development for paraeducators using TEACH to support implementation of pre-correction and active supervision improve classroom behavior of students with persistent challenging behavior, specifically:
 - a. Does this intervention decrease student problem behavior in the classroom as measured by discipline referrals?

- b. Does this intervention increase overall student task engagement in the classroom as measured by a daily student behavior rating?
3. Does professional development using TEACH increase paraeducators' sense of self-efficacy?
4. Do participating paraeducators and teacher rate the methods used in TEACH as feasible and acceptable?

Definition of Key Terms

Paraeducator. Educational support staff who work with students under the supervision of licensed teachers. Most paraeducators support students in special education.

Professional Development. The process of improving and increasing capabilities of staff through access to education and training opportunities in the workplace, through outside organization, or through watching others perform the job

Professional Learning Community (PLC). A group of educators that meet regularly, share expertise, and work collaboratively to improve teaching skills and the academic performance of students. PLCs have historically referred to groups of teachers, however, in this study it refers to paraeducators and teachers.

Andragogy. The method and practice of teaching adult learners.

Behaviorism. An approach in education that emphasizes empirical, objective methods in which behaviors are learned through interaction with the environment. This approach also emphasizes the importance of observable stimulus-response behaviors that can be shaped, based on the manipulation of the stimulus and response that a student experiences.

Social-cognitive theory. The theory that people are active agents who influence and are influenced by their environment. In addition, people learn by observing others within in the context of social interactions, experiences, and media influences.

Self-efficacy. This refers to a person's belief in the ability of himself or herself to succeed in a specific situation or to accomplish a task, which has an impact on how that person approaches goals, tasks, and challenges.

Evidence-based practice. A concept or strategy that is derive from or informed by objective evidence, most commonly educational research or metrics of school, teacher, and student performance.

Pre-correction. A strategy to prevent challenging behaviors from occurring. The teacher identifies the context in which a problem behavior is likely to occur. Then he provides prompts and reinforcement for expected social and academic behaviors.

Active supervision. A proactive approach used in school settings to monitor a large area in order to ensure safety and reduce problem behaviors from occurring.

Self-monitoring. The act of observing and regulating one's own behavior in a social context.

Chapter 2 – Review of Literature

Given the increasingly complex needs of students in special education and the limited resources in education, it is necessary for districts and schools to employ the most knowledgeable, skillful, and effective staff. Teachers and administrators are required to be licensed professionals with training in pedagogy, instructional strategies, and assessment. In contrast, there are no licensure standards for paraeducators, who often have little or no formal training in educational theory and practice. Despite these broad discrepancies in training, paraeducators are often tasked with primary responsibility for providing direct support to the most complex and challenging students in schools.

In order to maintain the quality of education for students with disabilities and legally comply with IEP implementation and compliance with IDEA and ESSA, it becomes the job of districts, schools, and administrators to provide training and professional development. Although the need for training is clear, the question of *how* to provide effective professional development to paraeducators is much more complex. One challenge is the broad variability across paraeducators in age, background, experience, and education. Another challenge is that paraeducators vary considerably in job roles and duties they are required to perform. Limited funding and resources for professional development of paraeducators make this problem of practice a difficult one to solve, but a necessary one.

It is also important to note that common barriers to providing effective professional development are the costs associated with the training and the feasibility of the intervention. It has been identified that some of the most promising practices for professional development and growth, such as job coaching and regular feedback

(French, 2001; Causton-Theoharis, Giangreco, Doyle, & Vadasy, 2007; Kretlow & Bartholomew, 2010) are time and resource intensive and, therefore, generally not practical. Job coaches and outside consultants who are truly able to spend time with staff and provide meaningful feedback cost a significant amount of time and money. Due to these barriers, the current professional development and training model continues to be one-time sessions. Within the current model, content is provided in a didactic fashion and participants are expected to generalize all of the information they hear and incorporate it into their daily practice.

Time is also an issue that is a common barrier to professional development. Educational staff have very few days and hours that they do not have already committed to student contact hours, paperwork (grading, attendance, data collection, IEP-related documents, etc.), meetings, behavior management, lesson planning, school functions, and other job-related tasks. This is especially true for paraeducators who rarely have planning time outside of student hours. Time and money are very realistic barriers to professional development, but TEACH is a model that has the potential to provide a more cost-effective approach through use of existing time and staff resources to support training.

These identified barriers to providing professional development for paraeducators are similar barriers faced by the school in this study. Over the past decade, the paraeducators working in this school went from working a full-time (1.0 FTE) schedule of 40 hours/week to working a part-time schedule (.08375 FTE) of 32.5 hours per week. This change in the hours that paraeducators work impacts how much time paraeducators have to collaborate with teachers, receive training, and engage in daily prep and clerical tasks they are required to complete. In order to build in extra time for training, time needs

to be set aside from the precious few hours that are available for all of the paraeducators, or their hours must be extended, resulting in extra duty pay. This example illustrates the challenge of addressing time and money.

In this section, I will review the literature related to paraeducator training and self-efficacy. I will present the features of the TEACH professional development model in greater detail and crosswalk features of TEACH with research on effective professional development for paraeducators. First, I will introduce the three primary theoretical frameworks that inform this research study, which include adult learning theory (andragogy), social-cognitive theory, and applied behavior analysis. Once the theoretical frameworks are introduced, a clear connection will be drawn from these overarching theories to the corresponding characteristics of TEACH, all within the context of the school in which the study takes place.

Theoretical Frameworks

Andragogy. Although learning on the part of children has a long history of research and theory called pedagogy, it was not until the 1970s that adult learning became a legitimate discussion when Malcolm Knowles (1973) introduced the term “andragogy.” An important distinction of andragogy, as Malik (2016) points out is that “learning for adults is learner-centered in that the learners participate in deciding how, what, and why they acquire knowledge” (p. 56).

Merriam (2001) identified five main ideas to consider when providing education to adults, including: 1) opportunities for self-directed learning; 2) building on learner’s previous life experiences; 3) teaching information in a way that is related to social and professional roles; 4) providing information and strategies that are immediately

applicable; 5) learner motivation to learn (p. 5). These features of adult learning will be a central focus of the professional development model in this study, identified through the components of TEACH.

Social-cognitive theory. A second theoretical framework guiding this study is Social Cognitive theory, of which the idea of self-efficacy is central. Self-efficacy means that when people are faced with challenges they must believe that their actions can positively impact the outcomes (Bandura, 2004). In other words, if one does not believe that their actions matter, they see little point in engaging in a task or putting in extra effort. As an example, paraeducators are often given a list of duties, a schedule to follow, a lesson plan to deliver, and data to take; they receive all of this with very little instruction as to how, why, and what to do if something doesn't work. In this scenario, paraeducators have very little agency over their daily job duties, which provide very little motivation to improve or revise their own practices.

Bandura (2004) suggests that self-efficacy has four core features: (1) intentionality (creating plans and strategies), (2) forethought (setting goals and anticipating outcomes), (3) self-reactiveness (monitoring and regulating actions), and (4) self-reflectiveness (reflecting on thoughts and actions and adjust as necessary (p. 618). All of these features allow an individual to have some control over the learning experiences they engage in which allow for a sense ownership and buy-in. Professional development for paraeducators should account for these four features to build paraeducator self-efficacy.

Applied behavior analysis. Behaviorism, and more specifically applied behavior analysis, is the last theoretical framework that contributes to this study. At its essence,

behaviorism asserts that behavior is a science and can be observed, measured, and analyzed (Baum, 2011). Applied behavior analysis (ABA) takes the science of behaviorism and focuses on how it can be implemented in real-life, applied settings rather than in laboratories (Johnston, 1996; Bear, Wolf, & Risley, 1987).

Behaviorism strives to create changes in behavior that are socially valid and assist the individual in getting the things that they want or need (Mayer, Sulzer-Azaroff, & Wallace, 2014; Cooper, Heron, & Heward, 2014). Therefore, once a behavior is identified as challenging, problematic, or simply lacking, behaviorists assert that implementing explicit, replicable programs that incorporate antecedent interventions, teaching, reinforcement, punishment, and contingency procedures can result in behavior change in the immediate context (Johnston, 1996; Bear, Wolf, & Risley, 1987). Two primary foundations of behaviorism are observations and data collection (Mayer, Sulzer-Azaroff, & Wallace, 2014; Cooper, Heron, & Heward, 2014). As Mayer, Sulzer-Azaroff, & Wallace (2014) point out, “From the beginning, applied behavior analysis has taken an *empirical*, that is an experimental, data-based, scientific approach, drawing upon observation and experience” (p. 6).

When applying the principles of ABA to professional development of paraeducators it is important to focus on how to support observable, measurable skills or behaviors of paraeducators and to measure the progress of paraeducators in implementation of those skills. Finally, it is important to consider the environmental variables and motivators that will encourage and allow the paraeducators to implement skills learned in professional development. The field of behavior analysis also provides guidance in identifying evidence-based practices that are more likely to be effective if

used consistently. This aspect of behavior analysis is key because the strategies that have been chosen to train within TEACH are strategies that have been identified as evidence-based and are appropriate for the specific school context; these strategies will be discussed later in this chapter.

Although the theoretical frameworks have been presented separately, there is considerable overlap between the three, especially social cognitive theory and andragogy. For example, self-efficacy is central to social cognitive theory and this is addressed in andragogy and applied behavior analysis through goal-setting, self-monitoring, and self-reflection. The same is also true when discussing content identification and development for professional development; many of the factors that need to be considered apply to social cognitive theory and andragogy.

Selecting Professional Development Content

When considering what content to include in professional development for paraeducators, andragogy, social cognitive theory, and behaviorism contain guidance through the tenets of each of these theories. It's important to consider the principles of andragogy, and the importance of selecting content for professional development that is specifically related to professional role and providing information and strategies that are immediately applicable (Merriam, 2001; Knowles, Holton, & Swanson, 2015).

Content that matches professional responsibilities and are immediately applicable.

Adults are often very action-oriented when approaching learning and want to find ways to overcome challenges that they encounter (Cox, 2015; Knowles, Holton, & Swanson, 2015; Zemke & Zemke, 1995; Merriam, 2001). The key component in the selection of

the content from the andragogical lens is that it clearly aligns to the individual paraeducators' job duties. The most effective learning will take place when the skill or strategy that is taught is immediately useful (Knowles, Holton, & Swanson, 2015). A benefit of TEACH is that it intentionally requires that local practitioners with close ties to the program are able to identify practices and content that is directly pertinent to the paraeducator's professional responsibilities. TEACH provides a framework in which paraeducators will immediately put to use the skills they have learned because they are directly related to their daily work.

Self-efficacy. Bandura (1991) suggests that having a clear direction and target for professional development can motivate adult learners through a clear connection to self-efficacy; this connection is much less likely to occur if the purpose and target of professional development are nebulous. Bandura (2004) outlined the following core features of self-efficacy: (1) intentionality, (2) forethought, (3) self-reactiveness, and (4) self-reflectiveness. When identifying content for training and professional development it is important to address intentionality by connecting with paraeducator needs to improve paraeducator self-efficacy, motivation and implementation.

If the daily experience of paraeducators is to feel ineffectual during student interactions, this can lead to a lack of self-efficacy and can undermine a paraeducator's sense of confidence when working with students (Carter, O'Rourke, Sisco, Pelsue, 2009; Lent, 2016; Bandura, 1989). The eagerness of these paraeducators to learn simple, concrete skills that improve their interactions with students and build their self-confidence has been expressed regularly in the literature (Carter, O'Rourke, Sisco, Pelsue, 2009; Breton, 2010) as well as in the context of the school in the study.

Adults are often more open when they do not feel their current skill set is the most effective in a given situation (Merriam, 2001; Knowles, Holton, & Swanson, 2015). For example, a paraeducator may be working with an especially challenging student who exhibits a behavior repertoire that the paraeducator had not previously encountered. As the paraeducator's attempts to intervene with the student fail, the paraeducator recognizes the challenge while also experiencing the daily frustration that this presents (Knowles, Holton, & Swanson, 2015). This would likely lead to the paraeducator being open to learning strategies that could be more effective, thus mitigating frustration at failed attempts while also experiencing positive outcomes from interactions with students. This idea of improving confidence through developing skills aligns with self-efficacy and social cognitive theory. As Lent (2016) points out, self-efficacy

“...addresses the question, “Can I do this?” And, according to social cognitive theory, they help determine which life roles and activities we will gravitate toward or away from, how much effort we will devote to them (especially when we encounter rough spots), how we feel doing them, and how well and how long we will do them” (p. 577).

Therefore, according to andragogy and social cognitive theories, providing training for paraeducators on strategies that will improve their success can impact job satisfaction and perseverance in the face of challenging situations. This also creates the opportunity for the paraeducator to experience immediate reinforcement when implementing a new strategy that works to positively impact their student's behavior, which can also increase one's sense of self-efficacy. Once again, we see the overlap of theories in this example because we know from applied behavior analysis that reinforcing

a behavior increases the likelihood that it will happen in the future (Mayer, Sulzer-Azaroff, & Wallace, 2014). As a result, a paraeducator's ability to learn to successfully intervene with a student can impact their sense of self-efficacy (social cognitive theory) and shape their behavior through immediate negative reinforcement (applied behavior analysis) through the absence of challenging student behavior.

Evidence-based practices. Within a school serving students with challenging behaviors, such as the one in the study, finding high leverage, effective strategies that can be used to effectively support this student population is integral to the success of effective professional development. The strategies that are identified for training must be effective and evidence-based. The idea of using evidence-based practices (EBPs) in education was originally adopted from the medical field and these are practices that are backed by research (Cook & Odom, 2013).

EBPs are a cornerstone of applied behavior analysis and the strict adherence to using EBPs in applied behavior analysis stems from the ethical perspective that interventions used with human beings (and specifically students, in this case) must be backed by research proving the effectiveness and replicability of the intervention (Mayer, Sulzer-Azaroff, & Wallace, 2014). The reason for this defining feature is that when using a strategy or intervention, we want to know that we are using something that has worked with other students and will not have a negative or harmful effect on the student. Students have a finite amount of time in their educational career and they are captive to the instruction of their educators; when educators use ineffective strategies, this clearly has a negative effect on student outcomes.

In order for a practice to be considered an EBP, the research behind the practice must meet specific standards which vary slightly depending on the research design (Cook & Odom, 2013). Although the classification of EBPs is still being established in education, the practices identified as evidence-based provide educators with tools that are likely to be effective with a majority of students.

TEACH provides training on evidence-based practices that have been shown to be effective and implemented with relative ease, such as increasing opportunities to respond, providing specific praise, and pre-correction. The use of evidence-based practices through empirical research is central to behaviorism (Mayer, Sulzer-Azaroff, & Wallace, 2014; Cooper, Heron, & Heward, 2014; Cook & Odom, 2013). Those developing the content for a paraeducator professional development model must be familiar enough with school initiatives, the roles of the paraeducators, and challenges in the environment to create a program that is meaningful for the paraeducators. In addition, TEACH focuses on teaching measurable , relevant skills, consistent with behaviorism (Mayer, Sulzer-Azaroff, & Wallace, 2014; Cooper, Heron, & Heward, 2014), and creating an atmosphere in which paraeducators are ready to learn. The two evidence-based practices that will be the focus of professional development in this study are pre-correction and active supervision.

Pre-correction. Pre-correction is an antecedent-based strategy that involves the prompting of the appropriate or pro-social behavior the staff want to see students engaging in rather than the challenging behavior (De Pry & Sugai, 2002). In order to do this, paraeducators need to be able to anticipate the likelihood of the challenging behavior occurring due to past experiences or observations. Colvin, Sugai & Patching (1993)

established a 7-step pre-correction procedure, which includes, 1) identifying the context and the predictable behavior; 2) specifying expected behaviors; 3) systematically modifying the context; 4) conducting behavior rehearsals; 5) providing strong reinforcement for expected behaviors; 6) prompting expected behaviors; and 7) monitoring the plan.

In a review of pre-correction research, Ennis, Royer, Lane, & Griffith (2017) applied quality indicators from the Council for Exceptional Children's (CEC) *Standards for Evidence-Based Practices in Special Education* (2014) to indicate the evidence supporting pre-correction. The authors of this review concluded that the use of pre-correction is effective across age groups (from PK-high school), in various instructional and non-instructional settings, and across a variety of staff. This is an encouraging finding, given that this strategy is easy to implement and to incorporate into existing classroom routines.

Active supervision. Active supervision is necessary to implement any proactive strategy because it presents opportunities for paraeducators to purposefully interact with students in order to provide feedback, re-direction, and reinforcement (Haydon & Scott, 2008). Active supervision requires that paraeducators continuously monitor the students in the classroom by scanning, moving among students, interacting with a variety of students (rather than focusing on only one or two), and providing reinforcement (De Pry & Sugai, 2002). Active supervision is a necessary component to effective teaching because it provides the opportunity to identify students who are struggling with the instructional content, proactively intervene in disruptive and/or challenging behaviors, and engage in higher levels of positive reinforcement. Active supervision is important for monitoring

student behavior and for increasing the opportunity for more effective interactions between paraeducators and the students they are working with.

Design and Delivery of Professional Development Training

The characteristics of this study are greatly informed by the theoretical frameworks of behaviorism, social-cognitive theory, and andragogy. Although these frameworks provide guidance that is useful to the implementation of TEACH, there is no one theory that can encompass any problem of practice, especially when faced with the challenges posed by the real-world context. It is essential to identify the strengths of each theory, as it applies to paraeducator training, and to create an effective model that can incorporate aspects of behaviorism, andragogy, and social-cognitive theory. There is also significant overlap amongst the theories, which allows for flexibility, adaptation, and interpretation, but none of the theories can be rigidly adhered to in the application of TEACH or any other professional development model. In the next section, the design elements of TEACH will be outlined as well as the theory or theories that support those elements.

Explicit instruction of content. In the case of paraeducator professional development, it is essential to build in opportunities for generalization and practice (Knowles, Holton, & Swanson, 2015; Zemke & Zemke, 1995). Generalization is a critical component of applied behavior analysis because it is the step that teaches the transference of information and skills from the training context into application in real world environments (Mayer, Sulzer-Azaroff, & Wallace, 2014). Promoting generalization requires that paraeducators are provided hands-on experiences to practice skills and given a variety of real-world examples. As Knowles, Holton, and Swanson (2015) point out,

“Repetitive practice of the whole procedure not only aids in the transfer to long-term memory but it also provides the learner with a sense of comfort and eventually a relaxation with the procedure as a whole” (p. 239). During the training component in TEACH, the facilitator will build in role plays, examples, and scripts so that paraeducators can participate in activities and discussions and have opportunities to practice new skills.

Contextual fit. When delivering professional development content, it is also important to consider how skills will be transferred from the training to the classroom. The strategies that are being taught, pre-correction and active supervision, have been identified as interventions that are evidence-based for this particular student population and they are easy to teach, learn, and implement (De Pry & Sugai, 2002; Haydon & Kroeger, 2016; Ennis, Royer, Lane, & Griffith, 2017). Both of these factors are important and the feasibility of implementing these strategies is directly related to contextual fit and increasing the likelihood that they will be adopted and implemented by the paraeducators.

After clear explanation and demonstration of the skills, paraeducators will develop a personal implementation plan in which they will identify how they will adapt practices trained (e.g. pre-correction and active supervision) to fit the specific context and individual style of the paraeducator. Implementation of the same strategy may be different depending on the student, context and staff members involved. The opportunity for paraeducators to develop individualized implementation plans gives the paraeducators a vehicle to be active participants in their own learning, which is a central component to andragogy (Cox, 2015; Knowles, Holton, & Swanson, 2015; Zemke & Zemke, 1995). This is also consistent with suggestions for increasing generalization of practices in to

classroom application. The purpose is to incorporate paraeducator intentionality and opportunities for self-directed learning (Merriam, 2001) by having them design a personal implementation plan to fit their context. This also aligns with Bandura's (2002) emphasis on intentionality within self-efficacy theory.

Self-monitoring and goal setting. Training will also include a focus on developing and using a self-monitoring plan as a support for implementation. Self-monitoring involves the observation of one's own behaviors and then recording occurrence of those behaviors (Kalis, Vannest, & Parker, 2007). In this study, paraeducators will be observing their own instances of pre-correction (frequency count) and active supervision (duration and movement throughout the classroom), then they will record these behaviors after the observation period and input the data into an online system. During the training, paraeducators will develop a personalized plan for self-monitoring their implementation of pre-correction and active supervision in the classroom.

As mentioned previously, one of the core features of self-efficacy is forethought (Bandura, 2004). TEACH integrates forethought in its design by having paraeducators complete an implementation plan that includes self-monitoring and goal setting related to implementation of the identified strategy and anticipating the benefits and outcomes of implementation. While providing a rationale may increase learner motivation to some extent, it is also vital that paraeducators in this study feel that they have some ownership and control in their own learning. The Self-Monitoring Plan and Tracking Form (see Appendix B) addresses forethought by setting daily goals based on their individual plans.

The use of goal setting is also a way to establish motivation by providing the rationale and objectives to the learners. This objective focus is built into the TEACH curriculum and is another aspect of forethought and social cognitive theory. This strategy is effective because, as Bandura (1991) points out, “Through exercise of forethought, people motivate themselves and guide their actions in an anticipatory proactive way” (p. 248). As previously noted, goal setting can have a positive impact on motivation and that is a part of the learning contract.

Supporting Implementation through Self-Monitoring and Collaborative Support

One of the unique features of TEACH is an explicit and purposeful focus on supporting implementation of trained practices in the classroom through ongoing self-monitoring and collaboration with colleagues to review progress and observations. The feedback structure and measurement tools used in this study include elements of all three theories and have been developed to fit into the context of the school. For example, Bandura’s (2004) core feature of self-reflectiveness is accomplished through data collection, data review, and collaboration with teachers and other paraeducators that is built into TEACH. The purpose of the feedback tools is to encourage and support implementation of the skills in the classroom and help the paraeducators internalize the skills they learn.

Follow up and feedback throughout a professional development period is necessary and essential to the success of TEACH. The limited research on paraeducator training has shown evidence that training without feedback leads to poor maintenance results (Hall, Grundon, Pope, & Romero, 2010; Brock & Carter, 2013; Brock & Carter, 2015; Walker & Smith, 2015). The feedback and review process are just as important as

the initial training, thus it is the responsibility of the facilitator to provide repeated practice, varied explanations, and review of new ideas (Knowles, Holton, & Swanson, 2015; Zemke & Zemke, 1995).

Self-monitoring. Self-monitoring was introduced in the previous section because it is introduced as part of the professional development content. In this section, self-monitoring will be described as a strategy for supporting sustained classroom implementation following training. Self-monitoring incorporates a follow-up component through review of the data and progress toward self-identified goals. The self-monitoring instrument in TEACH is effective because it promotes habit-forming and self-efficacy. According to Bandura (1991), “People cannot influence their own motivation and actions very well if they do not pay adequate attention to their own performances, the conditions under which they occur, and the immediate and distal effects they produce (p. 250).

The act of self-monitoring itself can change behavior just by increasing one’s awareness of their actions. When looking at affecting change and creating new behavior patterns and habits, it is vital that paraeducators be active participants in their own learning, monitoring, and reflection on the process. The benefit of this active participation in improvement through self-monitoring and reflection is tied directly to the literature on adult learning theory in the provision of opportunities for self-directed learning (Knowles, Holton, & Swanson, 2015; Malik, 2016; Merriam, 2001; Zemke & Zemke, 1995). The self-management components of TEACH is designed to encourage the use of pre-correction and active supervision in the classroom and to incorporate these strategies into daily practice.

Self-monitoring also lends itself to behaviorism as a tool for supporting

maintenance of implementation. As Stormont and Reinke (2009) point out, “The important thing to remember about using any behavior management practice is that without systematic planning for consistent use, it will not be as effective” (p. 29). This is addressed specifically in TEACH through self-monitoring. The paraeducators will be required to keep data on their own implementation of the evidence-based classroom intervention. With any habit development, increased awareness of one’s own behaviors and consistency in creating new behaviors is key; self-monitoring is an important part of changing paraeducator behavior.

Peer collaboration and support. TEACH also includes follow-up through peer collaboration and support. This component of TEACH is structured in a way similar to Professional Learning Communities (PLCs), which are commonly implemented in schools to support teachers’ professional growth (Hadar & Brody, 2012; Dufour, 2014). PLCs create opportunities for groups to develop shared goals and to deepen their own professional identities through shared experiences and contributions from individual members (Hadar & Brody, 2012). Although the research on PLCs has been done with teachers, the same concepts should apply to paraeducators, such as using colleagues as resources, sharing ideas about strategies that have been effective, and problem-solving challenges that face individuals or the group as a whole. As Hadar and Brody (2012) note, “Moreover, collaboration creates a culture stimulating further learning” (p. 46). In an effort to encourage collaboration and create a culture of growth and learning, the paraeducators will participate in collaborative sessions following the initial training on pre-correction and active supervision. This will also provide a time for the paraeducators to review their self-monitoring data and share ideas with one another. In addition, the

paraeducators will participate in the review and analysis of data in order to develop an understanding of the impact of the intervention. With the addition of the learning contracts, paraeducators will be able to track their own goals and evidence of accomplishment (Knowles, Holton, & Swanson, 2015). Collaboration between colleagues is an important part of the feedback loop in TEACH.

Observations. The last feedback and follow up elements are the classroom observations. Observations will provide an opportunity to collect observable, measurable data on behavior to identify if an intervention results in behavior change (Mayer, Sulzer-Azaroff, & Wallace, 2014). The paraeducator's implementation of pre-correction and active supervision will be observed and measured by the observers and compared to their own self-monitoring data and personal goals. If there is a discrepancy between these two, this data can be shared as a learning tool and areas of further training and practice can be identified. In addition, the awareness of being observed on their performance can often provide motivation for improved implementation and observations can lead to coaching opportunities (Kretlow & Bartholomew, 2010).

Balancing Effectiveness and Feasibility

Not only does TEACH provide a cost-effective answer to the professional development dilemma, but it also addresses the issue of feasibility. The components of TEACH can easily be integrated into existing structures and initiatives. For example, many schools are required to develop school improvement plans and TEACH could easily support any initiative by providing the framework. The focus of TEACH on parsimonious evidence-based practices and the use of self-management for data collection and implementation strikes a balance between feasibility and efficacy that is

likely to make an impact (Carnine, 1997; Wang & Lam, 2017). Feasibility is arguably the most common reason for initiatives to fail and the continued reason that there is such a wide research to practice gap (Greenwood & Abbot, 2001; Cook & Odom, 2013; Wang & Lam, 2017; Malouf & Schiller, 1995). If researchers and educators truly want to make a difference in education for students, it is possible that some of the rigor of research must be replaced by feasibility as the primary quality indicator for a practice; after all, if the most promising practice can never be implemented in real-life contexts, students will never benefit from that practice (Carnine, 1997, Malouf & Schiller, 1995).

The desired outcome of TEACH in this study is to improve the paraeducator implementation of two evidence-based practices, pre-correction and active supervision, in a school serving special education students with challenging behaviors. Although implementation is the primary outcome, there are two secondary outcomes of interest: improved student outcomes including increased on-task behavior and decreased off-task behavior, and improved feelings of self-efficacy for the paraeducators, as evidenced by paraeducator self-report.

Limitations of Theoretical Frameworks

Although the theoretical frameworks of andragogy, social-cognitive theory, and behaviorism provide important guidance for the creation of professional development, none of these theories contain all of the answers in isolation. The most promising aspects of each of these theories need to be teased out and used in conjunction with each other; the real effectiveness of this model lies in the interaction of the elements of the three theoretical frameworks. Therefore, although the theories are helpful in analyzing and

developing a professional development model, they are much less effective if they are applied to a professional development model on their own.

Behaviorism has also come under fire in recent years for the perception that it is rigid and the inability for behaviorism to recognize internal motivations and motives for behavior. Behaviorism relies on operationalized behaviors with the aim and intention of shaping behaviors. There are several aspects of this perspective that could be problematic. The first issue is with operationalized behavior, which translates to observable behavior, which makes it easy to identify and measure. As mentioned previously, this gives no credence to any internal reasons for a person's behavior. The second issue with this is that the observed behavior is open to the interpretation of the observer as a behavior that is either socially acceptable or a behavior that must be changed and shaped; this gives the person engaging in the behavior-shaping significant control over those exhibiting the behavior. This can also present ethical and cultural issues when behaviors are subjected to judgment on those with the power because the judgement is viewed through a cultural lens that may or may not be accurate.

Although these theoretical framework issues cannot be completely alleviated, the combination of all three do allow for problematic aspects of one theory to be addressed by others. For instance, many of the outcomes of interest in this study fall under the behaviorist category of observable, measurable behaviors (e.g. increased paraeducator implementation of an evidence-based practice and increased student on-task behavior as measured through observation), but self-efficacy of paraeducators will also be examined, which represents the internal states, perceptions and feelings of the paraeducators, which are less readily observable. It is through the interaction of the three theories that it is

anticipated that an effective professional development model can be implemented that is both rigorous, effective, socially valid, and practical.

Summary of the Research Literature and Application to the Study

This literature review demonstrates the need to address paraeducator training, the problem of practice presented in this study. Though the limited opportunities for paraeducator professional development are widely understood, methods for providing high quality professional development have not been widely investigated, especially in comparison to paraeducators' teacher counterparts. This study will examine one professional development model that proposes an effective and practical approach to professional development that can be used across various contexts and settings.

Although there are many holes in the research on effective professional development for paraeducators, there are things to be learned from the current literature as far as the need, the potential impact, and promising practices. We know that departing from the current practice of holding one-off trainings and providing a more comprehensive training package with feedback, coaching, and practice is more effective (Zepeda, Parylo, & Bengston, 2014; Brock & Carter, 2013; Brock & Carter, 2015; Carter, O'Rourke, Sisco, & Pelsue, 2009; Simonsen, B., Myers, D., & DeLuca, C., 2010; Hall, Grundon, Pope, & Romero, 2010; Walker & Smith, 2015). In addition, incorporating aspects from the three theoretical frameworks, such as use of evidence-based practices, opportunities for self-directed learning and self-monitoring, coaching, and collaboration with others (Merriam, 2001; Knowles, Holton, & Swanson, 2015; Zemke & Zemke, 1995; Bandura, 2001; Mayer, Sulzer-Azaroff, & Wallace, 2014; Cooper, Heron, & Heward, 2014; Cook & Odom, 2013; Hadar & Brody, 2012; Dufour, 2014; French, 2001;

Causton-Theoharis, Giangreco, Doyle, & Vadasy, 2007; Kretlow & Bartholomew, 2010) are practices that will strengthen the applicability, efficiency, and validity of learning opportunities for an adult audience.

This study proposes to use a professional development model called TEACH to provide high-quality, effective training for paraeducators to improve their skills and self-efficacy. In addition, it is the intention that the steps and structure provided by TEACH can be generalized to other settings because TEACH emphasizes the flexibility of fitting implementation to local context and personal preferences for implementation.

Chapter 3 – Methods

Research Methods

This study examined the effectiveness of a professional development model called TEACH to increase paraeducator use of evidence-based practices to support student behavior. The evidence-based practices selected for this study were pre-correction and active supervision.

The research design was quantitative, using a descriptive pre/post design. Pre/post comparisons across a group of eight paraeducators examined the impact of TEACH on paraeducator implementation of pre-correction and active supervision, ratings of self-efficacy, and student outcomes. This design was selected because it was easily incorporated into the existing structure and schedule of the school, and because addressed a local problem of practice important to the success of the school. Originally, this study was going to include 12 participants, but one of the paraeducators stopped working at the school and three declined to participate because participation was voluntary.

All of the elements in this study, including the measurement tools, were deliberately selected with the lens and perspective of a study that can be carried out by a practitioner in a real-life context. Feasibility was a cornerstone of this project because it was important to me as a practitioner-researcher, and an administrator at the school. To carry out this project the methods had to be meaningful in order to address school needs and feasible based on the realities and resources in the school.

Participants

The participants in this study were eight paraeducators, ranging in age from 27-65. The experience, education, and skill sets of each paraeducator varied significantly. Of the eight paraeducators, five were female and three were male.

Table 1 <i>Paraeducator Demographics</i>		
<u>Paraeducator #</u>	<u>Years of experience</u>	<u>Level (Years) of education</u>
Paraeducator 1 – Male	22	Master’s degree
Paraeducator 2 – Female	13	Master’s degree
Paraeducator 3 – Female	9	Some college (2 years)
Paraeducator 4 – Female	12	HS diploma
Paraeducator 5 – Female	13	Some college (1 year)
Paraeducator 6 – Male	25	Bachelor’s degree
Paraeducator 7 – Male	6	Some college (2 years)
Paraeducator 8 – Female	20	Some college (1 year)

Setting

The study took place in a public, separate school for students identified with Emotional/Behavioral Disorders (EBD) in a suburban school district in the Northwestern United States. The school serves between 45 to 55 special education students from school districts in seven surrounding counties. The common learning characteristics shared by the students are chronic absenteeism due to anxiety, depression, suicidal ideation, being victims of bullying, and a general inability to be successful in their home schools.

There were five special education teachers and five mental health specialists on staff, in addition to twelve paraeducators, eight of which were the study participants. When students begin attending the school, they are assigned an academic case manager and a mental health case manager. These two licensed staff work together to develop and implement each student's individual education plan (IEP). Each classroom has one teacher and two paraeducators. Much of the individual reinforcement, behavioral support, and instructional support is provided by the paraeducators. In addition, the paraeducators take behavioral data, create classroom materials, assist with program planning and development, and provide small group or 1:1 instruction, which means that paraeducators often have much more student contact time than the licensed staff.

Procedures

Recruitment and consent. The selection criteria for recruitment and participation was that the paraeducators worked at the school where the lead researcher served as the principal. All paraeducators working at the research site were asked to participate and sign a consent form. The consent form and all data collected was stored in a confidential location on-site. Participants were assured that participation was voluntary and they were able to withdraw their consent at any time. The research study occurred within the school professional development plan for paraeducators. In addition to consent on the part of the paraeducator and teacher participants, assent from the students that paraeducators were working with was obtained, as well as consent from the students' parents for students under the age of 18; if a student was 18 or older, consent was obtained from them.

Selection of evidence-based practices for professional development. This study examined the effectiveness of adapting the TEACH professional development

model for paraeducators. For this study, two evidence-based strategies, pre-correction and active supervision, were chosen to implement using the TEACH framework. Pre-correction and active supervision were selected because of the significant impact it can have in the classroom context. In classrooms with students who engage in persistent challenging behavior or disengagement, pre-correction provided a specific evidence-based strategy for paraeducators to use to prevent predictable problem behaviors by anticipating and pre-emptively prompting the expected behavior. Pre-correction has also been shown to work with similar students that are represented in the school context, specifically students with disabilities (Sprague & Thomas, 1997) and students who exhibit challenging, off-task behavior (Faul, et al., 2012).

Some of the specific reasons that pre-correction work with this student population, as pointed out by Faul et al. (2012), are the simplicity of the intervention and the flexibility of use according to the context. Teachers working with students exhibiting off-task and disruptive behaviors at high rates of frequency are often overwhelmed and need behavioral strategies that are effective and easy to use. In addition, pre-correction was a form of prompting that could be used in various forms, such as reminders, verbal cues, modeling, etc., that is appropriate to the scenario (Faul et al., 2012; Sprague & Thomas, 1997). All of these factors mentioned in the studies – including the high rates of off-task, disruptive behaviors on the part of the students, and the overwhelmed teachers requiring simplistic, effective interventions – are represented in the focus school for this study.

To provide consistent feedback to students, it is important that paraeducators are actively supervising by moving around the classroom and scanning. Active supervision

and pre-correction are also important with these students in order to identify or “catch” opportunities for error correction, pre-correcting for engagement behaviors, and promoting engagement through reinforcement. The emphasis on identifying positive, proactive interventions for disruptive and challenging behaviors has been central to education and is even outlined in IDEA (Ennis, Royer, Lane, & Griffin, 2017). In a study that focused specifically on decreasing the rate of problem behaviors during recess by using active supervision was effective (Lewis, Colvin, & Sugai, 2000). Although the study focused on recess, the implementation of the intervention required very little training, the effect was evident almost immediately, and the majority of the staff providing active supervision were classified staff.

In another study by Haydon and Kroeger (2016), they looked at the effects of active supervision in combination with pre-correction and explicit timing on classroom behavior in a high school. The results from this study indicated that utilizing a training package such as the one used in the study was feasible because it required very little training time and it was effective in reducing classroom behaviors (Haydon & Kroeger, 2016). In addition, the authors noted that the same, or a similar, intervention could be used by teachers with ease, especially in small classrooms (Haydon & Kroeger, 2016). The school at the focus of this research is also a secondary school and typical classroom sizes are 8-12 students with three adults (one teacher, two paraeducators). The results of the Haydon and Kroeger (2016) study are promising, especially in the replication of the grade levels of the students and the small classroom sizes.

Both pre-correction and active supervision fall into the category of positive, proactive behavioral interventions that can be applied easily and is supported by federal,

special education law. Given all of these factors, the selection of these strategies was compelling through their feasibility and effectiveness with the specific student population in the school.

Paraeducators were also able to utilize active supervision and pre-correction in a variety of settings with a variety of students and student behavior. The ease of implementation and flexibility of active supervision and pre-correction lends itself well to the research setting because it encompasses a school that has multiple student age groups (12-19), various student target behaviors, and a group of teachers who have different teaching and classroom management styles. Given the numerous components that present variability within the school setting and the day-to-day experiences of paraeducators, the chosen strategies provided the ability to individualize implementation to fit each situation that is encountered. The administrator and teachers identified both practices as high-leverage practices essential to maximizing the support of paraeducators in the classroom.

Finally, active supervision and pre-correction were also chosen due to the research support for these practices. The use of pre-correction in conjunction with active supervision and behavior-specific praise have been shown to be feasible behavior management strategies that decrease occurrences of minor problem behaviors in schools (Ennis, Royer, Lane, & Griffith, 2017; Evanovich & Kern, 2018; Haydon & Kroeger, 2016; De Pry & Sugai, 2002; Stormont & Reinke, 2009; Faul, Stepensky, & Simonsen, 2012).

Baseline data collection. Prior to professional development, paraeducators identified a consistent time of day that is challenging, for example 1st period Language Arts class or lunch supervision. Each classroom was comprised of a classroom team that

included one teacher and two to three paraeducators. In the process of identifying the most challenging class period of the day, each classroom team worked together to determine the same class period so that paraeducators working together were focused on intervention and data collection at the same time. Once the time of day was identified for each paraeducator, baseline observations were conducted over a period of two weeks prior to TEACH training. Observations were conducted by three different observers who work at the school including the building administrator (and principal researcher), the school psychologist, and a behavior specialist. The purpose for including three observers was to ensure more reliability of the data through multiple observers (rather than relying on only one perspective and interpretation) and to make the gathering of data more feasible by splitting up the time commitment.

It was also important to have observers other than this researcher/administrator because my role presented some limitations in this study. The first limitation was that, as the principal researcher, there is an inherent hope that the study will result in positive results, which can either sway the researcher/observer to intentionally or unintentionally interpret data more positively than it should be. The second limitation was that as the administrator in the school, I am in a position of authority and I supervise and evaluate all of the staff. In this role, my presence in the classroom as an observer could impact the data because the presence of a supervisor can cause staff to behave differently than they normally would. In order to mitigate this effect, the participation of the two other observers was key. In addition, the school staff had been exposed to numerous non-evaluative observations by the principal and participated in regular discussions about

program and staff improvements as systematic, collective change rather than experiencing punitive or disciplinary actions for ineffective practices.

A brief training was conducted with the three observers to increase reliability of data collection. Training included presenting operational definitions of active supervision and pre-correction along with demonstrations of a range of examples and non-examples. In order to determine if the observers interpreted the operational definitions of active supervision and pre-correction, all three observers first watched videos of classroom instruction while talking through each behaviors. After the talk aloud practice, the same procedure was done without talking to each other and comparing results. Once roughly 85% agreement was achieved, the observers conducted live classroom observations together, collected data, then discussed the results after the observation. Again, when about 85% agreement was achieved in the practice sessions, the observations began. The team was striving for 85% agreement on Classroom Observation forms (see Appendix A) that measure implementation data on active supervision and pre-correction.

In order to calculate IOA for pre-correction, the number of agreements that occurred across the three observers was divided by the total number of possible agreements, which was 15 – observations were done for 15 minutes and pre-corrective statements were tallied every one minute. If there were discrepant numbers in any of the one-minute increment across all three observers, this was considered disagreement; the one-minute increments that were the same for all three observers were considered agreement and this number was divided by 15. For calculating IOA for active supervision, there was a four-point rubric that was scored every minute for a 15-minute observation, resulting 60 total possible points. The score for that each observer assigned

to the paraeducator during an observation was divided by the 60 total possible points and these were then averaged across the three observers to achieve the agreement score.

This particular form of IOA is not typical and does result in lower standards for reliability. However, as the focus of this study is feasibility, this design endeavors to balance rigor and practicality. In order for staff and students in schools to benefit from promising and evidence-based practices the delivery of these interventions need to be able to be implemented by overworked public school staff. While this particular design, including the IOA procedure, does sacrifice some of the precision and objectivity of many other quantitative studies, it more accurately approximates the possibilities given real world resources in schools.

The observers established IOA prior to collecting baseline data and achieved 84% agreement. During the baseline (pre) phase, each paraeducator was observed two times before receiving the training on active supervision and pre-correction. In 20% of the observations, data was collected simultaneously by two of the observers and the IOA between the observers was 89% during the baseline phase. The observers were collecting data on the number of pre-corrective statements that were made every minute and scored on the quality of the active supervision, also given after every minute in a 15-minute observation period. Partial interval recording was chosen so that the behaviors, especially the quality of active supervision, could be recorded in smaller, discreet periods. In the active supervision category, the quality of active supervision could change significantly over an observation period and this method allowed for the observers to account for this variability and allow a higher score during parts of the observation even if the quality was not maintained across the entire time.

This same procedure was followed for the observations in the intervention (post) phase, although paraeducators were each observed three times, resulting in 36 total observations. For the intervention phase observations, 20% of these were conducted with two observers and the IOA across the intervention observations was 94%.

Once IOA was established, two observations per paraeducator occurred (24 observations total) to gather baseline data. IOA data was collected on 20% of the observations with two observers simultaneously collecting data in the same classroom.

Baseline data included the collection of observation data on paraeducator use of pre-correction and active supervision and daily ratings of student behavior by classroom staff members. The observer(s) collected data on each paraeducator's use of pre-correction and active supervision during two 15-minute observations across two different days. Student behavior data was collected using the data system currently in place in the school (see the Measures section below for a more detailed explanation). Student data collected included a) out of classroom support (OCS) referral log (see Appendix B) that students receive when they are engaging in problem behavior or self-select a break because they are getting frustrated and b) ratings of student's on-task behavior collected through the Daily Student Behavior Tracking Form (see Appendix C).

Data on student referrals and on-task behavior ratings was aggregated from all students in the class during the targeted subject or routine. The total number of out of classroom referrals was tallied each day and the average on-task rating across all students in the classroom was calculated to provide an overall measure of daily classroom behavior. Paraeducators also completed a Self-efficacy Survey (see Appendix D) during baseline data collection.

Professional development. After baseline data was collected, the intervention phase began. The intervention included three components: a) training, b) self-monitoring, and c) collaborative support.

Training. First, paraeducators and their partnering teacher received training on pre-correction and active supervision. The training focused on evidence-based practices in school and broke down the procedures and steps for active supervision and pre-correction. During this training the paraeducators collaborated with their classroom teams to develop an individual Goal Setting Form. The professional development session lasted about two hours and the training, as mentioned previously, defined active supervision and pre-correction and a rationale and research support for each practice was presented. The training led participants through completion of the Goal Setting Form (see Appendix E) which resulted in each paraeducator developing an individualized plan for implementing pre-correction and active supervision. The implementation plan was tailored to the challenging time of the day identified by each paraeducator and teacher team. The forms were reviewed, then given back to the paraeducators as a guide and a reminder of their plan.

In addition to developing a personalized plan for implementing pre-correction and supervision, paraeducators also developed a plan for self-monitoring their implementation of precorrection and active supervision that fit their preferences, style and the classroom activities during the identified subject or routine. In order to achieve fidelity, the three observers reviewed the individual plans and goal-setting forms to ensure that they were filled out accurately according to the training instructions. If any of the documents were not clear or did not follow the instructions, one of the observers

worked directly with that paraeducator to correctly complete both the implementation plan and the goal-setting form, although this was not necessary because the forms were filled out correctly.

Self-monitoring. In the four weeks following the training, paraeducators were asked to execute their implementation plan and collect self-monitoring data to support their implementation of pre-correction and active supervision during the time of day each person identified for intervention. A daily email was sent to the paraeducators and teachers to encourage use of active supervision and pre-correction. The email contained a link to a Self-Monitoring Form (see Appendix F) that paraeducators were asked to complete each day to report their use of active supervision and pre-correction.

Self-monitoring occurred with several measurements. The first measurement was simply a tally of pre-corrective statements that paraeducators counted during the period each one targeted and these were recorded in the online tracking system. In addition, the daily survey prompted paraeducators to rate their implementation of active supervision on four scales:

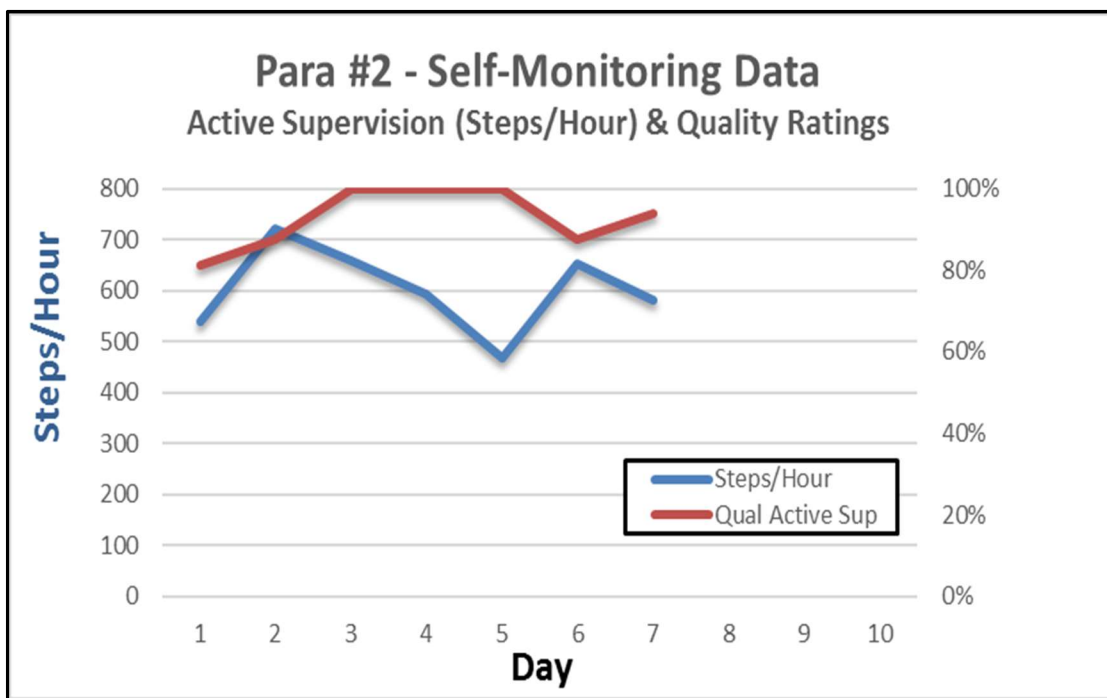
1. I continuously moved amongst the students;
2. I scanned the classroom to catch appropriate and inappropriate behaviors;
3. I interacted with a variety of students; and
4. I provided feedback (praise, error correction, redirection).

Each rating included a four point Likert scale with a rating of 1 = “Strongly Disagree” to 4 = “Strongly Agree”. Lastly, paraeducators were given activity trackers to wear on their wrists that tracked the number of steps they took in the identified self-

monitoring period. The paraeducators recorded their daily ratings and the number of steps taken each day on the daily on-line survey.

The self-monitoring data was presented in graphs as part of the intervention to support paraeducator use of pre-correction and active supervisions. An example of the graph is below:

Figure 1: Sample Self-Monitoring Graph for Individual Paraeducator



Intervention data collection. Paraeducator implementation of their plan began the very next school day following the training session. Data collection resumed after the training occurred and took place over the following four weeks. Classroom observations and paraeducators' self-monitoring data were collected over the four week implementation phase. Consistent with baseline data collection, observation data on paraeducator use of pre-correction and active supervision was also collected. Three days of observation data were collected on each paraeducator for a total of 36 observations, of

which 20% of the observations were conducted with IOA for a total of seven IOA observations.

In addition, as part of the intervention, paraeducators were asked to collect daily self-monitoring data on their implementation of pre-correction and active supervision. This self-monitoring data was entered into a google survey by each paraeducator which generated a graph of their implementation. Student outcome data continued to be collected using the existing school-wide data system on student problem behavior and on-task behavior.

After four weeks of implementation, paraeducators completed the same self-efficacy survey that they completed prior to the intervention. Finally, paraeducators and teachers were also asked to complete Social Validity questionnaires (see Appendices G & H) to assess the acceptability and feasibility of the intervention.

Instruments and measures

Multiple measurement tools were used in this study to measure the effectiveness and feasibility of the intervention. The data collection tools that were used were the classroom observation form, self-monitoring plan, student behavior ratings, pre/post self-efficacy survey, and a social validity questionnaire. The measures were selected based on considerations of feasibility and how well each measure was able to accurately reflect the data that each research question purported to answer.

The following table outlines the data collection tools and the alignment of the tool with the corresponding research question.

Table 2*Research Questions and Corresponding Measures*

Research Question	Independent Variable	Dependent Variable	Measure
1. Does professional development for paraeducators using the TEACH model increase paraeducators' implementation of the targeted evidence-based practice in the classroom, specifically active supervision and use of pre-correction?	TEACH (training on active supervision and pre-correction, daily self-monitoring & collaborative support)	Paraeducator implementation of active supervision and precorrection practices	Classroom observation form;
2. Does professional development using TEACH increase paraeducators' sense of self-efficacy?	TEACH	Self-efficacy	Self-efficacy survey
3. Does professional development for paraeducators using TEACH to support implementation of pre-correction and active supervision improve classroom behavior of students with persistent challenging behavior, specifically: <ol style="list-style-type: none"> Does this intervention decrease student problem 	TEACH	Student behavior (problem behavior resulting in out of classroom referrals) and on-task ratings	Daily student behavior ratings: on-task and Out of Classroom Support Referrals

<p>behavior in the classroom as measured by a daily student behavior rating?</p> <p>b. Does this intervention increase overall student task engagement in the classroom as measured by a daily student behavior rating?</p>			
<p>4. Are the methods used in TEACH feasible and acceptable by paraeducators and partner teachers?</p>	<p>TEACH</p>	<p>Paraeducator and teacher perceptions of Feasibility and acceptability</p>	<p>Social validity survey</p>

The measurement tools are described in more detail below.

Classroom observation form. The classroom observation form (see Appendix A) was used to collect data on paraeducator implementation of pre-correction and active supervision. The observation form used a partial interval recording system to collect active supervision data and frequency data on paraeducator use of precorrection. Observations lasted 15 minutes and the partial intervals were one minute each, so data

was collected every minute. Below are operational definitions for pre-correction and active supervision.

- Active supervision – 1) continuously moving amongst students, focusing on problem areas; 2) scanning classroom; 3) interacting with a variety of students; and 4) providing feedback (De Pry & Sugai, 2002).
- Pre-correction – positively stated prompts for expected classroom behavior in the absence of unexpected behaviors on the part of the student or students being prompted (Haydon & Kroeger, 2016)

Active supervision ratings are reported as percentages of total possible points with ratings on a one to four scale scored each minute for the 15 minutes observation. The one to four scale rated the quality of the active supervision, with one being the lowest quality and four being the highest. Each observation has 60 possible points (15 minutes x 4 possible points) and the total number of points will be divided by 60 (e.g. 45 out of 60 points = 75% of points earned). Pre-corrections are reported as the total number of precorrections occurring during each 15 minute observation period.

Daily student behavior data. Two student behaviors were tracked to assess the impact of TEACH on student behavior: Out of Classroom Support placements and on-task behavior. Both were measured daily for all students in the school using the existing school data system.

- **On-task** – Student on-task behavior was tracked using the Daily Behavior Rating Scale in the school. This measure was developed for the school with input from teachers and behavior specialist. This measure is an online system that tracks

general and individual behaviors for all students in the school, every period, and every day (see Appendix E). The program-wide behaviors tracked are attendance, time on task, and time off task. The daily time on task and time off task are collected for all students. On task behavior is defined as 1) looking at the teacher while instructions or lessons are being presented and responding verbally or non-verbally (e.g. asking questions or nodding); 2) following the instructions that were given; 3) carrying out instructions in the manner they were given or orienting toward teacher; or 4) requesting help when needed. Every day staff enter data estimating the number of minutes on task and off task for each student during each class period by selecting the number of minutes from a pull down menu (e.g. five minutes, 10 minutes, and 15 minutes) ranging from zero to 60 minutes. Data was reported as the average percentage of minutes on task each period across all students in the classroom (e.g. 60% on task would indicate that across all students in the classroom the average was 36 minutes on task out of a 60 minute class period).

- **Out of Classroom Support (OCS) placements** – When students exhibit disruptive and/or challenging behavior that cannot be managed in the classroom, student are referred to OCS, which is staffed by a behavior specialist. An OCS log captures the severity and intensity of the student behavior that led to the referral, as well as how long the student remained in OCS, how many minutes they were out of class, and the follow-up. There are two categories of placement, Minor and Major. The categories are operationalized below:
 - Minor referral reasons

- Disrespect to staff or students (without direct threats)
- Three redirections from staff for disruptive behavior
- Drug references
- Subtle sexualized references
- Out of area (not being in designated area that you are scheduled to be in)
- Major referral reasons
 - Physical aggression or threats of physical violence directed to staff or students
 - Self-harm
 - Explicit drug references
 - Explicit sexualized talk or overt sexualized touch
 - Refusal to turn in technology when at 2nd or 3rd tech strike
 - Refusal beyond two minutes to go to OCS room for a minor placement

The OCS procedures and protocols are outlined in a staff handbook and reviewed with staff several times throughout the year. The guidance for staff is as follows:

OCS Referral Process - When behaviors that warrant an OCS placement occur, staff will walk students to the OCS room. The referring staff will fill out the OCS referral form documenting the reason for the referral in writing. Once in the OCS room, mental health staff will initiate OCS placement protocols. OCS referrals will be reported for each classroom based on the average number of OCS referrals occurring per day (e.g. 0.3 referrals per day would indicate 3 OCS referrals across 10 days)

Self-efficacy survey. The self-efficacy survey (see Appendix C) measured the paraeducators sense of how effective they felt in the classroom. The lack of research on paraeducator self-efficacy required that a teacher self-efficacy survey be adapted for paraeducators. The self-efficacy survey had been adapted from the Norwegian Teacher Self-Efficacy Scale (NTSES; Skaalvik & Skaalvik, 2007) because it specifically addressed areas in education that affect teacher sense of self-efficacy, which could be applied to the paraeducator experience. NTSES is a multi-dimensional scale that measured six dimensions, broken into four items each (Skaalvik & Skaalvik, 2010). The six dimensions of the original scale included 1) instruction, 2) adapting education to individual student needs, 3) motivating students, 4) keeping discipline, 5) cooperating with colleagues and parents, and 6) coping with changes and challenges (Skaalvik & Skaalvik, 2007). The NTSES was analyzed using Cronbach's alpha to look at the effectiveness of the survey in measuring teacher self-efficacy, specifically in relation to teacher burnout. For each of the six dimensions, the Cronbach's alpha scales were .83, .90, .83, .91, and .81 (Skaalvik & Skaalvik, 2007). The results of the analysis indicate that this survey may be a useful tool to measure teacher self-efficacy (Skaalvik & Skaalvik, 2010). Although some of the items pertained to paraeducators, there was enough variability in teacher versus paraeducator roles that items had to be slightly re-written or excluded to match the role of paraeducators. This adaptation may impact the reliability and validity of this measure.

Self-monitoring. Paraeducators self-monitored their own implementation of active supervision and pre-correction daily during the identified class period. Active supervision was measured by counting the number of steps the paraeducator takes during

the identified self-monitoring period and by self-rating on a 4 point likert scale from (1 = “Strongly disagree” to 4 = “Strongly agree”) the following qualitative aspects of active supervision:

1. I continuously moved amongst the students;
2. I scanned the classroom to catch appropriate and inappropriate behaviors;
3. I interacted with a variety of students; and
4. I provided frequent feedback and praise.

For pre-correction, paraeducators tallied the number of pre-corrective statements they made. All paraeducators were provided with tally counters and they could use this for counting pre-corrective statements. At the end of the period or day, paraeducators input all active supervision and pre-correction data into an online survey and the data was presented in a graph (see Figure 1). Collection of self-monitoring data was a central component of the intervention, which provided a daily estimate of paraeducator implementation of pre-correction and active supervision.

Social validity survey. The social validity measure (see Appendix D) was adapted from the Behavior Intervention Rating Scale (BIRS) developed by Elliot and Treuting (1991). The BIRS was developed to measure how teachers perceived classroom interventions, in terms of teacher acceptability, effectiveness and feasibility (time and effort).

The BIRS was developed with teachers as the target audience, so the measure had to be adapted to a paraeducator perspective. There are 12 items on the questionnaire (the original version contained 24 items) and paraeducators were asked to rate themselves on each question on a four point likert scale ranging from Strongly Agree to Strongly

Disagree. There are two versions of the survey, one for paraeducators and their perception of the value and feasibility of the intervention, and one for classroom teachers and how they see the impact of the intervention on the classroom and skills of the paraeducators in their classroom.

Data Analysis

Paired sample t-tests. Paired sample t-tests were run in order to evaluate the effectiveness of the professional development within the TEACH model on paraeducator implementation of pre-correction and active supervision, paraeducator self-efficacy ratings, and student outcome data. The use of paired sample t-tests in this study were used because this analysis can compare the means for the continuous measures pre and post intervention to determine if there is a significant difference in paraeducators' implementation of the two strategies and whether there was a difference in paraeducator self-efficacy and student behavior. T-tests represent a fairly simple analysis that can be feasibly undertaken by practitioner-researchers; this was another important reason a t-test was chosen.

Although the use of a paired samples t-test is feasible from a practitioner perspective, there are limitations to this form of data analysis, specifically the small, non-randomized sample size. In addition, a paired samples t-test is used to look at only two variables and does not have the sensitivity to account for any other factors that could have a significant impact on the results. Classroom observation data of paraeducator use of pre-correction and active supervision was compared between the baseline phase and intervention phase to evaluate the impact of TEACH on paraeducator implementation. Across the eight paraeducators, a mean of the pre-correction and active

supervision data during baseline was compared to a mean of the same data in the intervention phase.

To examine impact on student behavior, daily behavior ratings for average on-task behavior for the classroom was also analyzed through a pre/post comparison as well as the daily totals of OCS placements of students in the classrooms in which paraeducators are implementing their learning contract. The self-efficacy surveys were analyzed through pre/post comparison to determine if the self-reported perceptions of self-efficacy increased across the paraeducators in response to implementation of TEACH.

Descriptive review. This study also measured paraeducator and teacher ratings of feasibility and acceptability of the TEACH methods used. Descriptive statistics were used to summarize the ratings to each item across each group of participants, paraeducators and teachers. These results were analyzed to identify the impact of TEACH on all of the factors in the table and to answer the following questions:

1. What was the overall increase of paraeducator reported self-efficacy from the pre-survey to the post-survey?
2. Did an increase in instances of active supervision and pre-correction measured through self-monitoring data coincide with an increase in instances of the same behavior measured through observations?
3. Did student behavior decrease in classrooms that had an increase in observed active supervision and pre-correction?
4. Did student behavior decrease in classrooms that had an increase in self-monitoring data?

Chapter 4 – Results/Analysis

The purpose of this study was to look at the impact of providing training in specific evidence-based practices paired with use of self-monitoring by paraeducators to support them to work with students with disabilities more successfully. The study implemented the professional development model, TEACH (Training to Evidence- and Assessment-based Classroom Habits; Borgmeier, Simonsen, & Freeman, 2014) to support paraeducator implementation of pre-correction and active supervision in the classroom. The study examined whether the use of TEACH increased implementation of the evidence-based practices trained, improved paraeducator self-efficacy and decreased student off-task, disruptive behavior.

The primary justification for designing and carrying out this research study was that there are well over one million paraeducators working in public schools, working with and supporting students and teachers. The need to provide training for paraeducators in special education is undeniable given the prevalence of paraeducators in public education, however, there is little guidance on how to provide professional development, what content to present, and what model is sustainable, effective, and practical in the public-school context. There is also limited literature in the area of training and professional development for paraeducators given the multitude of challenges, including schedules, school budgets, task variation, and lack of standardization and consistency in the paraeducator role.

The goal of this study was to add to the literature on this topic and to try to bridge the research to practice gap by making recommendations for a training model that can be replicated in various schools and contexts. It was also important to identify high leverage,

evidence-based practices that could be easily incorporated into a paraeducator's daily routine and that can have a measurable impact on the challenging behaviors of students in the classroom.

The specific context of the study was a public, separate school run by a regional program, serving students experiencing challenging behaviors as a result of mental health and behavioral disorders. Given the nature of the school, these paraeducators work in a setting with some of the most challenging students in the region who have not responded to multiple interventions and placement options within their neighborhood school district.

Analysis of Data

There were multiple research questions at the center of the study and multiple measurement tools used to answer those questions. The following were the questions the study attempted to answer:

1. Does professional development for paraeducators using the TEACH model increase paraeducators' implementation of the targeted evidence-based practice in the classroom, specifically active supervision and use of pre-correction?
2. Does professional development for paraeducators using TEACH to support implementation of pre-correction and active supervision improve classroom behavior of students with persistent challenging behavior, specifically:
 - a. Does this intervention decrease student problem behavior in the classroom as measured by a daily student behavior rating?
 - b. Does this intervention increase overall student task engagement in the classroom as measured by a daily student behavior rating?

3. Does professional development using TEACH increase paraeducators' sense of self-efficacy?
4. Are the methods used in TEACH feasible and acceptable by paraeducators and partner teachers?

RQ 1: Paraeducator Use of Evidence-Based Practices

For the first research question, the tools used to measure both active supervision and pre-correction was the classroom observation form (see Appendix A). There were three observers who participated in the observations after reaching IOA. The observations took place prior to the paraeducator training to establish baseline, then again during the intervention phase. There were two baseline observations conducted for each paraeducator during the baseline phase and three during the intervention phase, and the measures for both active supervision and pre-correction were averaged across the observations in each phase. The observation data was collected using a partial interval recording system for active supervision data and frequency data for paraeducator use of precorrection and observations were each 15 minutes long. In order for data to be collected consistently across the observers, pre-correction and active supervision were operationalized and defined, as seen below:

- Active supervision – 1) continuously moving amongst students, focusing on problem areas; 2) scanning classroom; 3) interacting with a variety of students; and 4) providing feedback (De Pry & Sugai, 2002)
- Pre-correction – positively stated prompts for expected classroom behavior in the absence of unexpected behaviors on the part of the student or students being prompted (Haydon & Kroeger, 2016)

Observation data. Observation data was gathered on paraeducator use of two evidence-based practices, pre-correction and active supervision, for eight different paraeducators, by three observers (see Table 3). The first column of the table identifies the specific paraeducator, and the following columns outline the data associated with each one. The next two columns represent the average number of pre-corrective statements that were observed and documented by the observers in the baseline phase, then in the intervention phase. Based on those averages, the fourth column in the table is the change score in pre-corrections from baseline to intervention phase. After the column with the pre-corrective change score, the next two columns are the average scores the observers gave to the paraeducators in each phase. As mentioned previously, active supervision was operationalized and a rubric was used to score the quality of active supervision on a one to four Likert scale (with four being the highest quality). The paraeducators could receive one score for every minute of the 15- minute observation, with a total possible score of 60. The two columns in Table 3 with the active supervision scores are the result of the scores being averaged across the baseline phase, then across the intervention phase. The final column outlines the change score in active supervision based on the baseline averages and the intervention averages. The change scores for the pre-correction only moved in the positive direction for two of the eight paraeducators and the paired samples t-test did not demonstrate a significant increase ($t=1.075$; $p = .171$).

Table 3				
<i>Descriptive Analysis of Observation Data</i>				
	Total Pre-corrective Statements (during a 15	Change Score	Active Supervision Scores (Out of 60 possible)	Change Score

min. observation)						
Para	Baseline Pre- Corrections Averaged Across Two Observations	Intervention Pre- Corrections Averaged Across Three Observations		Baseline Active Supervision Ratings across Two Observations	Intervention Active Supervision Ratings Averaged Across Three Observations	
1	1	1	0	37.5	48	+10.5
2	.5	2.5	+2	43	51.5	+8.5
3	1	1	0	30.5	42.33	+11.83
4	4	1	-3	44.5	28	-16.5
5	0	0.67	+0.67	45	38	-7
6	2.5	2	-0.5	28	43.5	+15.5
7	1.5	0.33	-1.17	25	29.67	+4.67
8	1.5	0.67	-0.83	42.5	43.67	+1.17
Total	1.5	1.15	-0.35	37	40.58	+3.58

In the active supervision category, there was a little more variability. For six out of eight of the paraeducators, the change scores increased from the baseline phase to the intervention phase. However, for the two paraeducators whose scores went down, one of those scores represented the biggest change in either direction and one was squarely in the middle of the group of scores. Overall, the average change score for active supervision slightly increased, but the average was clearly impacted by the two negative change scores, resulting in an overall increase in change score across all paraeducators of

+3.58. A paired samples t-test did not find a statistically significant increase in active supervision following implementation of TEACH ($t = -.319$; $p = .383$).

Self-Monitoring Data. A second indicator of paraeducator implementation was daily self-monitoring data (see Figure 2 below for Paraeducator #4 self-monitoring data; see Appendix J for all individual paraeducator graphs). Figure 2 shows the reported self-monitoring data for pre-correction and number of steps taken (as an indicator of active supervision) on those days during which the paraeducators did collect and report self-monitoring data. These graphs are presented as Pre-corrections per hour and number of steps per minute.

Figure 2

Paraeducator 4 - Oct 22 – Nov 15

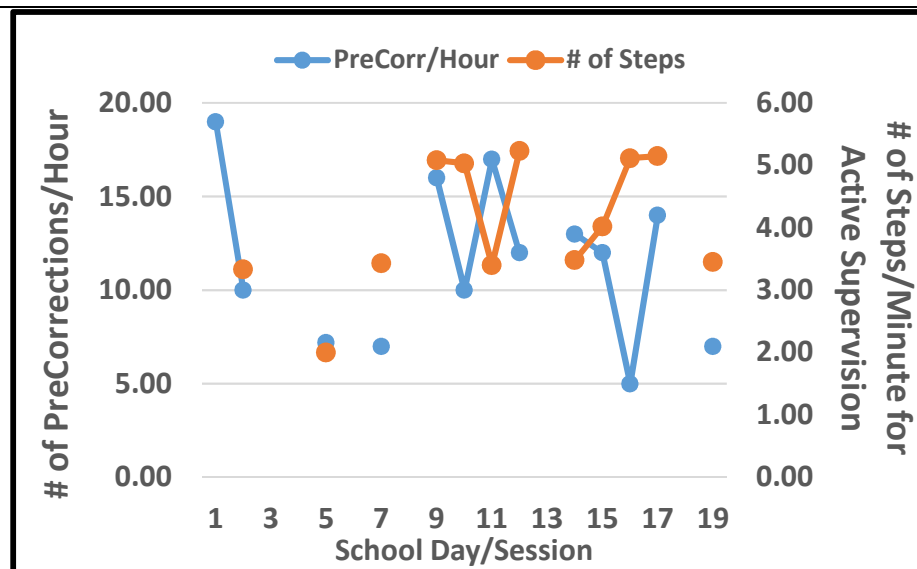


Table 4

Comparing Observed Rates of Pre-Corrections with Self-Monitored Pre-Correction Rates

Para	Observation # of Pre-corrections (per hour)*		Self Monitoring Pre-Correction	
	Pre	Post	# Days Reported	Mean Pre- Correction Rate/Hour
#1	4	4	10	6.51
#2	2	10	7	10.47
#3	4	4	10	5.9
#4	16	4	13	11.48
#5	0	2.67	8	16.18
#6	10	8	6	27.61
#7	6	1.33	6	3.46
#8	6	2.67	12	3.3
Total	6	4.6	9	10.613

Table 5

*Comparing Observed Rates of Active Supervision with
Self-Monitored Number of Steps Taken*

Para	Observation: Active Supervision Rating		Self-Monitoring Active Supervision	
	Pre	Post	# Days Reported	# of Steps/ Hour
#1	37.5	48	11	176.1
#2	43	51.5	7	79.42
#3	30.5	42.33	10	685.2
#4	44.5	28	13	220.31
#5	45	38	8	687.88
#6	28	43.5	5	119.412
#7	25	29.67	6	1007.17

#8	42.5	43.67	12	815.42
Total	37	40.58	9	473.86

When comparing observed rates of pre-correction and active supervision and the self-monitoring data, there are some patterns that can be identified. In the pre-correction category, two of the eight (25%) paraeducators were observed providing the same number of pre-corrections, another two of eight (25%) paraeducators increased their instances of pre-corrections, and four out of eight (50%) decreased their instances of pre-corrections. In the case self-monitoring data, the paraeducators were inconsistent in recording data, ranging from inputting the data six days to 13 days out of 20 total days. In order to elaborate on this, when comparing observed occurrences of pre-corrections with instances of self-monitored pre-corrections, the average pre-corrections in the pre phase was 6/hour and post phase was 4.6/hour, while the average of the self-monitoring data was 10.6/hour.

Active supervision showed an increase in observation data in six out of eight, or across 75%, of the paraeducators. For observation data, the information collected was ratings of the quality of active supervision, while the self-monitoring data recorded the number of steps the paraeducators took during the focus period.

Consistent with self-monitoring data collection for pre-corrective behavior, the data collection for active supervision was inconsistent and data was collected in the range of five days to 13 days out of 20 total days. However, the number of steps recorded included a wide range from a low of 79 steps/hour to 1000 steps/hour. Overall, the average number of steps taken across days the paraeducators reported data was 473/hour.

There are not a lot of conclusions that can be drawn when comparing active supervision observation data with self-monitoring data because the measures are not alike. It is interesting to note that the observation data showed a 75% increase in active supervision quality. Although there is no evidence, it could be hypothesized that the number of steps that paraeducators take could increase the awareness of the student behavior through proximity and positive interactions, thus resulting in a decrease in the need for pre-correction. From all of the data, it appears that active supervision is a more approachable, concrete, and feasible classroom intervention for paraeducators to implement when compared to pre-correction and this should be taken into account when selecting interventions for school implementation and warrants future research.

RQ 2: Student data.

Two tools were used to measure the impact of the TEACH intervention on student behavior: the daily student behavior ratings and the Out of Classroom Support (OCS) referrals. As part of their normal daily routine, paraeducators were already collecting daily data on student on-task behavior and recording it in the school-wide data system. The data for on-task behavior was averaged across all students in a class during each of the focus periods examined in the study for both the baseline and intervention phase. Comparisons of baseline and intervention data were used to determine if on-task behavior increased following paraeducator training in active supervision and precorrection. The second source of data was the average number of OCS referrals, also taken from each focus class period for comparing the baseline phase with the intervention phase. The results of student behavior data are presented in Table 6.

Table 6							
<i>Descriptive Analysis of Student Behavior Data</i>							
Period	Para	Percent of Time Rated On Task		Change Score	Average OCS Referrals/day		Change Score
		Pre	Post		Pre	Post	
1	8, 5	61%	35%	-4.95%	0.44	0.25	-0.19
2	7	79%	73%	-3.43%	0.33	0.15	-0.18
2b	1, 3	65%	69%	+2.40%	0.33	0	-0.33
3	4	76%	62%	-8.45%	0	0.5	+0.05
3b	6, 2	68%	72%	+2.01%	0.22	0.15	-0.07
Total		72%	66%	-2.48%	0.26	0.12	-0.14

To examine the impact of the intervention on student behavior, two different measures were analyzed: 1) on task behavior, measured by averaging the rating of students exhibiting on task behavior across all students in the classroom during the identified timeframe; and 2) the number of OCS (out of classroom support) referrals across all students in the classroom during the identified timeframe, which indicates behaviors that required students to leave the class in order to regulate their behavior. On task behavior is defined as students initiating a task in two minutes or less after instruction is given and this information was collected daily per class through the established electronic behavior tracking form. The number of OCS referrals are also tracked daily with detailed information about the individual circumstances for each student. The information pulled from this document were the number of referrals from the focus class periods, comparing the number of referrals during the baseline phase (pre)

and the intervention phase (post). In addition, the table indicates what paraeducators were in each focus period.

In periods 1, 2, and 3, the average on task behavior went down from the baseline phase to the intervention phase, while it went up slightly in periods 2b and 3b. The average on task behavior across all of the classrooms went down from the baseline phase to the intervention phase. The paired samples t-test did not find a significant increase in on-task behavior ($t = 1.358$; $p = .123$) from baseline to intervention.

For the second student-related behavior measurement, the goal was to see the number of referrals decrease, rather than increase. The number of referrals did decrease from the baseline phase to the intervention phase in four out of the five periods, resulting in an overall negative change score. A paired samples t-test did find a significant reduction in OCS referrals from baseline to the intervention phase ($t = 2.261$; $p = .043$).

In Table 7, the student behavior as measured by OCS referrals is compared to the active supervision self-monitoring data. There is one interesting pattern in four out of five of the focus class periods, OCS referrals went down from the pre data collection phase to the post data collection phase, which is the direction that we would want to see these student behaviors going. The only class period in which OCS referrals actually went up – in class period 3 – the least number of average steps was recorded at 220. For all of the other class periods there were more steps recorded, ranging between 248-1000, which might suggest a relationship between the number of steps a paraeducator takes and reductions in OCS referrals.

Table 7						
<i>Student Out of Class Supports (OCS) occurrences compared with Self-Monitored Number of Steps Taken</i>						
Period	Paras	Average OCS Referrals/day		Change Score	Self Monitoring Active Supervision	
		Pre	Post		# Days Reported	# of Steps/Hour
1	8, 5	0.44	0.25	-0.19	20	764.4
2	7	0.33	0.15	-0.18	6	1007.17
2b	1, 3	0.33	0	-0.33	21	390.86
3	4	0	0.5	+0.05	13	220.31
3b	6, 2	0.22	0.15	-0.07	15	248.47
Total		0.26	0.12	-0.14	15	546.242

Table 8 looks at student on-task behavior as compared to active supervision self-monitoring data. In terms of trends and patterns that this table displays, there is very little, other than each measurement tool is inconsistent. In three out of five of the class periods, there was a reported reduction in on-task behavior from pre to post intervention. When looking at those three periods, two of them – periods 1 and 2 – had the highest number of average recorded steps, while the third one – period 3b – had the least amount of average recorded steps. Given these results, there do not seem to be any trends that can be identified or any correlations hypothesized between the two measures.

Table 8						
<i>Student On Task Ratings compared with Self-Monitored Number of Steps Taken</i>						
Period	Paras	Percent of Time Rated On Task		Change Score	Self Monitoring Active Supervision	
		Pre	Post		# Days Reported	# of Steps/Hours
1	8, 5	61%	34%	-4.95%	20	764.4
2	7	79%	73%	-3.43%	6	1007.17
2b	1, 3	65%	69%	+2.40%	21	390.86
3	4	76%	62%	-8.45%	13	220.31
3b	6, 2	68%	72%	+2.01%	15	248.47
Total		72%	66%	-2.48%		546.24

RQ 3: Self-efficacy

In order to answer the third research question, the self-efficacy survey (see Appendix C) measured the paraeducators sense of how effective they felt in the classroom, both prior to the training and after the training. All paraeducators were given the survey during the baseline phase, then again after the completion of the study, and the scores were compared to identify if there was an increase in feelings of self-efficacy with the implementation of TEACH. The results of the self-efficacy data can be seen in Table 9. Self-efficacy data was collected through a pre/post test and scores were compared between the two. The pre-test was given prior to the training and the post-test was given when the intervention phase was completed. In Table 9, the scores for each paraeducator

are listed, excluding results for paraeducators 2, 5, and 6 who failed to turn in their final surveys. Due to the nature of anonymity in the study, the individual paraeducators who did not turn in their surveys could not be followed up with in order to collect these. The self-efficacy scores increased across all paraeducators from the baseline phase to the intervention phase. The paired samples t-test found a significant increase in paraeducator reports of self-efficacy from baseline to intervention ($t = -2.579$; $p = .031$).

Table 9		
<i>Paraeducator Self-efficacy Results</i>		
Para	Self-efficacy Pre-test	Self-efficacy Post-test
1	56%	75%
3	63%	75%
4	69%	69%
7	65%	67%
8	72%	90%
Average	65%	75%

To provide some further context on the self-efficacy survey, it was a 12-question survey in which each question began with “How certain are you that you can...” and the paraeducators had four possible scores of 1) Not certain at all; 2) Quite uncertain; 3) Quite certain; and 4) Absolutely certain. In response to each question, the paraeducators had to evaluate themselves. In the analysis, each answer was given a score of one to four, with the “Not certain at all” choice receiving a score of one, and “Absolutely certain” receiving a score of four, and possible total of 48. In order to look more closely at the

self-efficacy results, which is a central research question in this study, Table 10 below breaks down the results by each question in the survey looking at change from the pre to post scores, averaged across all of the paraeducators. This analysis allows for more clarity in the areas that paraeducators specifically reported that they felt an increase in their sense of self-efficacy, which is crucial feedback for future training.

Table 10		
<i>Mean Paraeducator Self-efficacy Ratings by Question (N = 5)</i>		
<i>Ratings: 1) Not certain at all; 2) Quite uncertain; 3) Quite certain; 4) Absolutely certain</i>		
	Pre-Survey	Post-Survey
1. Get all students class to work hard on their schoolwork?	2.8	2.8
2. Wake the desire to learn even among the lowest-achieving students?	2.3	2.8
3. Get students to do their best even when working with difficult problems?	2.5	2.8
4. Motivate students who show low interest in schoolwork?	2.4	2.6
5. Maintain discipline in any class, group of students, or individual students?	2.4	3.2
6. Intervene with even the most aggressive student?	2.5	3.2
7. Get students with behavioral problems to follow classroom rules?	2.2	3
8. Cooperate effectively with staff other staff?	3.6	3.2
9. Get students to behave politely and respectfully with staff and other students?	2.1	3.1
10. Successfully use any instructional and/or behavioral method that the teacher or school decides to use?	3	3
	2.8	3.2

11. Manage instruction regardless of how it is organized (groups, individuals, mixed-age, etc.)?	2.5	3
12. Intervene well instructionally and behaviorally if you are told to use methods that would not be your choice?		

Table 11 looks at the observation data for pre-correction and active supervision in relation to the paraeducator self-monitoring data. In all of the self-monitoring results, except in the case on paraeducator 3, the rates of self-efficacy increased; for paraeducator 3, the results stayed the same. Although the self-efficacy showed an overall increase, the pre-correction observation data resulted in a slight decrease from the pre to post phases, and the active supervision observation data showed a slight increase. The comparison of these results do not display any clear trends between the self-efficacy and observation data.

Table 11 <i>Comparing Pre/Post Observation Data with Paraeducator Self-Efficacy Data</i>						
	Total Pre-correction		Active Supervision Rating		Self-Efficacy	
Para	Pre	Post	Pre	Post	Pre	Post
#1	1	.75	63%	81%	56%	75%
#2	.5	1.67	72%	81%		
#3	.67	1	57%	71%	63%	75%
#4	4	1	74%	68%	69%	69%
#5	.33	.5	71%	66%		
#6	2.5	1.67	47%	78%		
#7	1.33	.33	42%	50%	65%	67%

#8	1.5	.33	71%	75%	72%	90%
Total	1.48	.91	62%	71%	65%	75%

In Table 12, once again, the self-efficacy ratings increased for all but one of the paraeducators from the pre to post surveys. When looking at the self-monitoring data of pre-corrections and active supervision, paraeducator 6 had the highest instances of pre-corrective statements at 27 and the second to lowest number of steps representing active supervision. In contrast, the two lowest instances of pre-corrective statements at three were the also the paraeducators, number 7 and 8, who had the highest number of steps, which were 1007 and 815, respectively. These results very widely enough that there is little correlation that can be made between these measurement tools.

Table 12 <i>Comparing Self-Monitoring Data with Paraeducator Self-Efficacy Data</i>					
	# of days reported	Pre-Corrections # of statements/ hour	Active Supervision # of Steps/ Minute	Pre	Post
#1	11	6.51	176.1	56%	75%
#2	7	10.47	79.42	63%	75%
#3	10	5.9	685.2	69%	69%
#4	13	11.48	220.31	65%	67%
#5	8	16.18	687.88	72%	90%
#6	5	27.61	119.412	65%	75.2
#7	6	3.46	1007.17	56%	75%

#8	12	3.3	815.42	63%	75%
Average Totals	9	10.613	473.86	65%	75%

RQ 4: Social validity

The final research question around feasibility and acceptability was measured by the social validity survey. The social validity measure (see Appendix D) was a survey given to each paraeducator and the teachers they worked with to measure how teachers perceived classroom interventions, in terms of teacher acceptability, effectiveness and feasibility (time and effort). There are 12 items on the questionnaire and participants rated themselves on each question on a four point Likert scale ranging from Strongly Agree to Strongly Disagree. The results of the social validity surveys are in Table 13.

The social validity data was collected through a questionnaire about the feasibility and the effectiveness of the intervention and this information was gathered from both the paraeducators and the teachers that work with them. The table below pairs the teacher that worked with each paraeducator to show the difference in the scores in each classroom team. The social validity survey was given only once, after the completion of the intervention phase. For this measure, the data overall showed a positive perception of the study through the social validity surveys.

Table 13			
<i>Social Validity Results</i>			
Teacher Results		Paraeducator Results	
1	72%	1	78%
		3	79%

2	83%	7	88%
3	92%	4	98%
4	82%	8	99%
		5	
5		6	
		2	93%
Total	82%		89%
Average			

Social validity was integral to the TEACH model because this measurement indicates how feasible the intervention is in a real-life context and can only be replicated if practitioners see the meaning in what they are participating in. The questionnaires were 12-question with six answers to choose from: 1) Strongly Disagree; 2) Disagree; 3) Slightly Disagree; 4) Slightly Agree; 5) Agree; and 6) Strongly Agree. Results were averaged across all of the individual questions with a possible total score of 25 points for teachers and 36 for paraeducators; each question was given a percentage based on the average score it received, compared to the total score. In order to dig deeper into the social validity results, Table 14 shows the results of each individual question so that more specific information could be gleaned about which parts of the intervention worked better than others, and Figure 1 displays the same information visually.

Table 14		
<i>Social Validity Results by Question</i>		
<i>Ratings: 1) Strongly Disagree; 2) Disagree; 3) Slightly Disagree; 4) Slightly Agree; 5) Agree; and 6) Strongly Agree</i>		
	Teacher Results	Paraeducator Results

1. This intervention is an effective choice for addressing a variety of problems.	5.75	5.83
2. <i>Teachers:</i> My classroom assistants would need additional resources to carry out this intervention.	4	5.33
<i>Paraeducators:</i> I would need additional resources to carry out this intervention.		
3. <i>Teachers:</i> My classroom assistants have the time to implement this intervention.	5.75	4.83
<i>Paraeducators:</i> I have the time to implement this intervention.		
4. <i>Teachers:</i> My classroom assistants seem to understand how to use this intervention.	4.25	5.67
<i>Paraeducators:</i> I understand how to use this intervention.		
5. This intervention is a fair way to handle the students' challenging behavior.	5.75	5.33
6. <i>Teachers:</i> The time required to on behalf of my classroom assistants is manageable.	6	5
<i>Paraeducators:</i> The time required to implement this intervention is manageable.		
7. <i>Teachers:</i> I have noticed an increase in positive interactions between my classroom assistants and the students.	4.5	4.83
<i>Paraeducators:</i> I have noticed an increase in positive between myself and the students.		
8. <i>Teachers:</i> I have noticed an increase in active supervision and pre-corrective statements on behalf of my classroom staff.	4.75	5.33
<i>Paraeducators:</i> I have noticed an increase in my active supervision and pre-corrective statements.		

9. I have noticed a decrease in challenging behavior of students after the implementation of this intervention.	4.25	4.5
10. This intervention is not disruptive to other students.	5	5.33
11. <i>Teachers:</i> The intervention easily fits into the current role of the classroom assistants and the classroom practices.	5.75	5.5
<i>Paraeducators:</i> The intervention easily fits into my current role in the classroom.		
12. I see this intervention as a beneficial addition to the classroom.	6	5.67

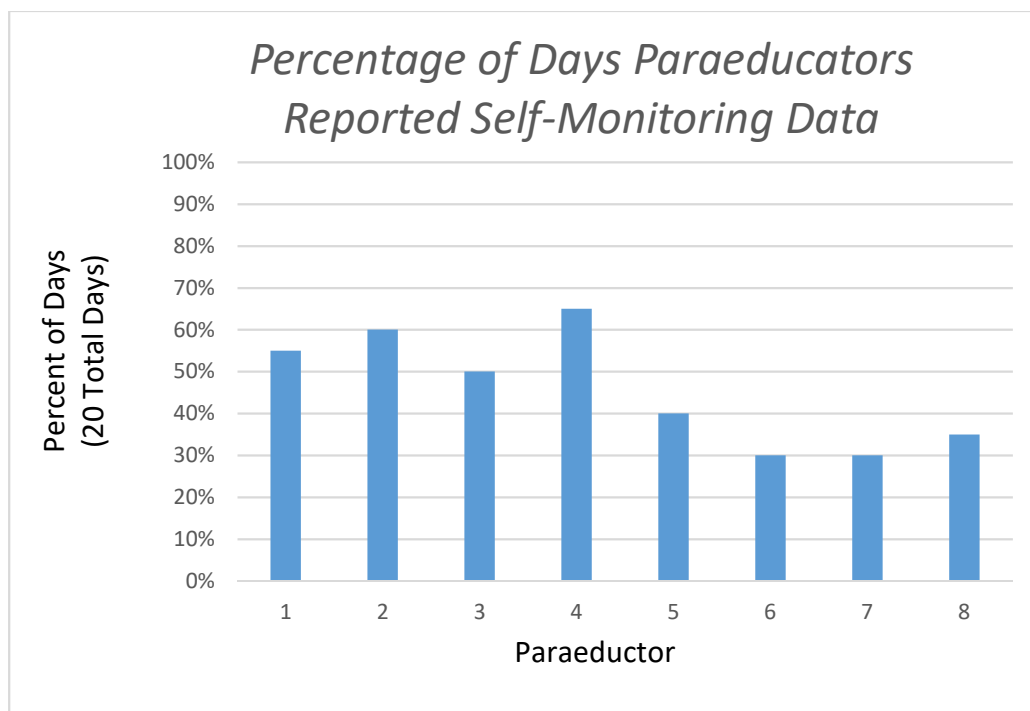
Self-monitoring. During the intervention phase of the study, the paraeducators had access to a Google Form and were reminded to fill the form in daily during the intervention phase. The form was used to collect self-monitoring data on the number of pre-corrective statements provided, steps taken, and a rating on the quality of the strategies that they engaged in during the focus period. Prior to the beginning of the intervention phase, the paraeducators filled out a Goal Setting Form (see Appendix E) and these forms were reviewed by the observers, then given back to the paraeducators for their reference and as a guide to follow for the intervention phase. As mentioned in the Methods section, emails were sent to the participants after the initial training to remind them to collect data (see Appendix I). The data that was collected was pulled from the form to create graphs. Each paraeducator was prompted to fill out their own daily report form, the data for each paraeducator was presented on a graph that each paraeducator could use to monitor their progress (see Appendix J). Graphs were reviewed during the

mid-intervention check-in meeting and information was gathered in the meeting minutes about the paraeducators' experience and perception of the study (see Appendix K) The graphs presented below aggregate data across all of the paraeducators' self-monitoring results.

Self-Monitoring Response Rates. One of the most important factors when considering the self-monitoring data was the limited response rates with which paraeducators collected and reported daily self-monitoring data (see Figure 4). In fact, the inconsistency of the data collection was significant and the average response rate across all of the paraeducators was approximately 45%. The table below outlines the average response rate for each paraeducator during the intervention phase of the study.

Figure 3

Percent of Days Providing Self-Monitoring Data



Limitations

One of the main limitations of this study are the number of participants and the unique context of the school setting. Originally there were 12 paraeducators, but four of those opted out of the study, therefore only eight paraeducators were included in the data portion of the study. In addition, the context of the school and the characteristics of the students attending the school result in a high staff to student ratio, which is not common across all public schools. The small number of students and the large number of staff result in a setting in which students can often be more supported than they would be in a typical school or in a general education setting.

In addition, as mentioned in the Methods section, the study was designed and the measurement tools selected specifically so that they can be carried out by practitioners in a real-life context. While this was a deliberate choice to address the research to practice gap, the design did present limitations. With the self-monitoring measurement, there was very little evidence of treatment fidelity. The first issue was when the paraeducators were developing their own individual plans for implementation when using the Goal Setting Form. Although the Goal Setting Forms were reviewed after they were filled out, copies were not made by the leadership team so individual goals were not referenced and used with paraeducators to follow through with goal setting as the study progressed; instead they were left with the paraeducators for their own reference and review.

Another limitation in the area of self-monitoring was inconsistency with which the data was collected and reported by each individual paraeducator. This inconsistency resulted in an unclear data pattern and could be explained by several reasons. The first issue that could potentially explain the lack of consistency was the reminder system that

was comprised of daily emails sent out to all of the participants in the morning. Clearly, the daily emails did not provide enough encouragement and support to paraeducators to develop a data collection routine. It is possible that a higher level of support such as daily checks with follow-up contacts and reminders for staff who did not turn in self-monitoring data would have increased the collection and reporting of self-monitoring data. Although this may have been a much more effective reminder, it also is much less practical which goes against the feasibility of a study carried out by a practitioner.

The last three self-monitoring limitations include 1) there was no evidence of teachers encouraging paraeducators in their classrooms; 2) the self-monitoring graphs were not very accurate and they were reviewed only once during the study during the mid-intervention check-in so the data did not seem to be a focus or priority; and 3) the meeting minutes were only collected for the mid-intervention meeting (see Appendix K) and not for the final meeting. Although it was originally planned for teachers to be more involved in this process, this did not happen aside from the teachers seeing the training material, getting updates, and filling out the Social Validity Questionnaires. Having built in collaboration, teamwork, and encouragement could have supported more regular data collection.

As far as the graphs, there should have been a more timely review of them, both to determine the accuracy of the data and to present to the paraeducators so that they can review their progress. The last limitation in this area was the lack of meeting minutes for the follow up meeting when the intervention phase was completed. The meeting was an opportunity for the paraeducators to discuss how the interventions were working in the classroom, as well as a time to review the procedures for pre-corrections and active

supervision. Although there was an agenda for the meeting, as mentioned previously, there was an oversight when it came to capturing meeting minutes so that they could not be referred to at a later date. The anecdotal information from the paraeducators in order to better understand their experiences was an important component, therefore the oversight of the final meeting minutes was significant. All of these limitations when analyzed all together, point to the potential that there were too many measures in this study to track as a practitioner-focused study.

Another limitation of the study is that we did not collect observation data on student behavior. This would have been challenging from a feasibility standpoint, but it might have helped us to understand if student on task behavior actually reduced, or if it was a product of increased supervision more accurately capturing student on task behavior. In addition, both measures of student behavior data – OCS referrals and on-task – can be very subjective, depending on each paraeducators interpretation of what justifies an out of classroom referral and what on-task behavior entails. One way to address this is to very specifically define these behaviors and train all of the participants in these definitions, although it is impossible to remove all subjectivity from these measures.

Chapter 5 – Discussion

There has been very little research on the topic of training for paraeducators and also the experience of paraeducators in regards to their sense of self-efficacy and effectiveness in their role as public education support staff. This study was an attempt to add to the body of literature that currently exists in this area because, although there is very little information, it is clearly an area that needs to be further explored in order to identify promising practices and recommendations to increase the professionalism and effectiveness of the paraeducator role.

In addition to this being a priority topic for research in education, it is also important that any intervention implemented in an educational setting is feasible and perceived as meaningful to school staff. That idea of feasibility and providing training in high leverage strategies was a crucial aspect of this study. Both teachers and paraeducators have challenging jobs and competing interests, therefore it is necessary to be realistic about any interventions being introduced and to understand how it fits within each individual implementer's context. The components of the TEACH intervention, including the evidence-based strategies selected, were all viewed through the practitioner's lens.

This study was implemented by a school administrator of a special school for students with behavioral disorders and mental health needs working within the challenges and constraints of the public education system. The TEACH model was chosen because of the focus on practical and feasible strategies for supporting implementation of evidence-based practices. Data collected from the paraeducators and supporting teachers identified that the intervention was feasible and acceptable. The intervention also had a

positive impact on the self-efficacy of paraeducators. Data on supporting paraeducator use of evidence-based strategies and student outcomes wasn't as clear as hypothesized, but we will look at some of the reasons for this and offer suggestions for improvement.

Synthesis of Findings

Paraeducator Implementation of Trained Practices. When initially looking at paraeducator implementation of the trained evidence-based practices (pre-correction and active supervision), the implementation data demonstrated mixed results. Classroom observation data revealed that use of pre-correction actually had an average decrease across all paraeducators from the baseline to intervention phase (see Table 4). Four of eight paraeducators showed a decrease, two did not change and only two showed an increase in use of pre-correction during the intervention phase. Meanwhile active supervision ratings did show an increase in paraeducator use from the average baseline ratings of 37 out of 60 to the average intervention ratings of 40.58 out of 60, which was a change score of 3.58. Six of eight paraeducators showed an increase, and only two showed a decrease in active supervision from baseline to intervention phase. Based on this data it's important to consider potential explanations for the trajectory of the data.

As identified in the results, limited use of the self-monitoring process as an implementation support likely had a negative impact on paraeducator use of both evidence-based practices. It was intended that paraeducators would collect daily self-monitoring data and enter that data in to a survey link that was sent to each of them daily. However, as the data suggests (see Figure 2), paraeducators collected and submitted self-monitoring data on less than 50% of days during the intervention phase in the study. There was a challenge with getting the graphs to present data accurately, and data was not

reviewed regularly with paraeducators by their supervising teacher. Lack of consistent feedback and implementation support could have contributed to limited improvement in teacher use of the trained classroom practices. However, one might expect that this limited use of self-monitoring would have a similar impact across both use of pre-correction and active supervision. As described previously, the data shows that use of pre-correction decreased on average, while active supervision increased from baseline to intervention phase. This would suggest that there are additional factors to consider in order to understand this discrepancy.

When considering the self-monitoring process, it's important to note there were potentially multiple levels of self-monitoring occurring at the same time. Paraeducators were being asked to respond to the survey linked in the daily email to document their use of pre-corrections and active supervision. In collecting self-monitoring data for pre-correction, paraeducators were asked to keep a tally of pre-corrective statements the paraeducators used during the assigned period. Self-monitoring for active supervision was supposed to occur two ways, first through the daily survey paraeducators were asked to qualitatively rate their implementation of active supervision on four scales, second paraeducators were given activity trackers that counted the number of steps they took during the assigned period. Paraeducators were to record in an on-line survey each day the number of tallied pre-corrections, qualitative ratings of their active supervision, and the number of steps taken as measured on the activity tracker. While survey data was entered less than 50% of the days, it is possible that due to the ease and novelty of the activity trackers that paraeducators were in fact regularly self-monitoring the number of steps they were taking, an indicator of active supervision, but not reporting it in the

survey. This could explain the increase in active supervision ratings over time, compared with pre-correction. The added challenge of the additional steps required to collect and enter daily pre-correction data compared with the ease of the activity tracker might in part explain the differences in implementation between pre-correction and active supervision. Even without collecting and entering their data in to the data tracking system, it is possible that the paraeducators were in fact self-monitoring their step data and that it may have had a positive impact on their daily implementation of active supervision strategies. It's also possible that asking paraeducators to self-monitor multiple behaviors at one time may have been too much amid all of their other responsibilities.

Another potential explanation for the decrease in pre-corrective statements is that, in general, the paraeducators expressed the difficulty in remembering to pre-correct in the same instances, day after day. Essentially there seemed to be some pre-correction fatigue on behalf of the staff providing this intervention. This information was gathered anecdotally during the mid-intervention check in with the paraeducators when they were asked about their experience in the study and implementing pre-correction. Another challenge to point out is that pre-correction is a more complex skill to understand and implement because it requires anticipation and timing of prompts and encouragements at specific times before the identified problem behaviors requiring pre-correction are most likely to occur.

The other intervention strategy – active supervision – is more straightforward, easy to observe, and pick up. The pre-correction procedure requires multiple steps (Colvin, Sugai, & Patching, 1997) including 1) identifying the challenging context and predictable behavior of concern; 2) specify the expected behavior; 3) modify the context

to reduce the risk of problem behavior, 4) conduct behavioral rehearsals of expected behavior with the student(s); 5) provide strong reinforcement for expected behaviors; 6) pre-correct: provide prompts for expected behavior before the opportunity to engage in predictable problem behavior; and 7) develop a plan to actively support and maintain use of pre-correction. In this study, the most pertinent steps in this process were steps 1, 2, 6 & 7. Given that pre-correction requires that the intervener anticipate situations in which challenging behavior is likely to occur and then deliver precorrections, it is likely pre-correction is a more difficult and multifaceted skill.

Upon reflection of the training the paraeducators received, it is clear that pre-correction should have been presented in a more comprehensive package as part of setting expectations, rather than as a more isolated strategy and intervention. If context had been provided, it would perhaps have served to give the paraeducators a schema to which they could attach the strategy in a more practical way. The data seems to suggest that a single training and a check-in for the paraeducators was not enough to incorporate this strategy consistently into their practice.

Anecdotally, a pilot of this study was done prior to this one in which the strategy highlighted was increasing positive praise statements and trying to reach a 5:1 positive to re-directive statements. In the pilot, paraeducators were only asked to implement one behavior at a time, increasing behavior specific praise may be more natural and easier to implement than pre-corrective statements. In addition, the paraeducators were provided with golf counters to keep track of and count the number of statements they made which served as a tangible reminder to engage in the strategy which could very well have assisted in more regular participation.

As far as the active supervision, because it was operationalized in the way that it was, including increasing steps, checking in regularly with students, etc., it seemed that this was easier to incorporate into the paraeducators' daily practice because it is an extension of what they do on a regular basis. Using the activity trackers also made it much easier to self-monitor and may have been effective in providing feedback even without entering the data in to the daily survey.

Student behavior. When looking at student data, average on task behavior decreased when aggregated across all classrooms from the baseline phase to the intervention phase. Only two out of five classroom showed a modest improvement in on-task behavior following intervention. On task data is collected through daily ratings for each student given by the paraeducators, individual student ratings in each classroom were combined to create a classroom average. It is possible that increasing the active supervision of paraeducators may have actually impacted their sensitivity to tracking on task/off task behavior ratings. Increasing active supervision behaviors of the paraeducators may have increased their opportunities to observe more off-task behavior; it's possible that the increased supervision could result in increased accuracy of on-task/off-task data collection. With more limited supervision, it's possible that on-task behavior was over-reported, and that once paraeducators increased their use of active supervision strategies that they have had more accurate ratings, comparatively inflating sensitivity to identifying off-task behavior and potentially reducing on-task behavior. So, rather than the rate of off-task behavior actually decreasing, it may be due to increased accuracy of paraeducator ratings. Another limitation of the study is that there was no observation data collected on student behavior which would have been a good indicator

to determine if on-task behavior really decreased or if it was due to the hypothesis that it was impacted by active supervision in some way.

Comparatively, the number of OCS referrals decreased from the baseline phase to the intervention phase in four out of the five periods, resulting in a negative average change score across all classrooms. One hypothesis for this is that as active supervision increased, minor behavioral incidents that occurred while students were off-task, were intervened with more quickly, thus preventing escalation to more major behavioral incidents that would lead to classroom removal. The ultimate goal is to reduce students' time out of class so that they learn to regulate themselves and miss less instruction, so the decrease in OCS referrals is promising, even if it contributes to increased off task time while in class.

Self-efficacy. Self-efficacy ratings increased by an average of 10% after the paraeducators participated in the training and intervention. Each of the participants were given a 12-question survey prior to the training and then again after the intervention was complete. Four of the five paraeducators increased scores in self-efficacy following the training, and one paraeducator maintained the same rating pre and post intervention, which was a statistically significant increase. These results demonstrate that paraeducators felt an increase in their effectiveness in the classroom. Although observation of paraeducator classroom behavior didn't see an increase in pre-correction, it may be that increased use of active supervision strategies led them to feel more effective in the classroom. Despite the decrease in student on task behavior, OCS referrals also decreased, which may have led to paraeducators feeling more positive about their work performance. As was mentioned previously, even though on task behavior was

reduced, that could have been due to paraeducators doing a better job with active supervision, which could be reflected in their self-efficacy ratings. One explanation for this is the element of active supervision provided a concrete activity for the paraeducators to focus on and engage them, thus increasing their awareness and self-efficacy.

In addition, simply the delivery of a professional development model could very well also positively impact the paraeducators' sense of self-efficacy. It is often a lack of self-efficacy that leads to a person's feelings of inability to effect change in the students around them, leading to dissatisfaction with their job. The four questions that displayed the largest increases from the pre to post surveys were:

- 1) Wake the desire to learn in even among the lowest-achieving students;
- 2) Maintain discipline in any class, group of students, or individual student;
- 3) Intervene with even the most aggressive student; and
- 4) Get students with behavioral problems to follow classroom rules.

All of these areas represent very difficult situations in which to intervene effectively, so the indication that paraeducators felt more equipped to handle these classroom incidents is a promising response to the training in terms of the paraeducators reflecting on their own practices. Even if the other data sources don't align with how the paraeducators felt about themselves, the first important step in any intervention, skill, or habit is believing that you are capable of mastering that skill, and the self-efficacy results suggest that the TEACH model provided this confidence in the paraeducators.

Social validity. The social validity measure showed a positive perception of the study procedures. Teachers and paraeducators saw the intervention as effective and, more importantly, feasible in day to day practice. Since feasibility was one of the most

important aspects of this study, it was helpful to see that the procedures used in the study were well received. Given the positive scores on the social validity measure, this professional development format could be replicated with different classroom interventions and strategies in the future. One area that should be noted, however, is that although the intervention was viewed as feasible by the participants there was clear discrepancy between the social validity results and the limited use of the self-monitoring data. This discrepancy would indicate that though the study was perceived as being feasible and effective, there are some aspects of the study, notably self-monitoring, that were either not practical and/or improvements could be made in the design. Suggestions are provided in the next section.

Another important aspect of the study that was not measured in terms of feasibility and social validity was the amount of work this study added to the professional development leader's existing daily job responsibilities. There were a number of tasks related to the intervention that were the sole responsibility of the leader, in this case also serving as the school principal, including developing and delivering the professional development, training staff, and conducting observations. All of these items required a significant amount of time, energy, and resources on top of an already busy job of running a school for a student body with complex needs.

Although the feasibility of this study was not measured from the perspective of the person leading the professional development intervention, as the author of this study and the leader in question, leading a comprehensive professional development package is a substantial amount of work that is challenging for only one person to carry out, especially when also serving as the building principal. As a result of these work load

challenges, some components of the day to day implementation supports were not implemented to the desired level of fidelity. As will be discussed in the next section, paraeducator completion of daily self-monitoring would have likely been more consistent, if the professional development leader could have consistently monitored paraeducator collection and entry of self-monitoring data and provided timely encouragement and feedback. . In order to improve feasibility *and* improve self-monitoring results, it is recommended that some changes be made to either cut down on the measurement tools or steps of the study, or include a way to share some of the responsibility.

Self-monitoring. The self-monitoring data was the least successful in terms of consistency and fidelity. When looking at the entry dates, it is clear that dates were missed regularly, despite the fact that some email reminders were provided during the intervention phase and a mid-intervention check-in was held; these reminders were not enough to support consistent data collection. Given that this was a new practice and something added to the daily tasks of the paraeducators, it seems that this would have to be incorporated into a program for a longer period of time to develop the habit and improve consistency of data collection. One implementation support that didn't happen as planned was including the teachers as an implementation support for the paraeducators to do regular check-ins reflecting on self-monitoring data and use of precorrection and active supervision strategies in the classroom. . Having the teachers involved in the process would allow each classroom team to support and remind each other to engage in every part of the intervention. In addition, although almost daily emails were sent out as reminders to the participants at the beginning of each day, there clearly needed to be a

higher level of support to encourage them to enter their self-monitoring daily. This higher level of support could have been in-person reminders, multiple emails, and specific feedback on the data collection. Teachers could also have been recruited to support and encourage their classroom paraeducators through reminders and informal classroom meetings that touch on this topic.

Based on self-monitoring data reported for active supervision, the number of steps reported by seven out of eight of the paraeducators increased over the intervention period. For pre-correction, in seven out of eight of the self-monitoring graphs (see Appendix J) on the number of pre-corrective statements made, the paraeducators showed that this number decreased from the beginning of the intervention compared to the end. This might be in part due to the additional complexity of implementing pre-correction in the classroom. Active supervision seems to be a more easily implemented and understood intervention, while pre-correction seems to be less intuitive and easy to carry out over time. Interestingly, this self-monitoring data is consistent with the observation data, suggesting that the paraeducators were honest in their self-assessments and had a good idea what they were measuring, since it matched with what the observers were seeing. A further step to ensure that the data was consistent would be to look at data from days that observations took place and the self-monitoring data was collected. Although this likely occurred, the data was not captured in a way to compare the two.

Connection to theoretical frameworks

Andragogy. As referenced previously, there are five main points to consider when developing professional development for adult learners: 1) opportunities for self-directed learning; 2) building on learner's previous life experiences; 3) teaching

information in a way that is related to social and professional roles; 4) providing information and strategies that are immediately applicable; 5) learner motivation to learn. Upon reflection of the research study in the context of andragogy, it is clear that points three and four – teaching information that is related to professional role and providing information that is immediately applicable – were present and this was further supported by the self-efficacy and social validity survey results. The positive survey results could also imply that point five was present indicating that the paraeducators were motivated to learn.

On the other hand, there was little evidence of points one and two in the professional development model. Of these two, opportunities for self-directed learning was present in the goal setting form, but it is likely that that opportunity was not meaningful enough to make the learning their own, which is an important part of andragogy. The study would have benefitted from identifying a way to have the paraeducators have more meaningful participation in determining the strategies that they learn about. This perhaps could have taken place by offering choices of evidence-based strategies and taking a vote amongst all of the participants, or had the paraeducators help determine the mode of data collection. Regardless of how to include paraeducator voice, it would be important for future studies to take this into account especially if following the tenets of andragogy.

Social-cognitive theory. Self-efficacy is a central component of social-cognitive theory and self-efficacy was very intentionally inserted into the study in the form of the self-efficacy survey. An interesting note is that although the observation results did not necessarily turn out the way we would have liked or hypothesized, the reported self-

efficacy results were overwhelmingly positive. This means that even of the actions and behaviors of the paraeducators did not demonstrate proficiency in the evidence-based strategies, their perception was that they were. While we would like to see actions match perceptions, one of the first steps of self-efficacy is to believe that your action can positively impact the outcomes and this belief in oneself is also the first step to being more confident and effective.

Self-efficacy also showed up in the self-monitoring data as a way for the paraeducators to reflect on their own actions and potentially adjust as necessary. This data was a central part of the study, though it was not completely successful because data was reported inconsistently. This is another interesting note because the self-efficacy survey results would suggest that data was being collected and interventions were being implemented, though that was not always the case. This could very well be a mismatch between perception and reality although, once again, it is important for staff to believe that they can do something before they try to do it. This could be framed as a “fake it ‘til you make it” instance which could be a good thing as long as the actions eventually match the perception. Later, suggestions will be provided about how data collection consistency could be improved.

Applied behavior analysis. Lastly, the goal of this study was to change the behavior of the paraeducator participants in a socially valid way and to measure that progress through data collection and analysis. All of those components are aligned with applied behavior analysis. In addition the use of the evidence-based strategies that were selected for the study were

Implications

The goal of this study was to identify an effective professional development intervention for paraeducators that is easily implemented in a school setting, positively impacts student learning and behavior, and that increases the participants' sense of self-efficacy in their daily practice. The effort to bridge the research to practice gap was successful in terms of ratings of self-efficacy and social validity across most paraeducators. However, limited paraeducator implementation of pre-correction following the intervention and limited use of self-monitoring strategies indicates a potential mismatch between reports of social validity and the feasibility and actual implementation intervention components. The paraeducators that participated in the study, as well as the teachers that worked with them, were overwhelmingly positive about the ability to learn and implement the strategies of active supervision and pre-correction, despite data demonstrating reduced implementation of pre-correction strategies during the intervention phase. Since participants were asked globally about participation in the intervention and its impacts, rather than responding about component parts (e.g. active supervision, pre-correction) it is possible that the effects of increased implementation of active supervision superseded concerns about implementation of pre-correction. It is also possible that simply receiving training with ongoing prompting, encouragement to self-monitor and use of the activity trackers served to increase perceptions of self-efficacy among a population of paraeducators that has traditionally received very little professional development and training.

The highest rated social validity questions were: 1) This intervention is an effective choice for addressing a variety of problems; 2) My classroom assistants have

the time to implement this intervention (*teachers*) and, I have the time to implement this intervention (*paraeducators*); 3) This intervention is a fair way to handle the students' challenging behavior; and 4) I see this intervention as a beneficial addition to the classroom. A limitation in these items is that with two potential interventions, active supervision and pre-correction, as well as the training and self-monitoring components of the intervention, it is not clear what perspective respondents were taking in answering these questions. Globally, these questions represent the most central aspects of the study by focusing on the value of the intervention and the ease of incorporating it into daily practice, but given the multiple components of the intervention, it is difficult to understand exactly what participants were responding to.

In the area of self-efficacy, the average self-efficacy across all nine paraeducators increased from 65% during baseline to 75% post intervention. The scores from the pre-test to the post-test increased across all but two of the 12 items, the two items that increased the most from the pre-test to the post-test were, "How certain are you that you can: 1) Maintain discipline in any class, group of students, or individual students?; and 2) Intervene with even the most aggressive student? The fact that these were two areas that the participants felt the most growth in their sense of self-efficacy is a very encouraging result, as is the overall decrease in OCS referrals which potentially links the self-efficacy ratings to student behavior data. Working with students with challenging behaviors and effectively intervening with them during a potential escalation is often a situation in which people feel ill-prepared to handle. If paraeducators feel more equipped to handle these situations it could lead to increased responsiveness to difficult situations rather than walking away from them. This is a case in practice, where it is nice to see the positive

impacts of the intervention in reducing OCS referrals and through increased self-efficacy of paraeducators, and practically that may be attributable to the combination of classroom interventions (pre-correction and active supervision) for which participants received training and implementation supports. Since paraeducators often time have such limited opportunities for training and professional development, though not perfectly implemented, the interventions seem to have had a beneficial effect, at least for increasing self-efficacy and reducing OCS referrals in the classroom.

Limitations

Despite the welcome reception of the intervention from the school staff, there were some clear limitations to the study which have resulted in suggestions for future implementers and research. One of these limitations is that, although the professional development intervention was well received, limited support for and implementation of the self-monitoring component of the study did not allow for a clear demonstration of the effectiveness of this professional development model with paraeducators.

Based on the quantitative measures used, the effectiveness of the TEACH model was unclear. There was an increase in paraeducator self-efficacy and use of active supervision and a decrease in pre-correction, OCS referrals, and on-task behavior. It would have been helpful to have included more open ended/qualitative opportunities to gather information, such as discussions with the paraeducators about various parts of the process in order to understand the paraeducators perspectives and experiences. For example, it would have been nice to follow up with paraeducators to learn answers to such questions as:

- What impacted their reported increases in self-efficacy?
- Why they did not report self-monitoring data consistently?
- How did the activity tracker as a self-monitoring tool impact their day to day activity in the classroom?
- Why they report feeling more prepared to support students with challenging behavior now following participation in this professional development?
- Why did they more consistently implement the active supervision strategies, but not precorrection?

Without the paraeducator responses to these questions, we are left to generate our own hypotheses. In the next paragraphs, we will review potential hypotheses that may warrant future research and serve as considerations for future implementers. The first suggestion for implements might be to include this step of regularly and actively seeking paraeducator feedback and being responsive to needs and concerns they raise before, during, and after professional development. This is particularly true given the wide variety of roles and responsibilities that paraeducators can play in schools, making it important that paraeducators are able to tailor practices to fit the context of their implementation needs.

Selection of Classroom Interventions. It may have been the case that focusing on two classroom interventions (pre-correction and active supervision) at the same time by have been too much. Given the many responsibilities of paraeducators and classroom staff, it might have been more effective to focus on a single classroom intervention rather

than two at one time. Focusing on two behaviors at once may have also made self-monitoring more challenging for participants. Another consideration may be the complexity of the classroom behaviors chosen, which might influence the choice to focus on more than one behavior at a time, or may contribute to prioritizing which behaviors to focus on. In this study, based on implementation data and reflection on the classroom practices, active supervision seems a much more straightforward strategy to implement than pre-correction, which requires participants to anticipate the behaviors and times of day when the intervention should be employed. Therefore, a suggestion for future studies would be to identify just one high leverage, straight-forward evidence-based strategy. For example, active supervision seemed to be successful, although other strategies such as 4:1 ratio and prompting would likely be more natural and easily implemented.

Selection of Self-Monitoring Methods. It may also be important to consider the ease of self-monitoring methods used. For example, the added step of completing a daily survey and providing qualitative ratings of implementation of active supervision and pre-correction or tallying pre-correction statements may have added steps or challenges that paraeducators struggled to overcome. In contrast, the activity tracker provided a much simpler method of data collection that was easily and readily accessible to the paraeducators. Even without formally entering self-monitoring data into the daily survey completion it is likely that paraeducators were aware of their step data, because of the ease of data collection and accessibility of looking at the number of steps. While the step counter does not account for the qualitative aspects of active supervision assessed through the survey, the activity tracker may have still served as a prompt reminding paraeducators to use the active supervision strategies they were trained to use. It is also

possible that the ease of implementing and tracking active supervision may have reduced focus on the second practice of pre-correction. In a previous pilot study, increasing teacher praise was the evidence-based practice paraeducators were trained to implement and they were provided with golf counters to track each time they used a praise statement. This was a successful implementation, but there was only one behavior of focus and the golf counters may have served as a tangible reminder of the need to provide reinforcement.

As mentioned previously, this study was done in a specialized school setting with a small number of paraeducators, so it will be important to replicate the TEACH model across a range of schools, settings and evidence-based practices as the focus of professional development. In addition, one of the biggest disappointments in the data collection was the inconsistency and low response rates in the paraeducator self-monitoring data. Upon reflection, there are several suggested changes to this study that could potentially improve these results. The first change would be to more fully include the classroom teachers in the process so that they can remind and encourage the paraeducators to implement the strategies and input the data on a regular basis. Presenting the intervention as a team challenge would reinforce the importance of the strategies, give the classroom teams a chance to provide feedback to one another, and provide the opportunity to hold each other accountable. Another idea to improve the regularity of the self-monitoring data is to build in a more robust reminder system. In this study an email was sent out in the morning, but a second email reminder at the end of the day may have been effective for prompting data entry. More important may have been a personal check

with the teacher focused on the daily implementation data likely would have a positive impact on increasing the consistency of data collection and use.

Lastly, there were multiple measurement tools that were incorporated into the study as part of the TEACH model, but it is possible that there were too many measurements to be carried out in a practitioner study. As mentioned in the previous paragraph however, the self-monitoring seemed to be cumbersome to the participants and perhaps it needs to be pared down or targeted; the same can be said for social validity, student behavior data, and observation data, so it would benefit any future researchers to really analyze the data they want and exclude any non-essential data so as to cut down on competing priorities.

As a result of this study, it is important to note that there have been changes enacted in the school based on this experience and all of the lessons learned from that. As a practitioner- researcher, this is probably the most positive outcome of the study given that this process provided professional growth opportunities and allowed this researcher to better support staff and develop effective interventions. In direct connection to this study, a very structured and deliberate professional development schedule has been developed for all staff as well as adopting focused areas of content.

As a behavior-focused public school, tier three interventions are commonly implemented, although tier one and two interventions are not as systematic. This model is inefficient and can be a drain on staff resources, therefore the initiative this school year has been to develop a more robust multi-tiered system of support (MTSS). In order to shore up the tiered supports for the behavioral part of MTSS, four evidence-based strategies were identified as tier one classroom-based strategies: 1) active supervision, 2)

4:1 ratio, 3) pre-correction, and 4) prompting high probability behaviors. Due to the complex nature of introducing four strategies at once and some of them being more challenging to master – namely pre-correction – it was determined that the tier one strategies would be the focus for an entire year. This slow rollout was a direct lesson learned from the study, as well as how the training was organized so that the more complex concepts were taught in a scaffolded manner. All of the strategies were introduced at the same time with a step-by-step procedure, video examples, real life examples, and then followed up by observations. Each strategy was the focus for one month, classrooms took data on those strategies, then classroom meetings were scheduled weekly every Wednesday morning so that staff could look at the data and talk about the interventions. At each of these meetings, the classrooms were supported by a behavior specialist to talk through the data, the implications of the data, and ideas for improving behavior management. After each of the strategies were practice for one month, classroom teams were asked to use all strategies and continue to take data.

In addition, to the slow, deliberate rollout and the scaffolded training, one of the main changes from the original study to this real life initiative, is that the whole classroom team was involved, including paraeducators, teachers, and support staff. Although this has not been a perfect rollout, it has been incredibly successful in terms of providing supported professional development and follow-up. In addition, staff have been very accepting of the initiative given that they have had time to learn the strategies, practice them, and do this in a collaborative team manner rather than feeling that they were being evaluated. As the principal researcher in the original study and the instructional leader of the school in which the research took place, I have found that the

most meaningful takeaway from this work is how it has helped me improve and be a better, more informed practitioner; this ultimately benefits the staff and the students.

Any instructional or behavioral intervention, regardless of the evidence that backs the strategy, will not be effective if it cannot be taught and implemented by the staff that work the most closely with students. It is common for public school staff to feel ineffective due to lack of training, resources, and time; this is especially true for paraeducators who are frontline staff who work directly with the most challenging students and receive the least amount of preservice and in-service training. There are clearly some encouraging results from this study, although there are also some clear limitations. Given the positive and welcome reception of the structure of the TEACH model, it is recommended that this study be replicated with the changes and suggestions outlined above. Ultimately, the issue of training and professionalizing the role of paraeducators, as well as finding a feasible and meaningful professional development model, is a very under-researched but necessary field to be explored on a deeper level if we want to improve services to special education students.

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Appendix A

Classroom Observation Form

Para Code:		Observer:	
Grade Level:		IOA with:	
Period:	<input type="checkbox"/> 1 st <input type="checkbox"/> 2 nd <input type="checkbox"/> 3 rd <input type="checkbox"/> 4 th <input type="checkbox"/> 5 th <input type="checkbox"/> SEL	Date of Obs:	
Activity:		Start Time:	
		End Time:	

- **Social prompt/pre-correction** – positively stated prompts for expected classroom behavior in the absence of unexpected behaviors on the part of the student or students being prompted
- **Active supervision** – 1) continuously moving amongst students, focusing on problem areas; 2) scanning classroom; 3) interacting with a variety of students; and 4) providing frequent praise

Pre-correction

Min	Tally of paraeducator's pre-corrective statements
1:00	
2:00	
3:00	
4:00	
5:00	
6:00	
7:00	
8:00	
9:00	
10:00	
11:00	
12:00	
13:00	
14:00	
15:00	

Active Supervision

Min	Qualitative score (1-4, 4 is highest)			
1:00	1	2	3	4
2:00	1	2	3	4
3:00	1	2	3	4
4:00	1	2	3	4
5:00	1	2	3	4
6:00	1	2	3	4
7:00	1	2	3	4
8:00	1	2	3	4
9:00	1	2	3	4
10:00	1	2	3	4
11:00	1	2	3	4
12:00	1	2	3	4
13:00	1	2	3	4
14:00	1	2	3	4
15:00	1	2	3	4

Total pre-corrective statements:

Total score: ____/60

Out of Classroom Support (OCS Log)

OCS Log 2018-2019

File Edit View Insert Format Data Tools Add-ons Help Last edit was made 5 hours ago by Jerome Reynolds

	C	D	E	F	G	H	I	J	K	L	M
	Arrival Time	Departure Time	Non-Compliance Time	Compliance Issues	Major or Minor Placement?	Reason For Referral (Staff View)	Reason for Referral (Student's view)	Trigger	Setting Events	Plan B	Follow up
1											
16	11:55 AM	12:45 PM			Minor	Disrupted Classroom			2nd Period		Plan to find a comfortable, designated chair for Sam in each of his classes.
17										Medical condition that creates back pain when sitting	
	12:20 PM	12:45 PM			Minor	Sitting in chair differently	Uncomfortable sitting in chair in a typical way		3rd period		
18	1:15 AM	1:30 AM			minor	Bored in quiet lunch			lunch		
19	1:45 AM				minor						
20	3:15 PM	3:45 PM		Disrespect	minor	verbal aggression towards peers	telling classmate to "Shut the F up!"	Peers not doing what she thought they should	Group, Cooking Activity	Follow up with Mrs. Friday before next group day	Follow up with Mrs. Friday before next group day
21	10:25 AM	10:45 AM			Minor	3 redirections not to eat/sleep	School is boring		Language Arts	Follow up with Jerome	
22	11:25	11:43 AM			Minor	3 Re-Directs	I was making a joke	Asked to put chrome book away	2nd period Math		

Appendix C
Daily Student Behavior Tracking (Online Google Form)

https://docs.google.com/forms/d/e/1FAIpQLSc2YXmSmh_L_cEmVvRgQTzopgzShJrYAH7OqGhTrmm59779ww/viewform

Absences *

Choose ▼

Class Period *

Choose ▼

Initiated task within 2 minutes of receiving instruction

☐ Independently initiated

☐ Initiated with staff support

☒ Did not initiate

Time on Task

Choose ▼

Off Task

Choose ▼

Appendix D

Self-Efficacy Survey

Self-Efficacy Survey (Pre/Post)

<i>How certain are you that you can....</i>	Not certain at all	Quite uncertain	Quite certain	Absolutely certain
1. Get all students in class to work hard with their schoolwork?				
2. Wake the desire to learn even among the lowest-achieving students?				
3. Get students to do their best even when working with difficult problems?				
4. Motivate students who show low interest in schoolwork?				
5. Maintain discipline in any class, group of students, or individual student?				
6. Intervene with even the most aggressive student?				
7. Get students with behavioral problems to follow classroom rules?				
8. Cooperate effectively with other staff?				
9. Get all students to behave politely and respectfully with staff and other students?				
10. Successfully use any instructional and/or behavioral method that the teacher or school decides to use?				
11. Manage instruction regardless of how it is organized (groups, individuals, mixed-aged, etc.)?				
12. Intervene well instructionally and behaviorally if you are told to use methods that would not be your choice?				

Appendix E
Goal Setting Form

Self-Monitoring and Goal Setting

Name _____ Week of: _____

- Each day, during your selected timeframe for using your targeted practice (pre-correction and active supervision) track your progress.
- Each day enter your count of occurrences for your targeted practice at the end of your timeframe.

Definitions-

Active supervision: 1) continuously moving amongst students, focusing on problem areas; 2) scanning classroom; 3) interacting with a variety of students; and 4) providing frequent praise
Pre-correction: positively stated prompts for expected classroom behavior in the absence of unexpected behaviors on the part of the student or students being prompted

DAILY GOALS

My goal is to have at least _____ occurrences of *pre-correction* each day when working with during _____.

(targeted routine)

My goal achieve _____ steps and achieve a score of _____ out of 20 on the active supervision survey during _____.

(targeted routine)

Appendix F

Self-Monitoring Form (Online Data)

Pacific Academy Self-Monitoring

* Required

Pick your name from the list *

Choose ▼

Which date are you entering self-monitoring data for? *

Choose ▼

If you did NOT collect self-monitoring data on this day, why:

Only complete this question if you did not collect self-monitoring data today

☐ I missed or was absent from my class today

☐ Other:

What time of day did you begin self-monitoring (e.g. 10:00)?

Your answer

How many minutes did you self monitor for?

Answer with whole numbers only (e.g. 45 or 30)

Your answer

Appendix G

Social Validity Questionnaire - Paraeducators

Social Validity Questionnaire (Paraeducators)

	Strongly Disagree	Disagree	Disagree Slightly	Slightly Agree	Agree	Strongly Agree
1. This intervention is an effective choice for addressing a variety of problems.						
2. I would need additional resources to carry out this intervention.						
3. I have the time to implement this intervention.						
4. I understand how to use this intervention.						
5. This intervention is a fair way to handle the students' challenging behaviors.						
6. The time required to implement this intervention is manageable.						
7. I have noticed an increase in positive interactions between myself and the students.						
8. I have noticed an increase in active supervision and pre-corrective statements on behalf of my classroom assistants.						
9. I have noticed a decrease in challenging behavior of students after the implementation of this intervention.						
10. This intervention is not disruptive to other students.						
11. The intervention easily fits into my current role in the classroom.						
12. I see this intervention as a beneficial addition to the classroom.						

Appendix H

Social Validity Questionnaire - Teachers

Social Validity Questionnaire (Teachers)

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. This intervention is an effective choice for addressing a variety of problems.						
2. My classroom assistants would need additional resources to carry out this intervention.						
3. My classroom assistants have the time to implement this intervention.						
4. My classroom assistants seem to understand how to use this intervention.						
5. This intervention is a fair way to handle the students' challenging behaviors.						
6. The time required on behalf of my classroom assistants is manageable.						
7. I have noticed an increase in positive interactions between my classroom assistants and the students.						
8. I have noticed an increase in active supervision and pre-corrective statements on behalf of my classroom assistants.						
9. I have noticed a decrease in challenging behavior of students after the implementation of this intervention.						
10. This intervention is not disruptive to other students.						
11. The intervention easily fits into the current role of the classroom assistants and the classroom practices.						
12. I see this intervention as a beneficial addition to the classroom.						

Appendix I

Email Reminder to Paraeducators to Collect Self-Monitoring Data

8/3/2021

NW Regional Education Service District Mail - Research reminder!!



Cara Olson-Sawyer <colonsawyer@nwresd.k12.or.us>

Research reminder!!

1 message

Cara Olson-Sawyer <colonsawyer@nwresd.k12.or.us>
To: Pacific Academy <PAStaff@nwresd.k12.or.us>

Tue, Oct 22, 2019 at 10:55 AM

Remember to collect your data today... Active Supervision and Pre-correction!

Cara Olson-Sawyer, Principal

Pacific Academy

503-614-1601

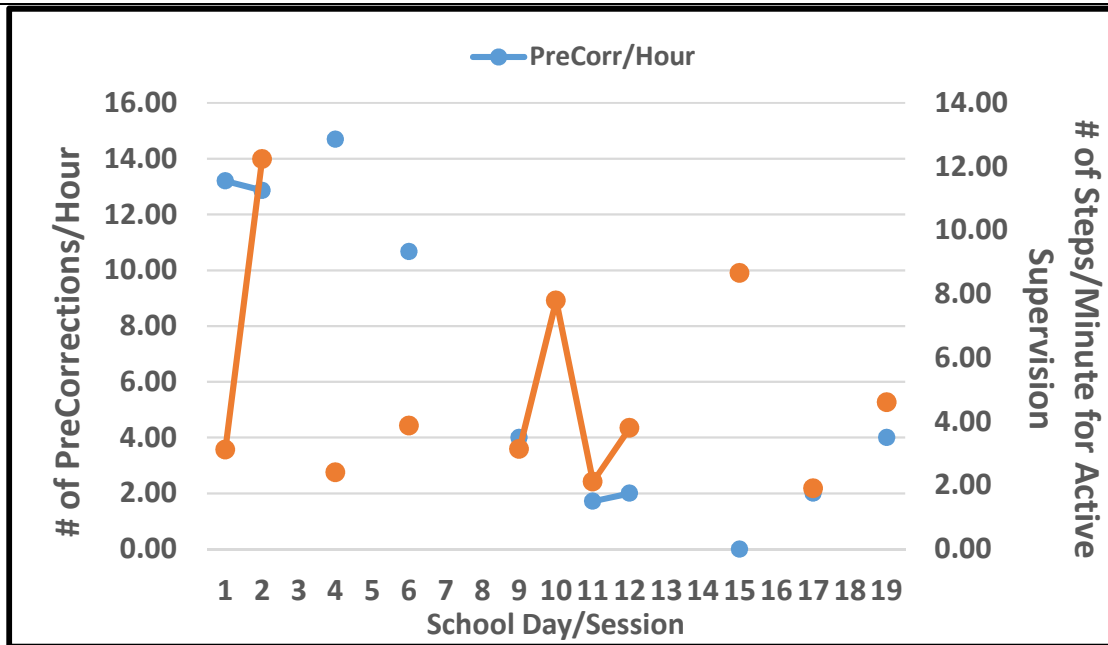
"CONFIDENTIALITY NOTICE: This e-mail message is for the sole use of the intended recipient(s) and may contain confidential information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message."

Appendix J
Self-Monitoring Graphs

Paraeducator 1

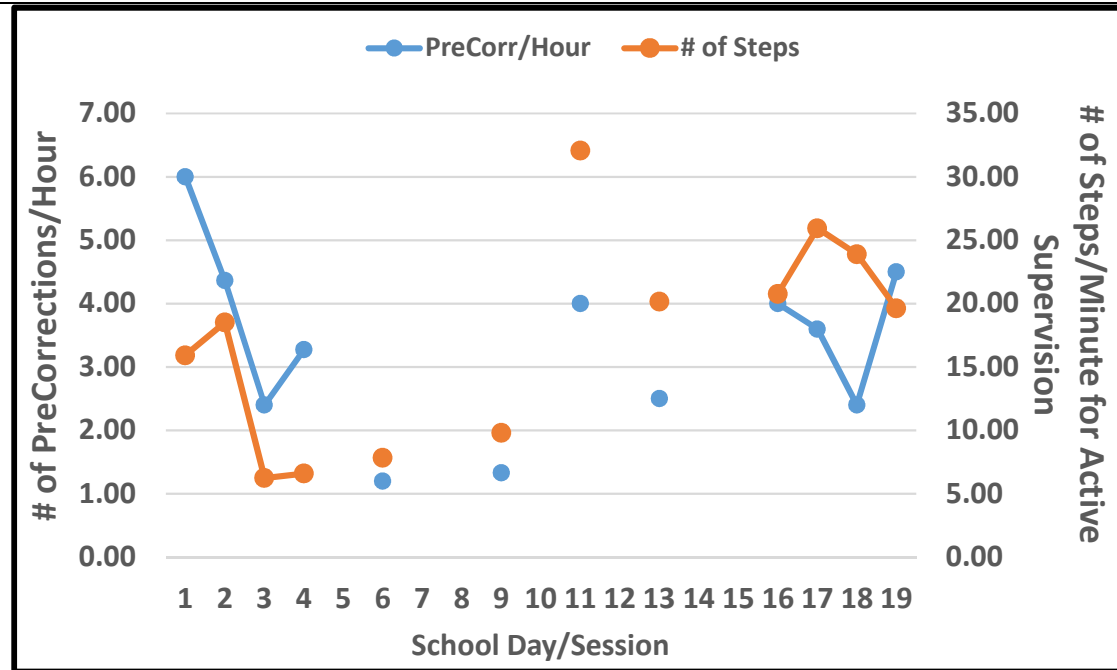
Figure 5

Paraeducator 96 - Oct 22 – Nov 15



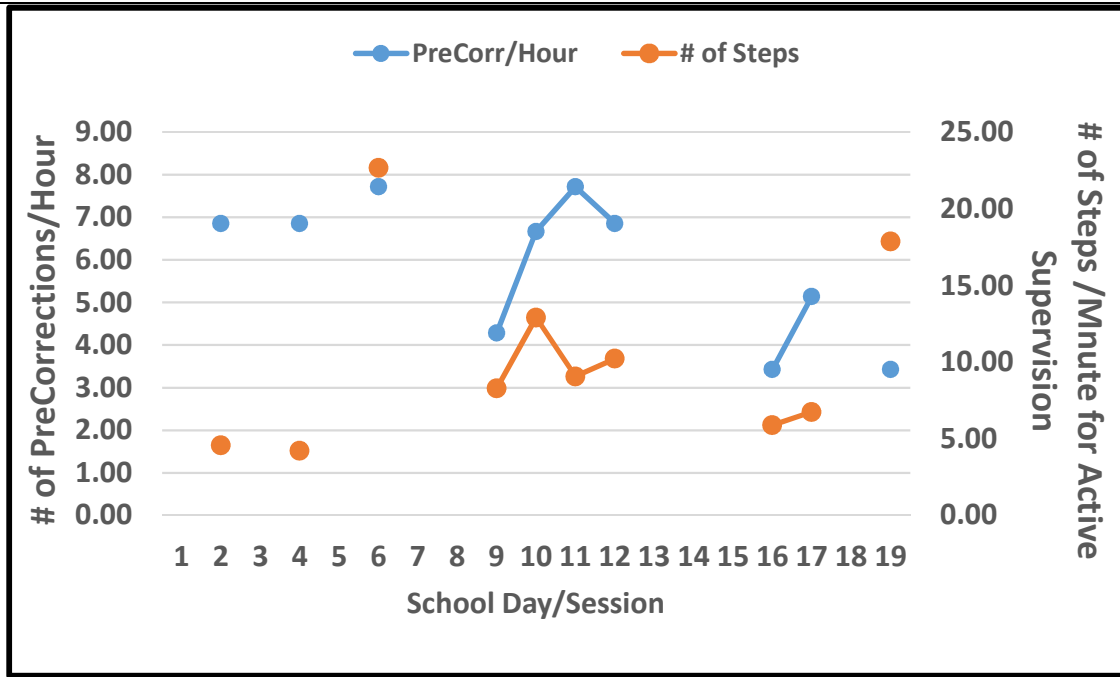
Paraeducator 2

Figure 6
Paraeducator 84 - Oct 22 – Nov 15



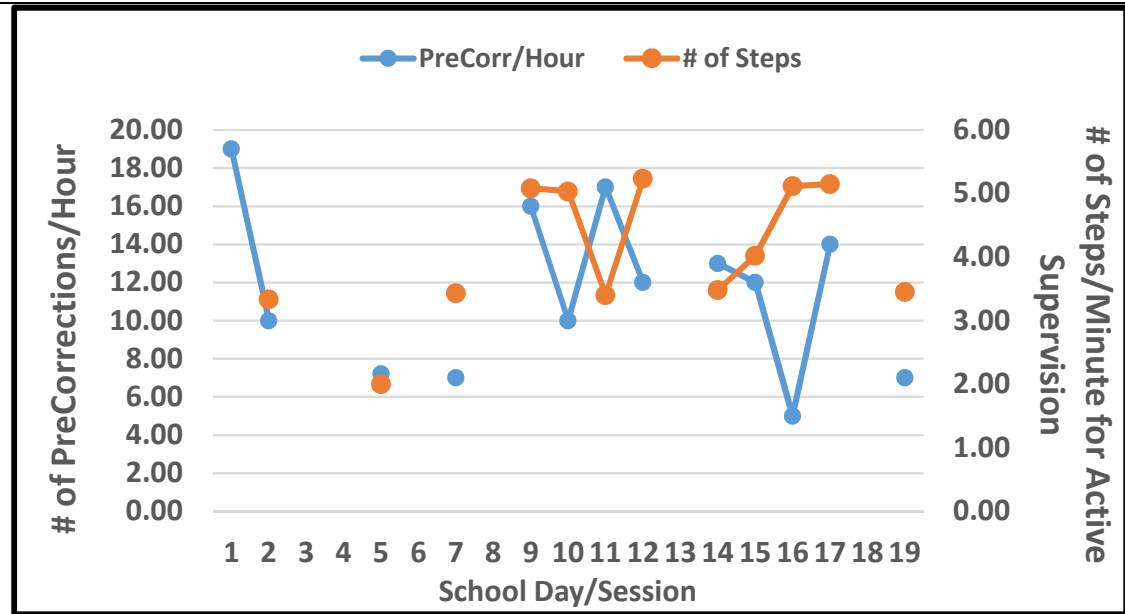
Paraeducator 3

Figure 7

Paraeducator 50 - Oct 22 – Nov 15

Paraeducator 4

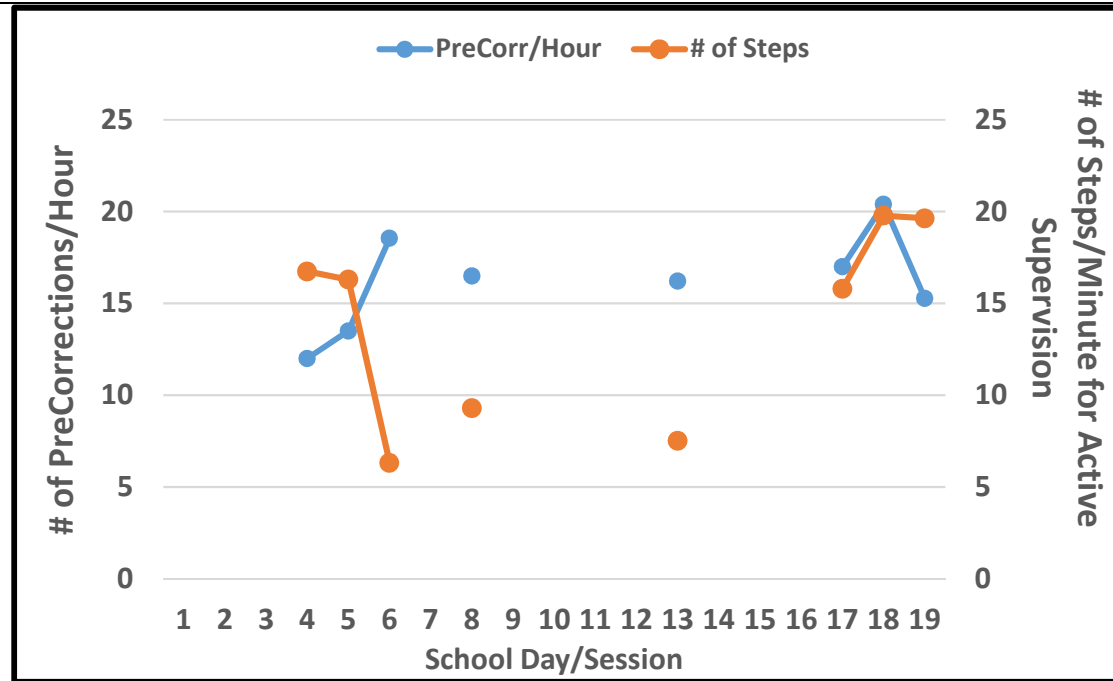
Figure 8
Paraeducator 72 - Oct 22 – Nov 15



Paraeducator 5

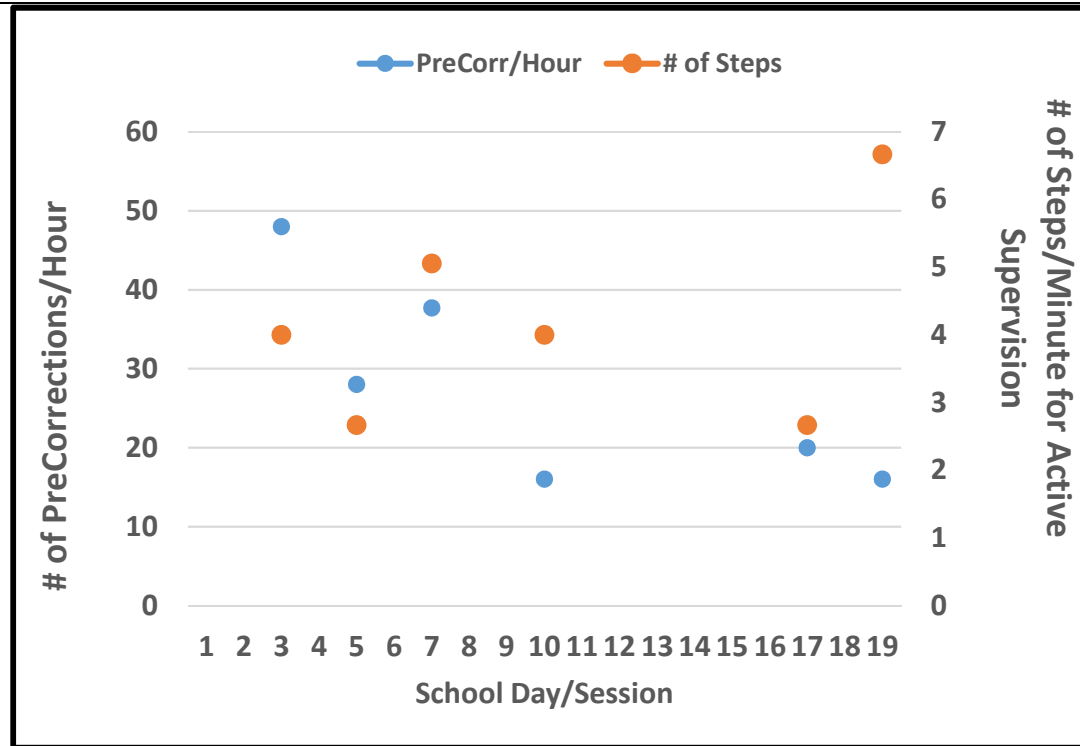
Figure 9

Paraeducator 74 - Oct 22 – Nov 15



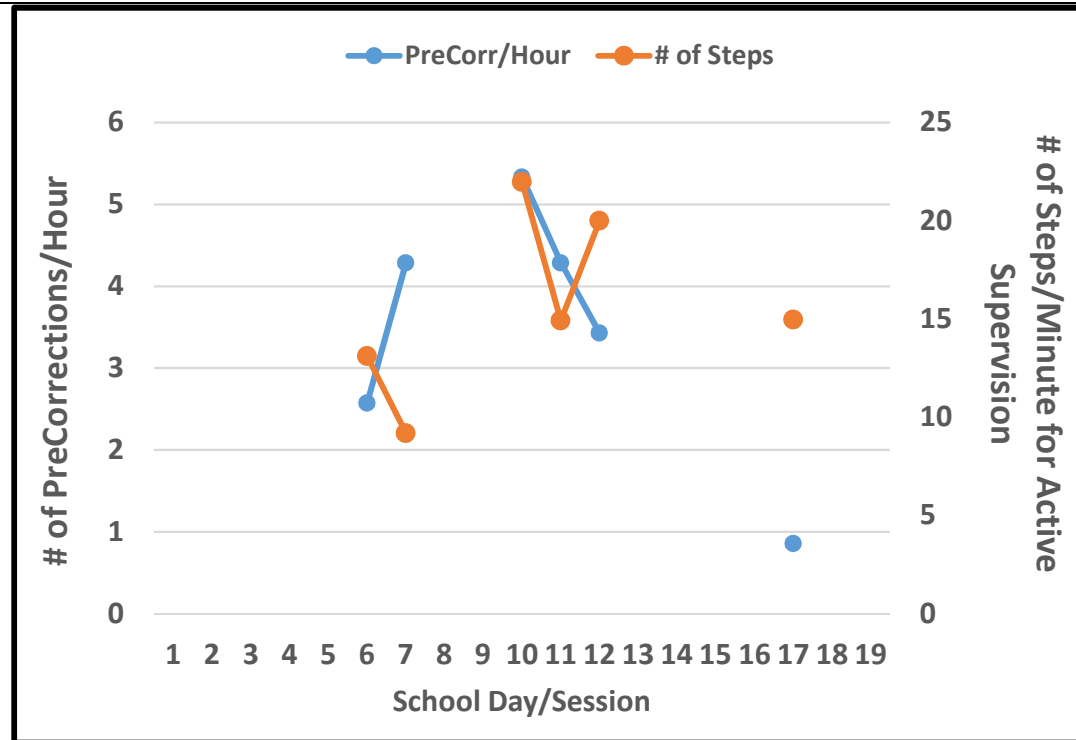
Paraeducator 6

Figure 10

Paraeducator 66 - Oct 22 – Nov 15

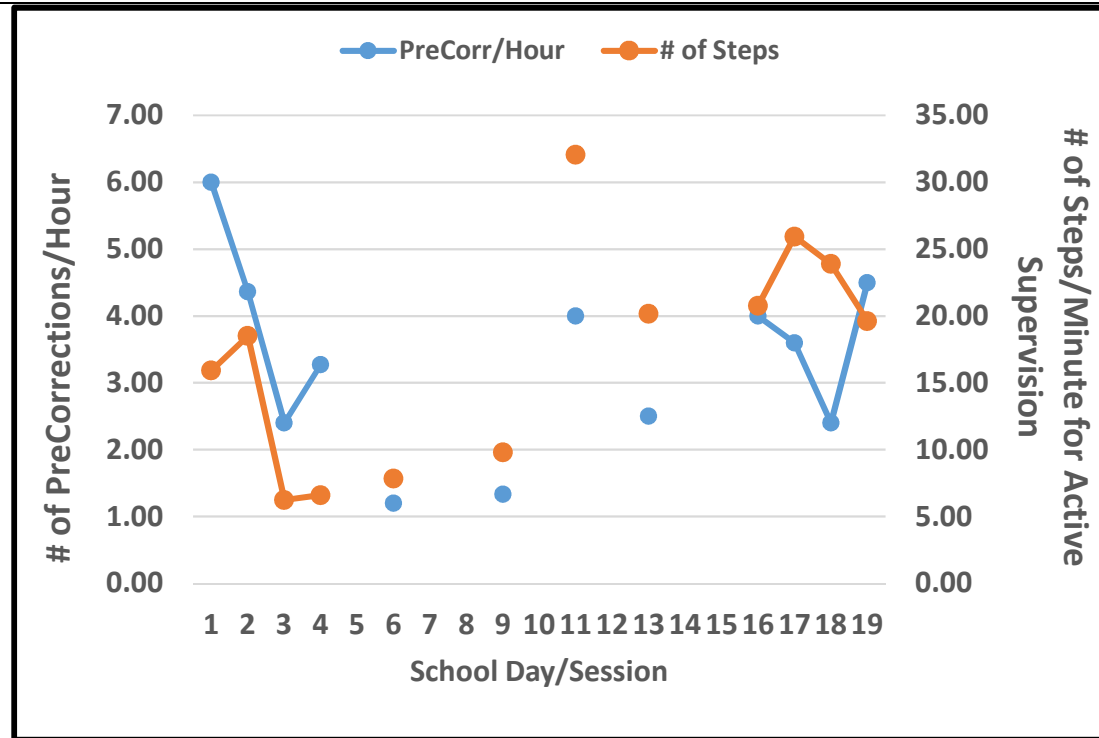
Paraeducator 7

Figure 11
Paraeducator 56 - Oct 22 – Nov 15



Paraeducator 8

Figure 12
Paraeducator 84 - Oct 22 – Nov 15



Appendix K

Meeting Minutes from Mid-Intervention Check-In

Present: Mary, Bonnie, Matt, Solange, Marianna, Trisha, Jon, Debbie, Kristina, Michelle, Jonny, Patricia, Tami, Meera, Cara	November 4, 201		
Topic	Discussion	Notes	Follow Up
Review the slide show			
Review graphs			
Review online form - fill out self-efficacy forms if you have not			

Share out regarding how pre-correction and active supervision is working in the classroom	<p>It started well, but it is hard to remember to collect data every day. The pre-corrective statements seem awkward sometimes but it is easy to count the steps using the step counter once we figured out how to use it. The strategies were easy to learn but it was hard to tell if there was a difference in student behavior. It helped if we worked as a classroom team and reminded each other. It is nice to learn new strategies and share ideas with each other. We would like to continue to get more training on how to work with students in a way that makes sense and is easy to do. These strategies are easy for us to incorporate into what we do in the classroom.</p>		
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