USING A MULTI-TIER FRAMEWORK TO INCREASE TEACHERS' FIDELITY OF BIP IMPLEMENTATION

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DEDICATION

I would like to dedicate my dissertation to my parents, Brian and Marsha Stanton, who have always supported me and challenged me to be the best person I can be.

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ABSTRACT

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DECEMBER 2017

Most school districts have policies and procedures in place to guide professionals (e.g., behavior specialists, psychologists) in conducting Functional Behavior Assessments and writing Behavior Intervention Plans for students with disabilities. However, it is often difficult for classroom teachers to follow through with every component and strategy in student BIPs due to time constraints, number of students, or lack of training. The purpose of this study was to examine the effects of using a tiered approach to deliver performance feedback and training sessions on the fidelity of special education teachers' BIP implementation. In this study, Tier 1 interventions were effective for all participants. Also, all participants were able to maintain their level of performance during the maintenance phase.

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CHAPTER I

INTRODUCTION

Background and Need for Study

In 1990, the Individuals with Disabilities Education Act (IDEA) replaced the Education for All Handicapped Children Act of 1975, which was the first law to grant equal access to education for children with disabilities. In its 1990 form, IDEA entitled students with disabilities to a free and appropriate public education (FAPE) in the least restrictive environment (LRE) that meets their individual learning needs (34 C.F.R. § 300.17; 34 C.F.R. § 300.114; Yell, 2012). In 1997, IDEA was reauthorized and included provisions to facilitate safe environments in American public schools. IDEA was most recently updated in 2004 and renamed the Individuals with Disabilities Education Improvement Act (IDEIA); the 2004 revisions included specific Individual Education Plan (IEP) components, required IEP meeting attendance for certain stakeholders, and transition planning. IDEIA states that if a student's behavior hinders his or her learning or the learning of others, the student's IEP must address the target behaviors, which could include noncompliance, property destruction, verbal outbursts, physical aggression, or self-injurious behaviors (20 U.S.C. § 1414 (d) (3) (B) (i); Yell, 2012). The behavioral needs of the student should be addressed through positive behavior supports and strategies (34 C.F.R. § 300.324 (a) (2) (i)). Appropriate positive behavior supports can be determined by conducting a functional behavioral assessment (FBA), developing a

behavior intervention plan (BIP), and writing measurable behavioral goals. Failure to appropriately implement positive behavior interventions to support a student's target behaviors is a denial of FAPE and the local education agency could be subject to litigation (Yell, 2012).

Schools conduct FBAs to determine why a student is engaging in a problem behavior in relation to the surrounding environment. The goal of the FBA process is to determine the function (i.e., purpose) of the inappropriate behavior(s) and to develop an effective intervention plan based on the data collected. When conducting a school-based FBA, a behavior support team may include an administrator, behavior specialist, special education teacher, general education teacher, and other key stakeholders working together to complete the assessment (Scott, Anderson, & Spaulding, 2008). The purpose of the behavior support team is to utilize the knowledge and experience of multiple professionals to conduct a comprehensive and effective assessment (Scott et al., 2008).

The first step in an FBA is developing an operational definition of the target behavior that is observable, measurable, and specific enough that an individual who does not know the student could easily identify the behavior when he or she sees it (Killu 2008; Scott et al., 2008). Next, the behavior support team gathers information about the antecedents and consequences of the problem behavior (Scott et al., 2008). This information can come from a review of the student's records, interviews (i.e., with the student, teachers, or parents), team meetings, rating scales, and behavior graphs (Killu, 2008). Finally, the behavior support team examines all of the collected information and

determines the function of each problem behavior. All behaviors function to avoid something or to obtain something (Cooper, Heron, & Heward, 2007). Once the behavior support team determines the function of the student's target behavior, the team can identify a more socially appropriate behavior that meets the same function (Scott et al., 2008).

After completing an FBA, the behavior support team develops a BIP, which is a blueprint for implementing interventions to reduce problem behaviors and increase positive behaviors. A BIP includes behavioral goals based on the results of the FBA and the student's present levels of performance. Behavioral goals must be measurable and focus on reducing the problem behavior and increasing socially appropriate behaviors (Drasgow, Yell, Bradley, & Shiner, 1999). The BIP also includes replacement behaviors; these behaviors serve the same function as the problem behavior but are more socially appropriate ways of meeting the students' needs (Drasgow et al., 1999; Scott et al., 2008).

The behavior support team works together to decide the most age- and situation-appropriate replacement behaviors for the student. A BIP also includes instructional routines and arrangements that are comprised of cues, prompts, schedules, and changes to the physical environment; these are called antecedent procedures (Scott et al., 2008). Antecedent procedures are behavior change strategies put in place to prevent the problem behavior from occurring (Cooper et al., 2007). When the use of antecedent procedures is

not effective at decreasing the target behavior, problem behavior can occur (or appropriate behavior does not occur) and consequence strategies must be utilized.

Consequence strategies should be directly related to the function of the target behavior and serve to decrease the problem behavior and increase appropriate behavior (Killu, 2008). The *reinforcement* of a behavior increases the likelihood of that behavior occurring in the future. For example, when a student is asked to complete a task and the student complies, a reinforcer (e.g., attention, tangible item) is delivered. In the future, the student is more likely to complete the task. In order to identify stimuli that are reinforcing to the student, the behavior support team can conduct a reinforcer survey. A reinforcer survey is a data-based method where one or more items are presented to the student contingent on a certain response and the likelihood of the specific reinforcer increasing future responses is measured (Cooper et al., 2007; Killu, 2008).

Finally, the behavior support team decides how behavior data will be documented and monitored. Data must be collected on a daily basis and the behavior support team determines if frequency (i.e., how often) or duration (i.e., how long) data will be collected. For example, the problem behavior of swearing would be measured in frequency and the problem behavior of being off-task would be measured in duration (Scott et al., 2008). In addition, the team should ensure that measures are in place to ensure the fidelity of BIP implementation; that is, is the BIP being implemented as it is written? Research shows that fidelity of implementation is critical to BIP success (Cook et al., 2012; Hagermoser Sanetti, Collier-Meek, Long, Kim, & Kratochwill, 2014).

In order for BIPs to be implemented with fidelity, the behavior support team should provide ongoing support to teachers in the classroom. A multi-tiered framework, such as Response to Intervention (RTI), can be used to deliver ongoing support to educators. RTI is a process that was initially developed as an alternative method to the IQ-achievement discrepancy model to recognize students with learning disabilities (Fuchs & Fuchs, 2006). Through the RTI process, teachers determine the amount and level of a specific intervention based on data and progress monitoring. RTI utilizes increasingly intensive tiers of support and can be modified as improvement is observed. Most RTI models include the following features: progress monitoring, a universal screener, data-based decision making, and a team-based approach (Myers, Simonsen, & Sugai, 2011). While the RTI model has been traditionally applied to students' academic instruction, tiered supports in learning may be effective for all learners, including teachers (Myers et al., 2011; Simonsen et al., 2014). Delivering performance feedback to teachers using increasing tiers of support as indicated by data may be more effective than the traditional one-size-fits all model of teacher training and support in schools (Myers et al., 2011).

Purpose of the Study

Most school districts have policies and procedures in place for professionals (e.g., behavior specialists, psychologists) to conduct FBAs and write BIPs for students with disabilities. However, it is often difficult for classroom teachers to follow through with every component and strategy in students' BIPs due to time constraints, number of

students who need interventions, or lack of training in the procedures. The purpose of this study was to examine the effects of using a tiered approach to deliver performance feedback and training sessions on the fidelity of special education teachers' BIP implementation.

CHAPTER II

LITERATURE REVIEW

Introduction

Students who receive special education services must be found eligible for those services under IDEIA guidelines. Special education eligibility is determined by an evaluation consisting of informal and formal measures of functional and academic performance that is conducted by a multidisciplinary team (34 C.F.R § 300.304). Per IDEIA, a student may be eligible for special education under one of 12 areas of disability. Two areas of disability under IDEIA that have behavioral implications are autism and emotional disturbance (34 C.F.R. § 300.8 (a) (1)). To be eligible for special education as a student with an autism spectrum disorder (ASD), the student must have deficits in communication and social interaction. Students with autism also have repetitive behaviors, restrictive interests, and sensory regulation issues (34 C.F.R. § 300.8 (c) (1) (i)). To be eligible for special education as a student with an emotional disturbance the student must have difficulty building relationships, irrational behaviors, general sadness or discontent, or anxiety related to academic or personal issues (34 C.F.R. § 300.8 (c) (4) (i)). The Centers for Disease Control and Prevention (CDC; 2016) reported that approximately one in 68 children has an ASD and ASD is four times more common in boys than in girls. The CDC (2017) also reported that one in seven children in the United States between the ages of two and eight has a mental, behavioral, or developmental

disorder. Also, children between the ages of three and 17 have behavior and conduct problems (3.5%), anxiety (3%), and depression (2.1%; CDC, 2017).

The Importance of Behavior Intervention

According to the National Longitudinal Transition Study-2, students with significant behavioral challenges have the lowest potential of any group of students with disabilities (Wagner, Gameto, & Guzman, 2004; Wehby & Kern, 2014). These students often fail multiple classes, get suspended from school, or require intense behavior treatment from a medical facility. These factors lead to limited post-secondary opportunities for these learners due to their increased social, academic, and behavioral needs. However, research has shown that through the use of positive behavior supports and function-based interventions, maladaptive behaviors of students can decrease and prosocial behaviors can increase, leading to better opportunities in the future for these students (Cook et al., 2012; Wehby & Kern, 2014).

FBAs and BIPs and IDEIA

Since 2004 and the introduction of IDEIA, using FBAs in the public school settings has been considered a "best practice" for determining why learners are exhibiting challenging behaviors in the classroom (Zirkel, 2009, p. 73). IDEIA states that if a student's behavior hinders his or her learning or the learning of others, then the behavioral needs of the student should be addressed through positive behavior supports and strategies (34 C.F.R. § 300.324 (a) (2) (i)). Appropriate positive behavior supports can be determined by conducting an FBA and developing a BIP. IDEIA also states that

conducting an FBA and implementing a BIP is required if a student is removed from the current educational placement and the disciplinary offense is determined to be a manifestation of the student's disability (i.e., is the target behavior directly related to the student's disability?). A manifestation determination review (MDR) must be conducted if the student is out of the educational placement for 10 days due to behavior challenges (34 C.F.R. § 300.530 (f) (i); Zirkel 2009). For example, if a student is physically aggressive toward a teacher and the principal places the student in in-school suspension for two days, that counts as two days out of placement. Research shows that a FBA should be considered if a student's placement in an instructional arrangement is being questioned or if behavior goals are being added to the student's IEP (Allday, Nelson, & Russel, 2011; Drasgow et al., 1999; Zirkel, 2009). Despite the serious implications for students if challenging behaviors occur in the school setting, IDEIA does not outline the requirements for FBA or BIP implementation or the components needed (Allday et al., 2011).

FBA and BIP Components

Multiple studies have been conducted to determine the most effective components of FBAs and student BIPs (e.g., Allday et al., 2011; Anderson, Rodriguez, & Campbell, 2015; Killu, 2008; Scott et al., 2008). The research supports multiple methods that can be effective for conducting FBAs and implementing BIPs; however, the methods and procedures used should be dependent on the individual learner and his or her needs.

The FBA consists of data collection, interviews, ABC (antecedent, behavior, consequence) data, frequency counts, and direct observation conducted by the behavior support team. The Functional Assessment Interview Form, the Preliminary Functional Assessment Survey, the Functional Analysis Screening Tool (FAST), and the Motivation Assessment Scale (MAS) are examples of interview tools often used by the behavior support team (Allday et al., 2011; Anderson et al., 2015). Interviews, anecdotal information, and student records are considered indirect data, since these data come from informants and are not directly observed (Anderson et al., 2015; Cooper et al., 2007; Neilson & McEvoy, 2004). Direct data methods include ABC data and direct observation. Types of ABC data that can be collected include frequency, duration, and interval. ABC data examines the antecedents and consequences of the target behavior. The intention of ABC data is to inform the behavior support team of specific situations in which the target behaviors occur and the current consequences being used. Interval data measures if a target behavior occurs or does not occur in a pre-set period of time.

After data are collected, they should be graphed and visually analyzed to look for trends and patterns (Anderson et al., 2015; Cooper et al., 2007). The FBA process should also include an operational definition of the target behavior and a hypothesis regarding the function of the target behavior (Allday et al., 2011; Killu, 2008). Ingram, Lewis-Palmer, and Sugai (2005) compared the effects of BIPs based on FBAs to BIPs that were not function-based on the target behaviors of two students. In this study, two BIPs were developed for each student and each student was observed throughout the school day

(Ingram et al., 2005). One student received all the function-based interventions prior to the interventions that were not function-based. The other student received them in a rotating order (Ingram et al., 2005). The results of the study showed that the target behavior decreased for both participants in all conditions; however, the results were more pronounced when the function-based interventions were being utilized (Ingram et al., 2005). At the conclusion of the FBA process, all of the data are examined by the behavior support team and used to make a hypothesis regarding the function of the behavior.

Once an FBA has been completed, a BIP should be developed and implemented with fidelity. Target behaviors are clearly defined to ensure data are collected accurately across all staff and environments (Allday et al., 2011). Antecedent and setting event interventions should be included to modify the environment, provide positive behavior supports, and prime the learner for unexpected situations (Killu, 2008). The BIP also outlines what staff should do when the target behavior occurs. Maladaptive behaviors should be put on extinction so that the same target behaviors are less likely to occur in the future. Extinction occurs when behavior that had previously been reinforced stops being reinforced and eventually decreases in frequency (Cooper et al., 2007). Consequences should be based on the function of the behavior. For example, if a student is engaging in target behavior to get attention from a teacher, the teacher should use planned ignoring to attempt to decrease the behavior. Planned ignoring is used in this scenario so the target behavior stops being reinforced and decreases. Positive reinforcement is also a

consequence intervention as it is delivered contingent on the replacement behavior being observed (Cooper et al., 2007; Killu, 2008). When the replacement behavior is observed, the student should be presented with a preferred reinforcer. Finally, a system for data collection is established in order to monitor the effectiveness of the plan. The data collection system depends on the type of target behavior being evaluated and how long and how often the behavior occurs (Anderson et al., 2015; Killu, 2008; Scott et al., 2008). Data should be graphed so that the data can also be analyzed visually.

FBAs and BIPs

An FBA must be conducted prior to developing and implementing a BIP to determine the function of the problem behavior and identify appropriate antecedent and consequence manipulations. Providing function-based behavior support through the FBA and BIP process has been associated with an increase in a variety of appropriate behaviors, including active engagement, peer interaction, hand-raising, requesting attention, initiating conversations, asking for help, following directions, and remaining in an assigned area (Chandler, Dahlquist, Repp, & Feltz, 1999; Gann, Ferro, Umbreit, & Liaupsin, 2014; Smith & Sugai, 2000; Wood, Ferro, Umbreit, & Liauspsin, 2011). In addition, the FBA and BIP process has been associated with a reduction in a variety of problem behaviors including wandering, noncompliance, tantrums, spitting, hiding under a desk, self-injurious behaviors, kicking, crying, and yelling (Chandler et al., 1999; Gann et al., 2014; Wood et al., 2011). The FBA/BIP process has been used successfully with students with emotional disorders, challenging behavior, autism, and other social

behavioral issues (Chandler et al., 1999; Gage, Lewis, & Stichter, 2012; Gann et al., 2014; Reinke et al., 2014; Smith & Sugai, 2000; Wood et al., 2011). In addition, using a team-based approach when conducting FBAs leads to more effective BIPs that reduce problem behaviors and increase positive behaviors (Chandler et al., 1999; Gage et al., 2012; Gann et al., 2014; Reinke et al., 2014; Smith and Sugai, 2000; Wood et al., 2011).

Treatment Fidelity

In order to ensure the effectiveness of BIPs, school staff must receive continuing support from the behavior support team responsible for BIP implementation; this support can be provided in multiple ways. Implementing BIPs with fidelity increases the likelihood that the plans will be effective. Treatment fidelity is defined as consistently and reliably implementing the strategies and interventions as they have been defined and taught (Smith, Daunic, & Taylor, 2007). Researchers have investigated ways to increase the fidelity of BIP implementation, including the addition of coaches and checklists (Codding, Feinberg, Dunn, & Pace, 2005; Reinke et al., 2014). There are also several instruments that have been developed to measure teacher fidelity in implementing BIPs including the treatment-monitoring interview, problem analysis interview, and problem identification interview (Jones, Wickstrom, & Friman, 1997; Wilkinson, 2006). These interviews are indirect methods of assessment used to aid in collaboration and consultation delivery in the classroom (Jones et al., 1997). However, the most frequently used methods for evaluating the treatment integrity of BIPs are consultation and performance feedback (Hagermoser Sanetti et al., 2014; Noell & Witt, 1999; Noell, Witt,

Gilbertson, Ranier, & Freeland, 1997; Noell et al., 2005). Treatment fidelity can be assessed initially using a permanent product review; however, over time, teacher implementation can deteriorate and increased performance feedback via the behavior support team consultation may be needed (Noell et al., 1999; Noell et al., 2005). Finally, treatment integrity can also be increased through a specific consultation procedure such as implementation planning that includes reviewing steps, strategies, and barriers to implementation (Hagermoser Sanetti et al., 2014).

There has been research on performance feedback and how performance feedback is used to increase treatment fidelity in the school setting (Briere, Simonsen, Sugai, & Myers, 2015; Codding et al., 2005; Codding, Livanis, Pace, & Vaca, 2008; Jones et al., 1997; Noell et al., 1997; Noell, Duhon, Gatti, & Connell, 2002; Noell et al., 2005). Performance feedback first involves identifying and monitoring a behavior to be increased or decreased. After a behavior is chosen, feedback is given in order to change the behavior (Noell et al., 2005). Performance feedback has been used to increase the treatment fidelity of general education teachers implementing BIPs in the classroom, general education teachers utilizing positive reinforcement in the classroom, and new teachers using specific praise in the schools (Briere et al., 2015; Noell et al., 1997; Noell et al., 2005). Jones et al. (1997) examined the treatment integrity of teachers providing positive reinforcement for students being on task. The researchers found that praise was only being observed between 9% and 37% of the time during interval recordings (Jones et al., 1997). Following performance feedback, teachers were providing reinforcement

between 60% and 83% during interval recordings (Jones et al., 1997). Often when social validity surveys are conducted, teachers and other professionals report that performance feedback is a preferred intervention due to the changes that are seen in the classroom and in students (Codding et al., 2005). Observed changes include increase in teachers' abilities in the classroom and student outcomes (Codding et al., 2005).

Studies have also been conducted to evaluate how goal setting, combined with performance feedback, affects educators and learners (Codding & Smyth, 2008; DiGennaro, Martens, & Kleinmann, 2007; Duncan, Dufrene, Sterling, & Tingstrom, 2013). Goal setting includes selecting a specific teacher behavior to increase or decrease and deciding on a specific level the teacher will obtain. Then, performance feedback is provided to help the teacher achieve his or her goal. This process leads to more targeted performance feedback and teacher participation (Codding & Smyth, 2008). Goal setting combined with performance feedback has been associated with a decrease in time spent in transition between activities in the classroom and an increase in the level of specific praise given to students (Codding & Smyth, 2008; Duncan et al., 2013). Duncan et al. (2013) examined rates of specific labeled praise given to students. Researchers provided a daily performance feedback note to teachers in conjunction with goal setting to increase the rates of specific labeled praise. Target students were chosen based on previous problem behavior (Duncan et al., 2013). Researchers found that all three teachers in their study increased their specific labeled praise when performance feedback was paired with goal setting (Duncan et al., 2013). Specific labeled praise given to non-target students

increased as well, but not to the same level. However, not all of the teachers mastered their goal, but the performance feedback was effective (Duncan et al., 2013).

Performance feedback has also been paired with self-monitoring to modify teacher and paraprofessional behavior in the classroom (Mouzakitis, Codding, & Tryon, 2015; Petscher & Bailey, 2006). In self-monitoring, an individual keeps track of his or her own progress on a target behavior using a data collection tool. Mouzakitis et al. (2015) compared the use of self-monitoring alone to self-monitoring with performance feedback to improve the treatment fidelity of BIP implementation. In this study, teachers utilized self-monitoring by itself, then the performance feedback package was added. Results showed that three of four teachers increased BIP implementation with self-monitoring alone, but did not reach the pre-set criteria. When performance feedback was added, the three teachers reached mastery level (Mouzakitis et al., 2015). Petscher and Bailey (2006) examined the effects of self-monitoring and performance feedback on a paraprofessional's usage of a token economy system in the classroom. The token economy system included "managing disruptions, prompting appropriate student behavior, and bonus-point delivery" (Petscher & Bailey, 2006, p. 222). A tactile prompt (i.e., a vibrating pager) was used to alert the paraprofessional to provide reinforcement if he or she had not already done so, but these prompts were eventually faded. Paraprofessionals filled out their own self-monitoring form and received performance feedback at the end of each session. In this study, token economy implementation improved for all participants with the use of the tactile prompt, self-monitoring, and

performance feedback. However, the use of the tactile prompt initially increased target behaviors for all participants, which may have caused improvement in performance without the introduction of self-monitoring or performance feedback; further research is needed (Petscher & Bailey, 2006).

Response to Intervention

Research indicates that when teachers or other education professionals receive performance feedback on a specific target behavior, their fidelity of implementation improves (Briere, et al., 2015; Codding et al., 2005; Codding, et al., 2008; Jones et al., 1997; Noell et al., 1997; Noell, et al., 2002; Noell et al., 2005). However, not all participants respond in the same way or need the same level of support at the same time. Research has been conducted on using a multi-tier support framework to provide performance feedback and other interventions to teachers to increase the use of specific praise (Myers et al., 2011; Simonsen et al., 2014).

A multi-tier support framework known as Response to Intervention (RTI) provides intervention to students in the public school setting who are considered "at risk" for failure (Fuchs & Fuchs, 2006). RTI became more widespread after the introduction of IDEIA in 2004 as a way to identify students with learning disabilities, providing an alternative to the IQ-achievement discrepancy model (Fuchs & Fuchs, 2006; Sugai & Horner, 2009). The response part of RTI includes identifying students who may be in need of intervention by looking at data from state-mandated standardized assessments, district-level universal screeners, teacher observations, or grades on classrooms

assignments and activities. Once an area of need has been identified, progress monitoring should be employed to track student growth and performance (Fuchs & Fuchs, 2006). The intervention part of RTI involves providing evidence-based practices and strategies to learners in their area of need in order to increase their level of performance (Fuchs & Fuchs, 2006; Sugai & Horner, 2009). Interventions can include targeted reading instruction, an evidence-based math program, or positive behavior supports included in an intervention plan such as a BIP. The service delivery model of RTI is a multi-tier framework. The interventions provided at each tier become increasingly rigorous (Fuchs & Fuchs, 2006). Tier 1 interventions are typically offered in the general education classroom and are intended to target all students (Fuchs & Fuchs, 2006). Tiers 2 and 3 include more systematic interventions that could increase in duration or require the learner moving to a separate setting or group for targeted instruction. The goal of RTI is to provide support for all learners and keep them in the general education classroom. However, if students continue to struggle and require more intervention, a referral to special education for additional services is sometimes needed (Fuchs & Fuchs, 2006).

A multi-tier framework of support can also be used to support teachers' instruction in the classroom. A multi-tier framework supports teachers at all levels of need and years of experience. Performance feedback can be provided and then additional interventions including self-monitoring or goal-setting can be given dependent on the teacher's level of need. In Myers et al. (2011), RTI was used as a framework for

delivering increasingly intensive performance feedback on BIPs. At Tier 1, school-wide positive behavior support training was conducted. At Tier 2, teachers received performance feedback, data on their rates of praise, and positive reinforcement from the research team on a weekly basis if their scores had improved. At Tier 3, each participant received feedback following each session on a daily basis and a script to follow to assist them with delivering praise in the classroom (Myers et al., 2011). Feedback included data on rates of praise, graphs, positive reinforcement as applicable, and the opportunity to answer questions (Myers et al., 2011). Following implementation of the RTI framework, the rates of specific praise given to students improved. The maladaptive behaviors of students in the classroom also decreased as result of the interventions (Myers et al., 2011).

Simonsen et al. (2014) used a case study to highlight the use of a multi-tier framework of support with four teachers in a middle school setting. The dependent variable in the study was teachers' rate of praise and was calculated as a rate through direct observation (Simonsen et al., 2014). Tier 1 supports included training on specific praise and instruction on self-monitoring using a golf counter. In Tier 2, participants set a goal for their self-monitoring and were provided antecedent coaching. All teachers in the study increased their rate of praise following either Tier 1 only or a combination of Tier 1 and Tier 2 supports (Simonsen et al., 2014). Simonsen et al. (2014) also looked at the components needed by school administrators to successfully implement a multi-tier framework for teachers in the school setting. At Tier 1, termed "universal screening", it

should be anticipated that approximately 80% of teachers will respond (Simonsen et al., 2014). A universal screening tool, such as a checklist, can be implemented at Tier 1 for teacher observations. At Tier 2, progress monitoring, data is reviewed on a regular basis to monitor teacher strengths and needs. Tier 3, intensive professional learning, is needed by approximately 5% of teachers (Simonsen et al., 2014). Consultation that includes actions steps and performance feedback is provided on a frequent basis. Each meeting between teacher and administrator or coach involves data review and data-based decision making in order to improve teacher and student performance (Simonsen et al., 2014).

Conclusion

IDEIA sets clear rules and expectations as to when an FBA must be conducted and a BIP developed. However, the literature supports the use of FBAs and BIPs to decrease challenging behaviors even when it is not required. When a BIP is being implemented, it must be done with fidelity. The provision of performance feedback increases the likelihood that implementation fidelity will occur. Performance feedback can be provided on its own or with the additions of goal-setting or self-monitoring. Performance feedback can be provided using a multi-tier support framework where the type or amount of performance feedback can vary depending on the need or skill level of the teacher. The literature supports the research question for the current study: Does a tiered approach to intervention increase the likelihood that teachers will implement BIPs with fidelity?

CHAPTER III

METHODOLOGY

Purpose of the Study and Research Question

The purpose of this study was to examine the effects of using a tiered approach to deliver performance feedback and training sessions on the fidelity of special education teachers' BIP implementation. Most school districts have policies and procedures in place for professionals (e.g., behavior specialists, psychologists) to conduct FBAs and write BIPs for students with disabilities. However, it is often difficult for classroom teachers to follow through with every component and strategy in student BIPs due to time constraints, number of students, or lack of training in the procedures. A social validity measure was used to assess teachers' perceptions of the effectiveness of the multi-tier approach to intervention. The research question for the current study was: Does a tiered approach to intervention increase the likelihood that teachers will implement BIPs with fidelity?

Participants and Setting

Participants for this study were recruited from various campuses in a suburban public school district in north Texas. There are 16 campuses across the district: two high schools, three middle schools, 10 elementary schools, and one alternative campus. The district consists of 11,570 students in Pre-Kindergarten through twelfth grade. District-wide, 9.6% of students are English Language Learners (ELLs), 10% are economically

disadvantaged, and 4.8% are in special education. Student ethnicity is as follows: 40.6% Caucasian, 38.1% Asian, 13.2 % Hispanic, and 4.4% African-American (U.S. Department of Education, 2015).

The study was approved by the Institutional Review Board (IRB) at Texas Woman's University. Approval was obtained from the school district prior to implementation of the study. Participants in the current study included four elementary and secondary teachers who serve students in a self-contained special education setting. (The study began with five participants, but one participant left the study during the baseline phase due to time constraints). For the purposes of this study, a self-contained special education setting is defined as a classroom where the majority of students receive special education services for at least 60% of the school day. All of the self-contained classrooms in the district have 12 or fewer students. There are 12 self-contained teachers in the district serving students with BIPs; all 12 teachers were sent an email asking if they would be willing to participate in the study (see Appendix A). Signed consent was received from all individuals.

Participant 1 was female and worked at an elementary campus. She had two years of teaching experience and had a Bachelor's degree and a Master's degree. Participant 1 had a mean of 70% of strategies implemented during baseline (range 60%-90%, median 70%). Participant 2 was female and worked at a secondary campus. She had nine years of teaching experience and had a bachelor's degree and a master's degree. Participant 2 had a mean of 76% of strategies implemented during baseline (range 70%-

80%, median 80%). Participant 3 was female and worked at a secondary campus. She had eight years of teaching experience and had a Bachelor's degree. Participant 3 had a mean of 86% of strategies implemented during baseline (range 70%-100%, median 80%). Participant 4 was female and worked at an elementary campus. She had 11 years of teaching experience and had a Bachelor's degree. Participant 4 had a mean of 70% of strategies implemented during baseline (range 60%-80%, median 70%). All participants in the study attended a monthly Applied Behavior Analysis (ABA) training during their first two years of employment in the school district. Their ABA training consisted of strategies and procedures for behavior reduction (i.e., antecedent interventions and consequence strategies), functional communication skills, and replacement behaviors. The ABA training was conducted by a Board Certified Behavior Analyst (BCBA) employed by the district. Following the initial training, self-contained teachers received ongoing classroom support from the BCBA. Classroom support included modeling intervention strategies, monitoring student behavior data, and providing follow-up on functional communication training.

Data Collection

A checklist was created for data collection purposes (see Appendix B). The checklist consisted of 10 common strategies found in BIPs such as manipulating antecedents, issuing contingent consequences, delivering reinforcers, and prompting for replacement behaviors. In order to create the checklist, the BIPs of all students in each classroom were examined by the researcher. Identifiable student information was

redacted prior to the review. The researcher made a table where the strategies in the checklist were compared to the strategies in individual student BIPs (see Appendix C). This table allowed the researcher to test the validity of the checklist and ensured that all relevant strategies were being addressed. The table shows that the researcher used the strategies most commonly found in the learner BIPs. Other strategies found in the BIPs were listed as well (see Appendix C).

Each participant was observed by the researcher during five 30 min sessions, which occurred approximately one time per week, to establish a baseline level of BIP strategy implementation. BIP strategies were marked as implemented (+) or not implemented (-). Strategies were either directly observed by the researcher or assessed via permanent product data (e.g., written reinforcer surveys or visual picture schedules). After each observation, each participant received a percentage score calculated by dividing the number of implemented strategies by the total number of strategies on the checklist. The average frequency was used to determine the amount of intervention delivered to participants. Any participant who used 100% of the strategies during baseline observation for three consecutive observations would have been deemed ineligible for the study due to a consistently high rate of implementation fidelity, indicating no need for intervention (see Appendix B). All observed participants were deemed eligible for the study after baseline data collection.

Research Design

A repeating single-case research design was used to determine if a multi-tier RTI framework can be used to increase the treatment fidelity of BIPs among teachers. Single-case research was used to study the behavior change of each participant after a treatment was applied. Each participant served as his or her own control and performance of the dependent variable was measured during the baseline and intervention phases. An ABCD design was used for each participant. Following the baseline phase (A), the first tier of support was introduced (i.e., the B phase) and then each subsequent tier of support (i.e., C and D) would be introduced if necessary (Cooper et al., 2007). In this study, only an AB design was needed for all participants. Data were visually analyzed to identify changes in level and trend within and between phases. Also, the percent of non-overlapping data (PND) was determined to see if a functional relationship exists between a tiered approach to performance feedback and an increase in BIP implementation fidelity. Finally, descriptive measures, including mean, median, and range, were calculated to give further information regarding the data.

Procedures

Following the baseline phase, each participant received Tier 1 interventions (see description below). All participants began Tier 1 intervention at the same time. During the Tier 1 intervention phase, each teacher was observed five times. Teachers who implemented at least 80% or more of the BIP strategies for five consecutive direct observations during the Tier 1 intervention phase no longer received any intervention

(i.e., they returned to baseline phase, and observations and probes continued). If teachers achieved 80% mastery across five sessions at any intervention phase, they moved back to the previous phase. If teachers implemented fewer than 80% of the strategies during any observation at the end of Tier 1, they began the Tier 2 intervention phase. The same decision rules (i.e., at least 80% for five consecutive observations) applied for Tier 2 and Tier 3 interventions.

The performance feedback would be delivered in a multi-tier RTI framework as follows:

- Tier 1: 10 min performance feedback sessions (based on observations and described below) are provided to teachers *one time per week* for three weeks.
- Tier 2: 10 min performance feedback sessions are provided to teachers *two times per week* for three weeks. A self-monitoring checklist is also provided to teachers to complete daily during Tier 2.
- Tier 3: 10 min performance feedback sessions are provided to teachers *daily* for two weeks. The researcher models BIP strategies for the teacher following each feedback session in Tier 3.

Independent and Dependent Variables

The independent variable in the study was performance feedback, which included review of data, discussion of strengths and weaknesses, recommendations for implementation, action steps, and a question and answer session (see Appendix D; Noell et al., 1997). During Tier 1 interventions, participants met with the researcher weekly to

discuss the observation and receive performance feedback. In this study, all participants implemented at least 80% of the strategies for five consecutive observations during Tier 1 and did not require Tier 2 or Tier 3 interventions. Although Tier 2 and Tier 3 supports were not needed, they are described below.

At Tier 2, a self-monitoring checklist would be provided (in addition to all of the Tier 1 supports) so that the teacher could monitor his or her own level of performance on each strategy (this checklist is the same as the observer's data collection tool; see Appendix B). For example, while working with a student, the teacher could note if he or she implemented a strategy. At Tier 3, strategies would be modeled for the teacher by the researcher in addition to the supports provided at the first two tiers. For example, the researcher would have modeled a prompting hierarchy for task completion or how to deliver reinforcers on a variable schedule.

The dependent variables in the study included the percentage scores from the checklist and a social validity measure (see Appendix E). The social validity measure was given to teachers after the intervention phases were completed. Questions on the survey were answered on a Likert scale and the answers were used to assess the social validity (i.e., consumer satisfaction; Wolf, 1978) of the intervention (see Appendix E for a list of questions).

CHAPTER IV

RESULTS

Overview of the Study

The purpose of the study was to examine the effects of using a tiered approach to deliver performance feedback and training sessions on the fidelity of special education teachers' BIP implementation. A social validity measure was also utilized at the end of the data collection period where teachers assessed the effectiveness of the multi-tier interventions. The research question for the study was: Does a tiered approach to intervention increase the likelihood that teachers will implement BIPs with fidelity?

Participants included four teachers, two elementary and two secondary, who serve students in a self-contained special education setting. A repeating single-case research design was used to determine if a multi-tier RTI framework can be used to increase the treatment fidelity of BIPs among teachers. Each participant served as his or her own control and performance of the dependent variable was measured during the baseline and intervention phases. Following the baseline phase (A), the first tier of support was introduced (i.e., the B phase) and no additional intervention was needed for any of the participants (Cooper et al., 2007). Data were visually analyzed to identify changes in level and trend within and between phases. Also, the percent of non-overlapping data (PND) was determined to see if a functional relationship existed between the introduction

of Tier 1 performance feedback and an increase in BIP implementation fidelity. Finally, descriptive measures were calculated to give further information regarding the data.

Descriptive measures of central tendency, including mean and median, and descriptive measures of variability, such as range, provide information about the data set in order to see how the numbers are related and how they differ. Measures of central tendency are defined as the statistical measures that identify a single value as representative of an entire sample (Cooper et al., 2007). Mean is the most commonly used measure of central tendency and it is the average of all data points in a phase. It is calculated by adding all the numbers in a given set and dividing by the number data collection opportunities. One advantage to using mean to represent the data is that it uses all the values in the data set (Cooper et al., 2007). Another measure of central tendency is median, which is the middle number in a set of data when the data points are arranged in ascending order. Therefore, approximately 50% of the numbers in the data set will be above this value and 50% will be below. One advantage to using median is that it is easy to calculate. However, a major disadvantage is that it does not necessarily use the exact values in the data set (Cooper et al., 2007). Measures of variability are used to describe the amount of variability, or spread, in a set of data. The measure of variability used in this study is range which is the difference between the greatest and least values in a data set. The range shows the spread of the data and how far the highest data point is from the lowest data point (Cooper et al., 2007).

Participant One

Participant 1 was observed five times over a five week period to establish a baseline rate of implementation fidelity. Participant 1 had a mean of 70% of strategies implemented during baseline (range 60%-90%, median 70%). Per the framework of the study, any mean score under 100% resulted in a participant receiving Tier 1 interventions over a three week period. Participant 1's mean score of 70% during baseline lead to the implementation of Tier 1 interventions. During Tier 1, Participant 1 was observed five times over a three week period to measure the effectiveness of the interventions. Participant 1 had a mean of 92% of strategies implemented during Tier 1 (range 90%-100%, median 90%). Following Tier 1, per the decision rules of the study (see Appendix F), Participant 1 entered the maintenance phase where observations continued to ensure performance maintenance. Participant 1 had a mean score of 100% during the maintenance phase.

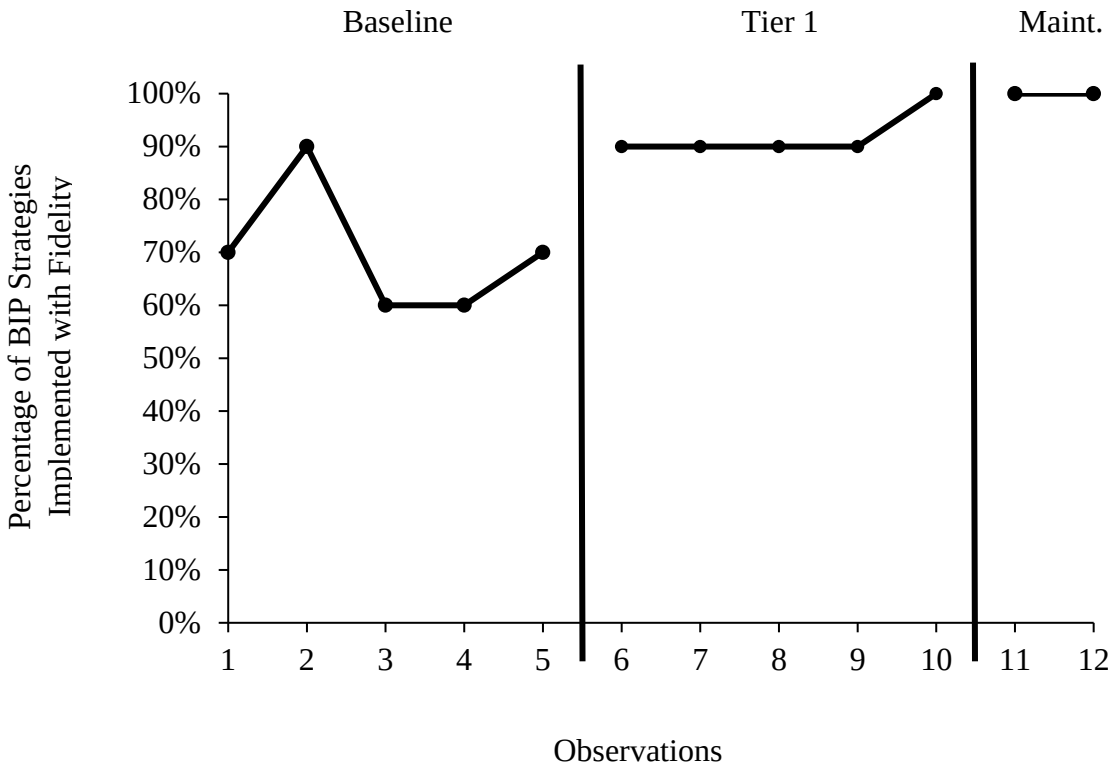

Figure 1. Participant 1

During the intervention phase, there was a clear separation in level between baseline and Tier 1. To determine the PND, a horizontal line was drawn at 90% (i.e., the highest point in the baseline data). The number of data points in the intervention phase above the line divided by the total number of data points in the intervention phase gives the PND. Therefore, for Participant 1, the PND is 20%.

Participant Two

Participant 2 was observed five times over a five week period to establish a baseline rate of implementation fidelity. Participant 2 had a mean of 76% of strategies implemented during baseline (range 70%-80%, median 80%). Per the framework of the

study, any mean score under 100% resulted in a participant receiving Tier 1 interventions over a three week period. Participant 2's mean score of 76% during baseline led to the implementation of Tier 1 interventions. During Tier 1, Participant 2 was observed five times over a three week period to measure the effectiveness of the interventions. Participant 2 had a mean of 96% of strategies implemented during Tier 1 (range 90%-100%, median 100%). Following Tier 1, per the decision rules of the study (see Appendix F), Participant 2 entered the maintenance phase where observations continued to ensure performance maintenance. Participant 2 had a mean score of 95% during the maintenance phase.

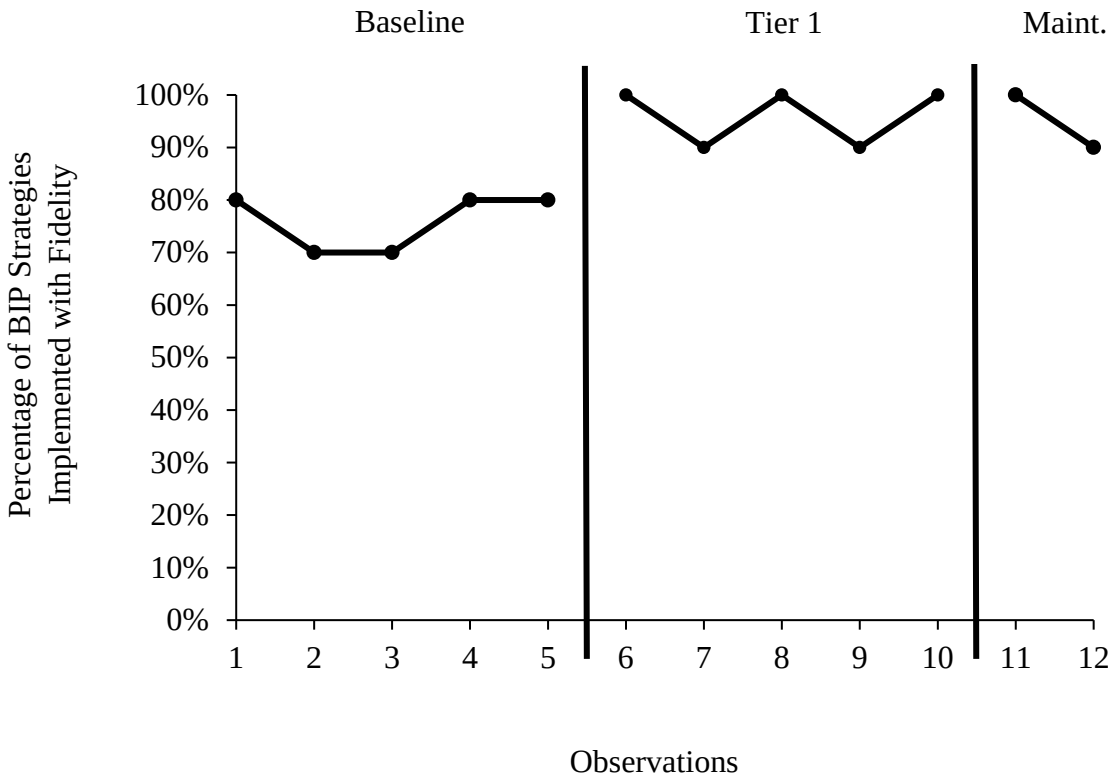

Figure 2. Participant 2

During the intervention phase, there was a clear separation in level between baseline and Tier 1. To determine the PND, a horizontal line was drawn at 80% (i.e., the highest point in the baseline data). The number of data points in the intervention phase above the line divided by the total number of data points in the intervention phase gives the PND. Therefore, for Participant 3, the PND is 100%.

Participant Three

Participant 3 was observed five times over a five week period to establish a baseline rate of implementation fidelity. Participant 3 had a mean of 86% of strategies implemented during baseline (range 70%-100%, median 80%). Per the framework of the study, any mean score under 100% resulted in a participant receiving Tier 1 interventions over a three week period. Participant 3's mean score of 86% during baseline lead to the implementation of Tier 1 interventions. During Tier 1, Participant 3 was observed five times over a three week period to measure the effectiveness of the interventions. Participant 3 had a mean score of 100% of strategies implemented during Tier 1 (range 100%-100%, median 100%). Following Tier 1, per the decision rules of the study (see Appendix F), Participant 3 entered the maintenance phase where observations continued to ensure performance maintenance. Participant 3 had a mean score of 100% during the maintenance phase.

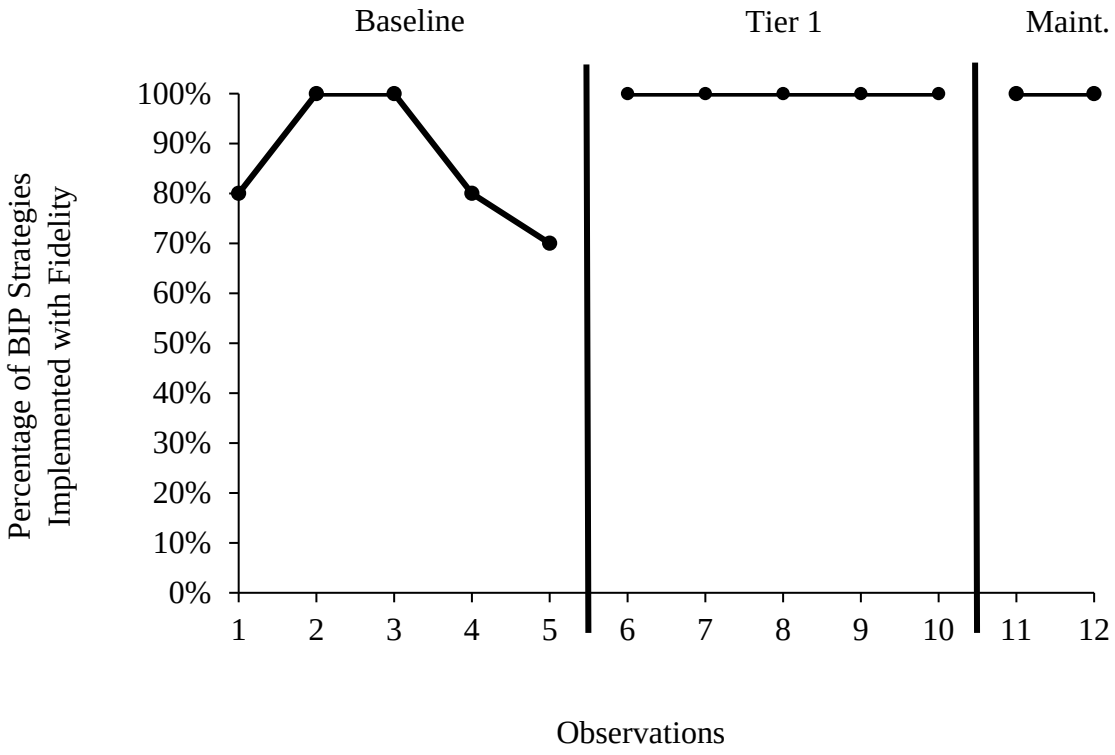

Figure 3. Participant 3

During the intervention phase, there was no visual trend. To determine the PND, a horizontal line was drawn at 100% (i.e., the highest point in the baseline data). The number of data points in the intervention phase above the line divided by the total number of data points in the intervention phase gives the PND. Therefore, for Participant 3, the PND is 0%.

Participant Four

Participant 4 was observed five times over a five week period to establish a baseline rate of implementation fidelity. Participant 4 had a mean of 70% of strategies implemented during baseline (range 60%-80%, median 70%). Per the framework of the study, any mean score under 100% resulted in a participant receiving Tier 1 interventions

over a three week period. During Tier 1, Participant 4 was observed five times over a three week period to measure the effectiveness of the interventions. Participant 4 had a mean of 92% of strategies implemented during Tier 1 (range 90%-100%, median 90%). Following Tier 1, per the decision rules of the study (see Appendix F), Participant 4 entered the maintenance phase where observations continued to ensure performance maintenance. Participant 4 had a mean score of 95% during the maintenance phase.

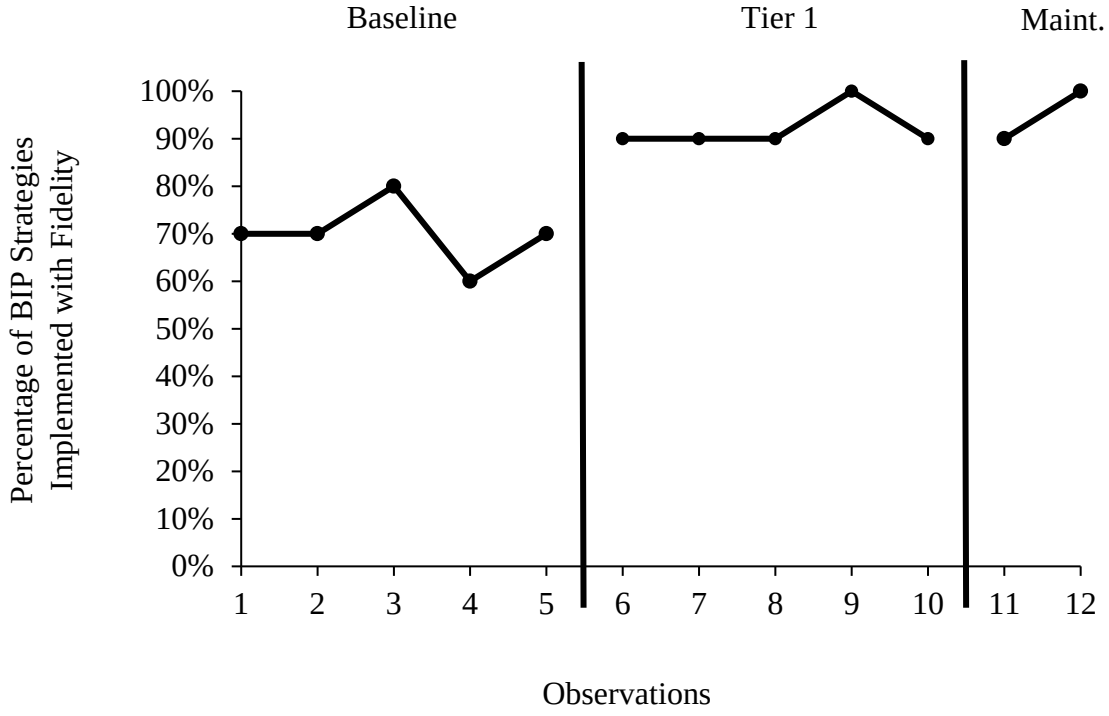

Figure 4. Participant 4

During the intervention phase, there was a clear separation in level between baseline and Tier 1. To determine the PND, a horizontal line was drawn at 80% (i.e., the highest point in the baseline data). The number of data points in the intervention phase

above the line divided by the total number of data points in the intervention phase gives the PND. Therefore, for Participant 4, the PND is 100%.

Social Validity Measure

At the conclusion of the study, a survey was given to all the participants. They were asked to rate five statements on a Likert scale (see Appendix E). Table 5 below shows the results of this survey.

Table 1

Social Validity Survey Data

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	N	N	N	N	N
Question 1: Following implementation of the multi-tier framework, I saw an increase in my students' positive behaviors.	4	0	0	0	0
Question 2: Following implementation of the multi-tier framework, I saw a decrease in my students' negative behaviors.	1	2	0	0	1
Question 3: Following implementation of the multi-tier framework, I am better able to understand the components of my students' BIPs.	3	1	0	0	0
Question 4: The multi-tier framework, as opposed to traditional performance feedback, was beneficial to my learning.	4	0	0	0	0
Question 5: Overall, students, teachers, and other staff members benefitted from these interventions.	4	0	0	0	0

All participants strongly agreed that following implementation of the multi-tier framework, they saw an increase in their students' positive behaviors. However, only one participant strongly agreed that following the implementation of the multi-tier framework a decrease in students' negative behaviors was seen. One participant strongly disagreed with this statement. Three participants strongly agreed they are now better able to understand components of students BIPs. Finally, all participants strongly agreed the multi-tier framework was beneficial to their learning and that overall, students, teachers, and other staff benefitted from these interventions.

CHAPTER V

DISCUSSION

The purpose of the current study was to examine the effects of using a tiered approach to deliver performance feedback and training sessions on the fidelity of special education teachers' BIP implementation. A social validity measure assessed the participants' satisfaction with the multi-tier interventions.

Four teachers, elementary and secondary, who serve students in a self-contained special education setting, participated. All participants attended a monthly ABA training during their first two years of employment in the school district. Following the initial training, self-contained teachers were provided with ongoing classroom support from the school district BCBA.

A repeating single-case research design was used to determine if a multi-tier RTI framework can be used to increase the treatment fidelity of BIPs among teachers. An AB design was used for each participant. Following the baseline phase (A), the first tier of support was introduced (i.e., the B phase) and no additional intervention was needed (Cooper et al., 2007). Data were visually analyzed to identify changes in level and trend within and between phases, and measures of central tendency were calculated.

Purpose of Study

Performance feedback is effective in increasing the likelihood that teachers will implement BIPs with fidelity when it is provided using a multi-tier framework. When performance feedback is delivered in this capacity, the teacher can receive support specific to his or her needs or level of skill. If a teacher is struggling with a concept, support will be provided until mastery is achieved. However, in practice, this may prove difficult, especially within the public school system. Increased support for teachers is synonymous with increased staff, funding, and time which are often not plentiful.

The purpose of the current study was to examine the effects of using a tiered approach to deliver performance feedback and training sessions on the fidelity of special education teachers' BIP implementation. In this study, Tier 1 interventions were effective for all participants. Also, all participants were able to maintain their level of performance during the maintenance phase.

During baseline, Participant 1 had a mean of 70% of strategies implemented and a mean of 92% during Tier 1 intervention. The graph for Participant 1 (see Figure 1) shows a clear separation in levels between baseline and Tier 1. Participant 1's data collection from the BIP checklist indicated that while Participant 1's overall average increased, there were certain strategies that were not implemented in baseline that continued to often not be implemented during Tier 1 (see below). In future practice, it may be necessary to change the focus of performance feedback meetings to a detailed review of deficit areas.

During baseline, Participant 2 had a mean score of 76% of strategies implemented and a mean score of 96% during Tier 1 intervention. The graph for Participant 2 (see Figure 2) shows a clear separation in levels between baseline and Tier 1. Participant 2's data from the BIP checklist indicated that while Participant 2's overall average increased, there were certain strategies that were not implemented in baseline that continued to sometimes not be implemented during Tier 1 similar to Participant 1 (see below). These data indicate that there may be a need for small group training at Tier 1 so participants are learning from the trainer and their colleagues.

During baseline, Participant 3 had a mean score of 86% of strategies implemented and a mean score of 100% implementation during Tier 1 intervention. The graph for Participant 3 (see Figure 3) shows once she was provided with Tier 1 interventions, she was able to maintain at 100% for the duration of the study. These findings imply that in future studies it may be necessary to have individual decision rules so that a participant can immediately return to maintenance when he or she is able.

During baseline, Participant 4 had a mean score of 70% of strategies implemented and a mean score of 92% during Tier 1 intervention. The graph for Participant 4 (see Figure 4) shows a clear separation in levels between baseline and Tier 1. Participant 4's data from the BIP checklist indicated that while Participant 4's overall average increased, there were certain strategies that were not implemented in baseline that continued to sometimes not be implemented during Tier 1 similar to Participants 1 and 2 (see below). Participant 4 also had areas that she implemented during baseline but did not implement

during Tier 1. There may be a need for a self-monitoring checklist for participants to utilize throughout the tiers.

Overall, during Tier 1, teachers implemented six of the strategies from the BIP Checklist 100% of the time (see Appendix B). Participants 1, 2, and 4 consistently did not implement four of the strategies from the BIP Checklist: (a) Is errorless teaching used?; (b) Are tasks interspersed at a ratio of 80% easy to 20% hard?; (c) Is teacher using the Premack Principle?; and (d) Are replacement behaviors being taught through direct instruction? All teachers had previously received training in all these areas; however, these data imply that there may be a need for a generalized training prior to the start of a multi-tier framework. The general training could also serve as the Tier 1 intervention and participants could receive small group or individual feedback in Tiers 2 and 3.

A social validity measure was also used in this study. All participants reported they saw an increase in positive behaviors from their learners following the study. Also, all participants reported that the multi-tier framework was beneficial to their learning. Finally, participants felt that all students, teachers, and other staff benefitted from the interventions.

Limitations

This study has several limitations. First, there was no replication of effect. The intervention was only implemented one time and there is uncertainty as to what variability may occur.

Second, there is a lack of generalizability due to the limited number of participants in a single district. It will be difficult to generalize the results across other school districts as there are different levels of training and support.

Third, there is a threat to validity because the researcher was the sole data collector, so information cannot be validated across various individuals. This increases the potential for human error and subjectivity. Human error could have occurred when data were being collected or when data were being converted into a digital from. Subjectivity could have occurred when the participants were being observed. Each question on the observation form required the researcher to notate "yes" or "no" and the criteria involved minimal measurable components.

Fourth, the researcher's previous relationship with the teachers as the behavior specialist for the school district could be a confounding variable. The researcher has been the individual responsible for training the teachers and providing ongoing consultation in the classroom. This relationship could be a limitation.

Fifth, the recruitment of volunteers could be a limitation in this study. All of the participants in this study volunteered their time. Individuals who volunteer for extra events or trainings often tend to be high-performing teachers, so the outcomes of the study could have been different if participants were recruited in a different way.

Finally, there is no measure of student outcomes. The social validity scale inquires about student behavior, but is measuring social validity only. The multi-tier

intervention may have been effective for the teachers, but the impact on the learners is unknown.

Implications for Future Research

This study indicates several areas where future research is needed. First, further research is needed in providing multitier levels of performance feedback to teachers. Limited studies have been conducted; however, performance feedback does appear to be effective in increasing treatment fidelity of BIP implementation.

Second, further research is needed in what levels of intervention are effective at each Tier. In this study, interventions were arbitrarily chosen based on research in traditional performance feedback. Interventions should vary by type, length, and intensity and researchers may see different results.

Finally, further research is need in measuring the effects of the multi-tier framework on learner behavior. The teacher observation forms could be individualized to each student's BIP and specific data could be taken in that capacity. Also, in this study, learner behavior was not measured. Only a social validity scale was completed by the participants at the end of the study. In the future, researchers should look specifically at the number of target behaviors a student displays before and after intervention.

Implications for Practitioners

This study has several implications for practitioners such as teachers and administrators in the field of special education. First, the study showed the use of a multi-tier framework of support may be a more beneficial system than traditional

performance feedback. When a multi-tier framework of support is used, teachers can receive performance feedback and coaching based on their individual strengths and weaknesses. In contrast, the traditional performance feedback model provides the same instruction and support to all teachers despite their needs.

Second, the use of a multi-tier framework of supports allows teachers to be more proactive in their implementation of classroom interventions and plans. In this model, teachers receive ongoing progress monitoring and performance feedback. Teachers are given praise and recommendations on a regular basis. In a more traditional performance feedback model, recommendations for changes that need to be made in the classroom may not be provided until a long time after initial implementation. This could significantly affect the fidelity of implementation and student achievement.

Finally, when a multi-tier framework of support is used, campus principals are better equipped to support special education teachers in the classroom. Many campus principals do not have a special education background, so they are often unaware of the requirements of the special education teacher to implement the many facets of an IEP. When a multi-tier framework of support is used, the campus principal receives frequent feedback from the coach on the teacher's classroom performance. This allows the campus principal the opportunity to assist the special education teacher in providing additional training, supplies, or support.

Conclusion

The results in this study determined that performance feedback is effective in increasing the likelihood that teachers will implement BIPs with fidelity when it is provided using a multi-tier framework. In this study, Tier 1 interventions were effective for all participants and all participants were able to maintain their level of performance during the maintenance phase. Also, all participants reported that the multi-tier framework was beneficial to their learning and participants felt that all students, teachers, and other staff benefitted from the interventions. Implementing BIPs with fidelity is vital for learners in special education as their progress depends on the provision of the components of their IEP.

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Appendix A

Participant Letter

Hello!

My name is Erin Stanton and I am currently the Behavior Specialist for the Coppell ISD Intervention Services department. I am also a student at Texas Woman's University in Denton where I am pursuing my PhD in special education. You are receiving this email because you are a special education teacher who implements behavior intervention plans in your classroom.

During the 2015-2016 school year, I will be completing my dissertation entitled "Using a Multi-Tier Framework to Increase Teachers' Fidelity of BIP Implementation." If you choose to participate in this study you will be observed at least five times during the baseline phase of the study. During each observation, I will record the number of student BIP components that are implemented or of which there is evidence. The number of observations following baseline is dependent upon the percentage score you receive. A multi-tier framework will be used to provide performance feedback and other supports. Performance feedback will include a review of data, discussion of strengths and weaknesses, recommendations for implementation, action steps, and a question and answer session. The total commitment is approximately 12 hours over a nine-week period. All observations and feedback sessions will occur during the school day.

If you wish to participate in the study, please sign and complete the attached form and return to me via interoffice mail by Friday, April 29, 2016.

Sincerely,

Erin Stanton

Appendix B

BIP Checklist

Strategy	Implemented	Not Implemented
Antecedent Strategies:		
1. Is errorless teaching used? • Errorless teaching is where the student is prompted to make the correct response immediately.		
2. Are materials mixed and varied? • Mixed and varied materials looks like different instructional materials interspersed so that students receive a variety of tasks.		
3. Are tasks interspersed at a ratio of 80% easy to 20% hard? • The majority of tasks students complete should be easy, maintenance tasks to keep motivation high.		
4. Is teacher using the Premack Principle? • The Premack Principle can be defined as "If ___, Then ___" statements.		
5. Is a structured daily schedule in place? • A structured daily schedule looks like a consistent student schedule with free time structured as well.		
6. Are prompting procedures utilized? • Prompting procedures are used to promote independent responding and should be minimally intrusive.		
Consequence Strategies:		
7. Has a reinforcer survey been completed? • A reinforcer survey is a set of questions used to identify reinforcing items for a student.		
8. Is a variable schedule of reinforcement being used? • A variable ratio schedules is where reinforcers are delivered after a varying number of responses.		
9. Are function-based consequence strategies used when behavior occurs? • Function-based consequence strategies are used when the problem behavior occurs and are based on the function of the problem behavior.		
Replacement Behaviors:		
10. Are replacement behaviors being taught through direct instruction? • Replacement behaviors look like appropriate behaviors that are used to replace problem behaviors.		

Appendix C

BIP Table

BIP Checklist Validity Check		
Strategy	**Number of BIPs with Strategy**	**Number of BIPs without Strategy**
Strategies on BIP Checklist:		
1. Is errorless teaching used?	29	2
2. Are materials mixed and varied?	29	2
3. Are tasks interspersed at a ratio of 80% easy to 20% hard?	28	3
4. Is teacher using the Premack Principle?	30	1
5. Is a structured daily schedule in place?	31	0
6. Are prompting procedures utilized?	31	0
7. Has a reinforcer survey been completed?	31	0
8. Is a variable schedule of reinforcement being used?	30	1
9. Are function-based consequence strategies used when behavior occurs?	31	0
10. Are replacement behaviors being taught through direct instruction?	31	0
Other Strategies in Student BIPs:		
Visual schedule	24	7
Utilize social stories/video modeling	2	29
Provide a promiser prior to transitions	9	22
Implement a token economy	2	29
Close proximity to staff	2	29

Appendix D

Checklist for Performance Feedback meetings

Performance Feedback	Initial When Completed
1. Review teacher baseline data.	
2. Discuss strengths and weaknesses based on the baseline data.	
3. Recommendations for implementation will be given by the researcher.	
4. Researcher responds to any teacher questions or concerns.	
5. Actions steps to be completed before next session will be discussed.	

Appendix E

Social Validity Measure

Question	Score
1. Following implementation of the multi-tier framework, I saw an increase in my students' positive behaviors.	5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree
2. Following implementation of the multi-tier framework, I saw a decrease in my students' negative behaviors.	5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree
3. Following implementation of the multi-tier framework, I am better able to understand the components of my students' BIPs.	5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree
4. The multi-tier framework, as opposed to traditional performance feedback, was beneficial to my learning.	5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree
5. Overall, students, teachers, and other staff members benefitted from these interventions.	5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree

Appendix F

Decision Rules

Decision Rules

Following the baseline phase, each participant received Tier 1 interventions (see description below). All participants began Tier 1 intervention at the same time. During the Tier 1 intervention phase, each teacher was observed five times. Teachers who implemented at least 80% or more of the BIP strategies for five consecutive direct observations during the Tier 1 intervention phase no longer received any intervention (i.e., they returned to baseline phase, and observations and probes continued). If teachers achieved 80% mastery across five sessions at any intervention phase, they moved back to the previous phase. If teachers implemented fewer than 80% of the strategies during any observation at the end of Tier 1, they began the Tier 2 intervention phase. The same decision rules (i.e., at least 80% for five consecutive observations) applied for Tier 2 and Tier 3 interventions.

The performance feedback would be delivered in a multi-tier RTI framework as follows:

- Tier 1: 10 min performance feedback sessions (based on observations) are provided to teachers *one time per week* for three weeks.
- Tier 2: 10 min performance feedback sessions are provided to teachers *two times per week* for three weeks. A self-monitoring checklist is also provided to teachers complete daily during Tier 2.

- Tier 3: 10 min performance feedback sessions are provided to teachers *daily* for two weeks. The researcher models BIP strategies for the teacher following each feedback session in Tier 3.