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Direct Training of Teachers in the Use of Praise: Implementation and Generalization

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DIRECT TRAINING OF TEACHERS IN THE USE OF PRAISE:

IMPLEMENTATION AND GENERALIZATION

by

Linda-Mai Thanh Nguyen

Abstract of a Dissertation
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ABSTRACT

DIRECT TRAINING OF TEACHERS IN THE USE OF PRAISE:

IMPLEMENTATION AND GENERALIZATION

by Linda-Mai Thanh Nguyen

August 2015

Praise has been shown to be an effective intervention for decreasing problem

behaviors in the classroom when there is a hypothesized attention function.

Unfortunately, studies have shown that teachers generally provide low rates of praise

even after didactic instruction. Praise training consisting of didactic and direct training

have been used to increase praise rates, but few studies have examined the individual

components within praise training to determine if didactic training is necessary.

Additionally, while some studies have examined the maintenance of praise rate following

praise training, few studies have focused on the generalization of praise towards other

students. This study replicated and extended upon Dufrene, Parker, Menousek, Zhou,

Harpole, and Olmi (2012) and Dufrene, Harpole, and Zoder-Martell (2014), by testing the

efficacy of a direct teacher training procedure to increase praise while evaluating

maintenance and generalization of praise. Four elementary school students and their

teachers participated in the study due to referrals for problem behavior within the

classroom with a hypothesized attention function. All teachers were trained to increase

BSP through the use of a bug-in-the-ear radio. Praise directed towards the target student

as well as other students in the classroom were recorded along with occurrence of

problem behavior by the target student. Teachers who did not demonstrate maintenance

and/or generalization were provided additional training. Results of this study showed that

direct training resulted in increase in praise towards all target students but maintenance was not stable following withdrawal for all teachers. Of the four teachers, only one generalized praise towards other students. Additional training was required for three of the four teachers to generalize praise, which maintained during follow-up.

The University of Southern Mississippi

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IMPLEMENTATION AND GENERALIZATION

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Linda-Mai Thanh Nguyen

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
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DEDICATION

I would like to thank my fellow cohort and friends made during this program. I would especially like to thank Dr. Chelsi Clark and Brandon Taylor, for their encouragement throughout this program. You provided the necessary push to continue on when things were difficult, and you were there to help me every time I stumbled.

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CHAPTER I

INTRODUCTION

Students' disruptive behaviors can interfere with teacher instruction and student performance for themselves and others. Snider, Seligman, Ketchen, Levitt, Bates, and Garvey (2002) reported that the prevalence of problem behaviors such as interrupting others, playing with objects, and not staying in their seats, were reported to occur with approximately 25% of elementary students. With a quarter of students displaying problem behaviors in the classroom, there have been many studies examining various interventions to decrease disruptive classroom behaviors.

Of the variety of interventions used, praise is a simple and powerful technique used to decrease problem behaviors and increase appropriate behaviors. Praise can be an intervention component (Duncan , 2012; Sterling-Turner & Watson, 1999; Vannest, Davis, Davis, Mason, & Burke, 2010) or a standalone intervention (Coffee & Kratochwill, 2013; Reinke, Lewis-Palmer, & Martin, 2007; Riley-Tillman & Eckert, 2001). Praise is a simple intervention which requires little to no additional materials, other than what a teacher has readily available- a method of communication. Despite the simplicity of praise as an effective intervention (Coffee & Kratochwill, 2013; Hawkins & Heflin, 2011; Keller, Brady, & Taylor, 2005; Workman, Watson, & Helton, 1982), many teachers overlook praise as an intervention and naturally provide low rates of praise (White, 1975). White (1975) examined teacher praise rates and found that teachers praised at an average rate of 0.34 per minute (range = 0.05 to 1.21) across 104 teachers spanning grades one through eight. Therefore, it may be that additional supports are necessary for increasing the extent to which teachers use praise in their classrooms.

Praise is an easy intervention or intervention component which comes in many forms (e.g., nonverbal, verbal, physical, behavior-specific, behavior nonspecific, contingent, noncontingent, immediate, and delayed). Praise can be provided in different forms such as nonverbal (e.g., smiles and thumbs-up), physical (e.g., high-fives and pats on the back), and/or verbal (e.g., "good job", and "fantastic"). Additionally, praise delivery can be manipulated by deciding if praise will occur after a specific behavior (contingent or noncontingent), if the praise statement will include a description of the behavior (behavior-specific or behavior nonspecific), if it will be on a certain schedule (interval, ratio, fixed or variable), and how soon after a behavior occurs will praise be provided (immediate or delayed). The variety of praise topographies have been researched extensively and most studies found that contingent (Ford, Olmi, Edwards, & Tingstrom, 2001; Thompson, 1997), behavior-specific (Bartholowmew, 1993; McAllister, Stachowiak, Baer, & Conderman, 1969) and immediate (Cherne, 2008; McAllister et al., 1969; Sutherland, Webby, & Copeland, 2000) praise result in larger changes in behavior.

Cherne (2008) conducted a meta-analysis of teacher praise across 26 single-subject experimental design studies. Using percentages of non-overlapping data points (PND) to evaluate effectiveness of interventions, the results of the analysis showed that praise was most effective when it was behavior specific rather than ability-based or effort-based. Praise was effective in increasing appropriate academic behavior, decreasing problem behaviors and was moderately effective as a stand-alone intervention or as a component in an intervention. Unfortunately, although praise is an effective and simple intervention, praise may not be delivered consistently by teachers. Therefore, an

important role of the school psychologist is to consult and improve teachers'
implementation of praise.

      Despite the benefits and ease of providing praise, there is no consensus on the
most effective method of training teachers. Additionally, research on praise training
methods which generalize without explicit training to a larger number of students have
not been explored. This study will review previous literature on praise as it has been used
within consultation, school-based consultation, and teacher praise and generalization.

CHAPTER II

REVIEW OF RELATED LITERATURE

Consultation

The role of a school psychologist is varied depending upon the situation and the circumstance. Common roles for school psychologists working in the school system include providing indirect and direct services in the form of assessment, consultation and intervention (Fagan & Wise, 2007).

School-based consultation includes assessing a student, or the class's performance, and providing recommendations and supports to the teacher for improving the performance of the student or a class of students. As a result, consultation is an indirect form of service delivery in which a school psychologist provides another professional with the skills and supports to effectively solve a problem. Behavioral consultation (Bergan & Kratochwill, 1990) is a commonly used consultation model in schools and includes four stages: problem identification, problem analysis, treatment implementation and treatment evaluation. The first stage is problem identification which is to operationally define the problem and select the appropriate data collection measurements. The second stage is problem analysis which includes evaluating occurrence of the problem as well as the contextual variables that evoke or maintain the problem. Problem analysis data provide the impetus for specific intervention recommendations. Treatment implementation, the third stage, is for the consultant to provide training, monitoring and assistance to the consultee to maximize treatment integrity. Last is treatment evaluation, where the goal is for the consultant to examine if

the goals of the intervention have been met and measure the extent to which the intervention was implemented as planned.

Direct behavior consultation (Sterling-Turner, Watson, & Moore, 2002; Watson & Sterling-Turner, 2008) is an extension of behavioral consultation and also includes the four stages. One criticism of behavioral consultation is that the process includes an overreliance on verbal interactions with teachers as opposed to a greater emphasis on assessment and teacher training in the classroom during ongoing classroom activities (Noell & Witt, 1996; Witt, Gresham, & Noell, 1996). In response to this criticism, direct behavioral consultation (DBC) offers an extension of behavioral consultation that places a greater premium on assessing behavior and training teachers to implement interventions through the use of direct interactions (Dufrene, Harpole, & Zoder-Martell, 2014) during on-going classroom activities. Although the DBC literature is limited with regard to the number of studies that have empirically tested DBC procedures, there is emerging support for demonstrating that DBC training procedures may result in higher treatment integrity compared to indirect training procedures, and that when interventions are implemented with greater integrity, students display improved behavioral performance (Dufrene et al., 2012; Sterling-Turner et al., 2002).

School-based consultation has been used to improve teachers' implementation of a variety of interventions across a range of students (pre-school, elementary, junior high school, general education and special education; Alpert & Yammer, 1983). Additionally, school-based behavioral consultation has been shown to improve academic and behavioral concerns (Sheridan, Welch & Orme, 1996). As a result, school-based

consultation is useful for improving teacher implementation of interventions and students benefit from the consultation process.

<div align="center">School-Based Consultation and Teacher Praise</div>

A variety of different consultation procedures have been used to improve teachers' praise. The consultation literature includes mutliple demonstrations of training and performance feedback procedures that have been demonstrated to be effective for improving teachers' praise delivery (Coffee & Kratochwill, 2013; Hawkins & Heflin, 2011; Keller et al., 2005; Martens, Hiralall, & Bradley, 1997; Reinke et al., 2007; Thompson, Marchant, Anderson, Prater, & Gibb, 2012; Sloat, Tharp, & Gallimore, 1977; Van Houten & Sullivan, 1975; Workman et al., 1982; Wright, Ellis, & Baxter, 2012).

Consultation and training for teacher praise

In general, when consulting with teachers, consultation will consist of indirect and/or direct training methods. Across consultation studies, direct training methods have been more effective than indirect in changing teacher behavior (Dufrene et al., 2014; Dufrene et al., 2012; Sterling-Turner et al., 2002; Thompson et al., 2012; Workman et al., 1982; Wright et al., 2012). Unfortunately, relatively fewer teacher training studies included training teachers to increase praise.

Keller et al. (2005) conducted a study that focused on teacher consultation and praise. They demonstrated the effectiveness of using praise as an intervention with three student teacher interns teaching in special education self contained classrooms. They examined the effects of a self evaluation intervention which consisted of a script with nine steps focused on the teacher's perfomance, information about praise and specific praise, how to monitor their praise and how to increase their own praise. All teachers

displayed increases in specific praise and the frequency of praise during the maintenance phase, suggesting maintenance did occur for all three teachers though two of the three teachers displayed a decreasing trend during maintenance. The researchers also examined generalization across classes (settings) and found increasing trends during both intervention and maintenance phases for one teacher, decreasing trends during both phases for another, and an increasing trend for the last teacher but only during the maintenance phase as there was only one datum reported for generalization during the intervention phase. Therefore, the results suggest limited maintenance and generalization following consultation.

Consultation and in-situ training for teacher praise

Some studies have evaluated various training procedures for increasing the extent to which teachers use praise in the classroom. However, a subset of studies have evaluated a specific training procedure that involves real-time prompts provided in the classroom during on-going instructional activities. *In-situ* training involves training that occurs in the natural environment and though it has been posited to improve treatment integrity (Martell, 2012), reactivity and intrusiveness are some concerns with this training method. To decrease or avoid these issues, studies have utilized technology to provide immediate prompting during training and specifically, some researchers have found a bug in the ear (BITE) to be a less intrusive method for delivering immediate prompts (Bowles & Nelson, 1976; Dufrene et al., 2014; Dufrene et al., 2012; Martell, 2012; Sloat et al., 1977).

Bowles and Nelson (1976) demonstrated the importance of in-situ/direct training in their study of behavior modification knowledge and implementation by teachers. The

researchers were interested in the extent to which teachers would generalize knowledge of behavioral modification principles to the classroom when teachers were first trained via an inservice workshop (six, two hour sessions) and then an in-class training (two, one hour sessions) using the BITE to provide prompts. Specifically, the researchers were interested in changes in teachers' test scores on behavior management principles and behaviors (e.g., frequency of prompts, contingency statements, and praise statements) in the classroom, before and after training. The researchers randomly assigned the teachers into three groups: experimental group A, experimental group B, and control. Teachers in the experimental groups A and B were taught behavior management principles such as how to identify behaviors, collect data and identifying appropriate consequences during the course of the six session workshop. Additionally, teachers in experimental group A also received in-class BITE training after the workshop which included two, one hour sessions in which the researchers provided prompts to the teacher at an undisclosed schedule. The BITE prompts to the teacher were used to increase teacher prompts, praise and contingency statements to students. Teachers in the control group received no inservice workshop nor BITE training. All three groups were given tests on behavior management principles before and after each training phase (pre and post tests). Additionally, all teachers were observed in their classrooms (one hour observations) before and after each training phase. The results of the study were that teachers exposed to the inservice workshop had better scores on the post-tests compared to the control group, but the training did not generalize to the classroom and improvement of teacher behavior was not observed. Teachers who were exposed to both the inservice workshop and the BITE training resulted in improved scores on the tests and increases in teacher

praise and contingency statements in the classroom. Therefore, the results of this study demonstrate the superiority of direct, *in situ* training to didactic training for improving teachers' use of behavior modification procedures in the classroom.

Dufrene et al. (2012) examined the direct training component of DBC on teacher praise and effective instruction delivery (EID; Ford et al., 2001) and student disruptive behavior in four Head Start classrooms. Four teachers received didactic training (scripts, practice, feedback, and handouts) and direct training (immediate prompting from one-way radio), and results showed that praise increased more after direct training compared to didactic training and students' disruptive behavior decreased when praise was delivered at a greater rate. However, Dufrene et al. did not evaluate the extent to which teachers generalized praise use to other times and settings.

Similarly, Dufrene et al. (2014), replicated and extended the Dufrene et al. (2012) study by examining DBC's direct training procedure with elementary alternative classroom teachers. Two teachers were trained to increase praise through indirect/didactic training (one session consisting of practice, feedback, and handouts) and then a direct training procedure (immediate prompting from a BITE radio during on-going classroom activities every minute in which no praise occured). Both teachers showed increases in praise during direct training but after the BITE radio was withdrawn, one teacher maintained increased praise rate while the other teacher failed to maintain increased praise rate. To improve praise rates, the teacher with low praise rates during maintenance was provided with additional direct training and performance feedback (graph of previous day's data) was added. The results showed that praise rates maintained during follow-up observations conducted one and two months after training was completed.

A limitation in all three studies (Bowles & Nelson, 1976; Dufrene et al., 2014; Dufrene et al., 2012) is that all three studies sequentially exposed teachers first to didactic training then direct training procedures after finding that didactic training did not result in significant changes in praise rates. The studies showed that direct training resulted in larger behavior changes but order effects provide a potential threat to internal validity of the findings.

Zoder-Martell, Dufrene, Tingstrom, Olmi, Jordan, Biskie, and Sherman (2014) addressed this issue by evaluating direct training with direct care staff working in an intermediate care facility. Zoder-Martell et al. (2014) used a direct training procedure consisting of prompts delivered from a one-way radio, to increase rates of positive interactions (any verbal statement expressing approval or asking for information about wishes or desires) towards residents from four staff members during mealtime. Martell (2012) used a multiple baseline design across participants with four phases: baseline, direct training (positive interaction prompt provided once every two minutes via BITE radio), maintenance and follow-up (two weeks after conclusion of maintenance phase). The results were that direct training via prompts from BITE radio increased positive verbal interactions from direct care staff, and results maintained above criterion (rate of positive verbal interactions higher than baseline rates) through follow-up for three of the four staff members. For the staff member that did not maintain increased positive interactions, a single performance feedback session resulted in an increase in the rate of positive interactions that matched the level observed during training, and those increases maintained at follow-up. The results show that an initial didactic training component may be unnecessary for changing behaviors and future researchers examining training

methods may want to move straight into direct training in order to observe faster changes in behavior.

Consultation and performance feedback for teacher praise

Martens, Hiralall, and Bradley (1997) examined goal setting and feedback notes on teacher praise. A special education teacher was trained to increase praise for two students referred for disruptive behaviors (excessive fidgeting, tantrums, speaking out of turn, and off-task behavior). The teacher was trained to increase praise for alternative appropriate behaviors (e.g., listening to others, counting aloud, waiting for turn to speak, answering in complete sentences) to a goal of six times in a 30 minute session (decided upon by teacher) and was provided with a feedback note at the beginning of the next session. The feedback note contained information such as: if praise goal was met for student A, if praise goal was met for student B, and the lists of specific behaviors (up to four) to praise for each student. The results showed that goal setting with feedback increased teacher praise and appropriate student behavior. Unfortunately, the researchers did not collect follow-up nor maintenance data. So, it is unknown if praise maintained following the removal of goal setting and feedback.

Reinke et al. (2007) examined visual performance feedback (in the form of a graph) on behavior-specific teacher praise. Three elementary school teachers and six students participated in the study where teachers received group consultation and visual performance feedback to increase behavior specific praise (BSP). Group consultations consisted of three, half hour meetings, where teachers were provided information on what BSP was, how it differed from general praise, and its impact on students' disruptive behavior. The visual performance feedback component consisted of a graph which

displayed the amount of BSP provided to students for all previous days in the study (no verbal feedback included). Results of the study suggested that both group consultation and visual performance feedback increased BSP across all teachers. Additionally, the researchers recorded praise provided to other students in the classroom and all teachers displayed increases in praise towards non-target students when visual feedback was provided. Of interest, all teachers displayed increases in general praise to a higher degree than with BSP which were more variable. Unfortunately, data on BSP during follow-up sessions (two weeks, one month) suggest that praise rates were not mantained after withdrawal of consultation procedures. As a result, additional research is needed regarding consultation procedures that result in maintained praise use.

Hawkins and Heflin (2011) investigated video self-modeling and visual performance feedback on behavior-specific praise and specifically, maintenance when consultation procedures were withdrawn, with three high school teachers who worked with students with emotional/behavioral disorders. The video self-modeling consisted of video clips of the teacher providing BSP to students with the researcher providing BSP towards the teacher about the clips. Visual performance feedback consisted of a graph of BSP provided by the teacher in previous sessions. Praise (specific and non-specific) increased across all three teachers during consultation phases, but only one teacher displayed modest maintenance, and the authors noted that the teacher who did display maintenance displayed more interest in the video self-modeling than the other two teachers who did not favor the consultation procedures and mentioned that they did not want to watch themselves. As a result, maintenance of the consultation procedures was

limited, and teacher bias may have been involved with the one teacher who displayed maintenance of behavior change.

Consultation and combined procedures for teacher praise

As previously mentioned, there are a variety of training method components used during consultation with teachers to increase praise (e.g., prompting, role-playing, performance feedback) and oftentimes they are used in various combinations, making it difficult to determine which components are necessary. Few studies have attempted to explicitly study the different components often used to increase teacher praise.

Sloat et al. (1977) examined different training components to identify at which point further training did not result in significant improvement in teacher praise. The researchers examined: didactic instruction, modeling and role playing, videotape feedback, direct coaching, graph feedback and graph feedback with goals. Didactic instruction consisted of one hour sessions where teachers read and discussed readings on reinforcement and completed an assignment (e.g., observed and described a student's behavior in class). Modeling and role playing consisted of video clips of teachers displaying appropriate behaviors shown to the teachers who then scored and discussed them and then role played the skills. Videotape feedback consisted of teachers watching themselves teaching on a video clip, scoring for positive and negative statements, graphing the data and then discussing the clips among the other teachers. Direct coaching consisted of a consultant who provided praise and prompts to the teacher through a one-way radio. Graphed feedback consisted of four daily graphs with frequency of verbal academic praise statements, verbal management praise statements, other verbal statements (e.g., negative verbal statements), and the ratio between positive verbal

statements and other statements. Finally, graphed feedback with goals was similar to graphed feedback with the addition of a line on the graphs to represent the praise frequency goal provided by the consultant based on previous data (highest weekly mean throughout the study).

The results showed that increases in praise were not significant until modeling and role playing were added and increased further when videotape feedback was introduced. Direct coaching and graph feedback did not result in significant increases compared to videotape feedback but graphed feedback with goals showed increases in praise compared to all other intervention components. The authors noted that there were equipment errors with the BITE radio during the direct coaching phase (i.e., the device malfunctioned and teachers did not receive all prompts) which resulted in inconsistent coaching of the teachers. Additionally, the authors neglected to mention how often teachers were prompted with the BITE radio. As a result of the inconsistent coaching and limited information about the frequency of prompts, there is little information about how much coaching is necessary for improvements in teacher behavior.

Oftentimes, increasing teacher praise is one step in a teacher training package used to target multiple student behaviors across multiple settings. These teacher training packages are often used when implementing large changes on a systems level such as the system-wide Positive Behavior Interventions and Supports (PBIS; Sugai & Horner, 2002). PBIS is a school system framework which promotes the use of evidence-based practices to improve academic and behavioral outcomes for all students and includes tiered interventions to support students' social-behavioral needs. Thompson et al. (2012) examined a tiered approached to consultation for supporting teachers' implementation of

PBIS by using a conceptually systematic approach to supporting teachers' intervention implementation. The researchers examined different training methods and the resulting rates of behavior-specific praise from the teachers involved in the study. Due to the framework of the RtI model, there were three different levels of consultation. Tiered consultation procedures included: school-wide-in-service training (presentation to staff), video self-monitoring, and peer coaching (feedback, consultation, etc.) for staff members that did not respond favorably to the universal in-service training. Three teachers participated in the study and were referred for participation based on failure to implement PBIS procedures despite receiving school-wide in-service training. Subsequent to the school-wide in-service training, teachers who failed to implement PBIS procedures received video self-monitoring and peer coaching. The additional supports resulted in increases in BSP. These results suggest that all teachers may not respond favorably to indirect staff-wide training, but that additional supports such as video-self modeling and peer coaching may improve praise delivery for teachers in need of additional supports. Moreover, this study included a conceptual model (i.e., RtI) that is conceptually systematic with broader efforts in place in schools (i.e., RtI, PBIS).

<div align="center">Teacher Praise and Generalization</div>

The consultation literature is incredibly limited with regard to the extent to which researchers have evaluated the effect of various consultation procedures on consultees generalized intervention use (Scheeler, 2008). This is alarming given that one of the goals of school-based consultation is to provide teachers with the knowledge and skills to address future problems from different students in different contexts (Bergan & Kratochwill, 1990; Tillman, 2000). Although the consultation literature is lacking in

empirical tests of the generalized impact of various consultation procedures, there are a limited number of studies that have evaluated the impact of various consultation procedures on teachers generalized use of praise.

Generalization is the occurrence of a behavior which occurs in non-training conditions (Stokes & Baer, 1977). There are multiple forms of generalization, including generalization across subjects, settings, people, behaviors, and/or time. Stokes and Baer (1977) stated that generalization may not naturally occur in the absence of explicit programming. Additionally, Stokes and Osnes (1989) outlined a variety of generalization training procedures and organized the procedures in the following categories: (a) exploit current functional contingencies, (b) train diversely, and (c) incorporate functional mediators.

In perhaps the first attempt to systematically assess and program for teachers' generalized praise use, Riley-Tillman and Eckert (2001) examined the extent teachers would generalize skills learned through consultation for a target student to non-target students in the same class. Three general education teachers from an elementary school each referred a student for difficulty in staying on task in the classroom. Due to the researchers' interest in the teachers' learned skills, the researchers collected data on teacher treatment integrity (praise) towards target and non-target students. Treatment integrity was reported as a percentage score which was calculated by dividing the frequency of praise statements by the target number of praise statements. The researchers used a multiple baseline across participants design to test various consultation procedures. Phases in the study included: baseline, consultation, generalization prompt and generalization training.

The consultation phase consisted of interviews with the teachers, intervention training and three consultation sessions with the teachers. The consultant and teacher discussed the selected problem behavior (e.g., defining the behavior, antecedents, consequences), the selected intervention (praise) and the goal (four to five praise statements contingent upon appropriate behavior during each 20 minute session) during the consultation sessions. Additionally, during the consultation phase, teachers were trained to implement the intervention through role-play with additional training (feedback) provided for low treatment integrity (below 75%; when praise goal was not met). During the consultation phase, all teachers eventually met the goal for praise towards the target students (four to five praise statements per session) but praise statements towards non-target students only increased marginally for all three teachers.

Following the consultation phase, teachers were then provided with a generalization prompt (generalization prompt phase). The generalization prompt was a simple statement to each teacher that was provided only once; and, the statement suggested to teachers that other students in the class might benefit from increased praise. Only one of the three teachers displayed an increase in praise towards non-target students following the generalization prompt.

Given the minimal response of teachers to the generalization prompt, Riley-Tillman & Eckert (2001) instituted the generalization training phase for all three teachers. The generalization training phase consisted of an interview and a script which had the consultant reviewing the intervention (e.g., goals), the teacher naming other students who display similar problem behaviors, discussing possible advantages (e.g., decrease in problem behavior) and disadvantages (not described in the article) of using the

intervention with the other students, and providing the teacher with a handout on the intervention procedure. The results of the generalization training were that two of the three teachers showed modest increases in praise behaviors towards non-target students, but due to overlap in data points across the generalization training phase and non-generalization training phases, confidence in the impact of generalization training is diminished.

The main limitation of the study concerns the phase changes. The phase changes occurred before a stable pattern in the data was observed for some participants which presents major threats to internal validity (i.e., extent to which any observed generalization could be attributed to generalization programming). Specifically, teacher 2, who showed mixed results and little generalization, did not meet the praise goal consecutively during the consultation phase (average treatment integrity of 73%) before the phase change to generalization prompt phase was implemented. As a result, it is unclear if larger changes during generalization would have occurred had all the teachers been trained to meet the goal for consecutive sessions.

Coffee and Kratochwill (2013) continued with the research on generalization training during consultation by replicating and extending Riley-Tillman and Eckert (2001). The purpose of the study was to examine the implementation and generalization of praise intervention by teachers during consultation. Four teachers were trained during the course of the study, with each teacher recommending three or four students in their classroom. Of the students, one student from each class was designated the target student, another student was designated as the generalization student and the other remaining students were designated as the nontarget students. Teachers 1, 2, and 4 all had four

students of interest in their classrooms while teacher 3 only had three students of interest. Similar to Riley-Tillman and Eckert's (2001) study, the researchers provided the teachers with a praise intervention, where praise (termed approval in the study) was provided to the students contingent on on-task behavior of the student during academic time. A multiple baseline design across teacher-participants was used with the phases consisting of: baseline, intervention, generalization prompt, and generalization training. The conditions were modeled off of Riley-Tillman and Eckert's (2001) study with intervention (consultation as noted by Riley-Tillman and Eckert) consisting of praise training of the teachers with booster sessions provided for teachers who did not implement the intervention adequately. The researchers noted that all of the teachers did not perform the intervention with appropriate integrity and therefore all were provided with a booster session, in which the intervention protocol was reviewed.

During the generalization prompt phase, teachers were provided with a prompt suggesting that the generalization student displayed similar behaviors as the target student and that the teacher may consider using the intervention on the generalization student or any other students in the class. Data were collected and then the researchers moved to the next phase, generalization training. They used the same programming as Riley-Tillman and Eckert for generalization training: "train diversley, use sufficient stimulus exemplars, recruit natural consequences, modify maladaptive consequences, and incorporate salient self-mediated stimuli" (Coffee & Kratochwill, 2013, p. 14). Through the use of an interview and script which outlined the intervention goals and procedure, they had the teacher select other students for the intervention, and then had the teacher discuss any concerns.

The results of the study suggest that the consultation procedures used resulted in no significant improvement in teachers' generalized praise use. Although a limitation of the study concerns the treatment integrity as performed by the teachers within the study, the results are similar to those found by Riley-Tillman and Eckert (2001) in that although intensive consultation and generalization training procedures were implemented by the consultants, the extent to which teacher praise generalized to other students was limited.

Duncan, Dufrene, Sterling and Tingstrom (2013) replicated Martens et al. (1997) and Riley-Tillman and Eckert (2001) by examining the effects of a generalization training which included goal setting and performance feedback note on teacher praise towards a target student and non-target students. Three teachers (two general education public school teachers and one Head Start teacher) were trained in the course of the study. Each teacher referred a student for disruptive behaviors (off-task, inappropriate vocalizations, and out of seat/area) and through consultation, it was hypothesized that all three students' behaviors were maintained at least partially by teacher attention. Praise was determined to be an appropriate intervention for all three students to decrease the disruptive behaviors. During the study, observers recorded the rate of specific labeled praise the teachers provided towards the target student and non-target students. Additionally, observers recorded the occurrence of disruptive behaviors dispalyed by the target students.

The researchers used a multiple baseline across participants design to assess their data with phases including: baseline/consultation, teacher training, goal setting and feedback note, withdrawal of feedback with generalization suggestion/prompt, generalization training with goal setting and feedback note, and follow-up. Teacher

training for praise consisted of a time-in handout (Olmi, 1998) describing how best to provide specific labeled praise, a script, role-play, practice and feedback. The second phase, goal setting and feedback note, included the consultant providing the teacher with a praise rate goal and a feedback note at the beginning of each session with data on their performance during the previous session. The third phase, withdrawal of feedback with generalization suggestion/prompt, consisted of removing the feedback note and a meeting with each teacher where the consultant probed if the teacher had ever considered using the intervention for any of their other students. The fourth phase of generalization training with goal setting and feedback note, included sequential modification across targets by setting goals for praise to non-target students and then providing the teacher with feedback regarding whether or not they met their goal. The consultant provided teachers with a daily goal (a 50% increase of praise towards non-target students) for praise toward any student in the classroom along with a feedback note at the beginning of each session. Additionally, training consisted of a script and a *STAR* handout (Fox & Nicholson, 2003) describing how to praise any appropriate student behavior and ignore minor behaviors. The STAR handout served as a self-mediated moderator of generalization in that it is a mnemonic for guiding teachers' response to students' behaviors. Specifically, teachers may prompt themselves to *Stop and Think* (upon observing student problem behavior to determine if behavior is of serious concern)*,*determine if a response is necessary, then *Ask* if another student is displaying appropriate behavior that might warrant praise, and then *Act* by responding in the manner decided upon. The last phase, follow-up, consisted of withdrawal of the feedback note.

The results of the study showed that teacher praise increased towards the target student during goal setting and feedback, but decreased when it was withdrawn. Generalization towards non-target students did not occur until teachers were trained to generalize (the suggestion/prompt did not result in any noticable differences) but teacher praise towards target students decreased during this phase. Additionally, when praise rates were high, student disruptive behavior decreased. Similar to Riley-Tillman and Eckert (2001) and Coffee and Kratochwill (2013), despite labor intensive consultation methods, teachers' praise toward target students did not maintain following withdrawal of goal setting and feedback, and teachers' generalized praise use was modest at best despite receiving multiple generalization training procedures.

Studies have shown that even simple praise interventions require training in order for teachers to consistently use praise. Additionally, while only scant research exisits examining generalization training strategies designed to increase teachers' generalized praise use, the exisiting literature indicates that somewhat resource intensive consultation and generalization training techniques (e.g., sequential modification via goal setting and feedback for generalization students) result in only minimal generalization gains (Coffee & Kratochwill, 2013; Duncan et al., 2013; Riley-Tillman & Eckert, 2001). Furthermore, when generalization training becomes the focus of consultation, teachers' praise delivery to initial target students may diminish. Taken together, the consultation literature is in dire need of resource efficient consultation procedures that result in teachers acquiring intervention skills and using those skills in a generalized fashion over time and under other relevant conditions (e.g., stimulus and setting generalization).

Summary of Consultation for Teacher Praise Generalization Literature

Unfortunately, there is scant research available evaluating the extent to which teachers learn new skills during consultation interactions and then generalize those skills to other relevant students and settings. Moreover, across the few studies that have systematically assessed and programmed for generalization of teacher praise use, results have been discouraging. Specifically, Riley-Tillman and Eckert (2001), Coffee and Kratochwill (2013), and Duncan et al.'s (2013) generalization training techniques during consultation resulted in only minimal gains in teachers' generalized praise use, and minimal gains occurred in spite of labor intensive consultation practice such as follow-up meetings with teachers, goal setting, feedback, and self-mediated strategies. Clearly, there is a need for additional research evaluating novel consultation procedures that may increase the extent to which teachers acquire skills during consultation and then maintain those skills over time while generalizing those skills to relevant students and settings.

Purpose of the Present Investigation

This study tested the efficacy of specific teacher training procedures while evaluating effects on generalization. As a result, this study replicated and extended Dufrene et al. (2012) and Dufrene et al. (2014). Specifically, this study tested: (a) if the use of a BITE training procedure resulted in increases in BSP from the teacher towards the target student, (b) if the use of a BITE training procedure would result in increases in BSP from the teacher towards non-target students when the teacher had not been trained to praise others, and (c), if BSP towards non-target students had not occurred, would generalization training in the form of sequential modification, result in increases in BSP towards non-target students.

Research Questions

1. Will BITE training increase teacher BSP towards target students?

2. Will BITE training increase teacher BSP towards non-target students without explicit training for generalization?

3. Will teacher BSP maintain immediately following training?

4. Will sequential modification result in generalization to non-target students?

CHAPTER III

METHOD

Participants and Setting

Participants were four general education teachers and their students in an elementary school, located in a southeastern state in the United States. The student population of the school consisted of 80% Black, 12% Caucasian, and 8% Other (i.e., Asian, Native American, and Hispanic). Of the student population, 44% were female and 56% were male. Approximately 11% of the student population received special education services and 77% of students were eligible for free or reduced price lunches.

Teachers and students were selected based on teachers' student referrals to the district's behavior specialist due to disruptive classroom behaviors such as off-task, inappropriate vocalizations, out-of-seat, and non-compliance. Students referred for services due to severe disruptive behaviors, such as physical aggression, were not included in this study and were provided services outside the scope of the study. All teachers and students' parents/guardians provided consent (Appendix A and B) prior to participation in the study. The study was approved by The University of Southern Mississippi's Institutional Review Board prior to recruiting participants (Appendix C).

All observations and data collection were conducted in the teachers' classrooms during a core academic instructional period in which the teacher reported having the greatest occurrence of problem behaviors for the target student. Students who displayed problem behaviors only during non-instructional activities or settings (e.g., disruptive behavior in the cafeteria) would have been excluded from the study.

Specific inclusion criteria for the study included: (1) students' disruptive behavior was hypothesized to be at least partially maintained by teacher attention (i.e., teacher attention items on the *Functional Assessment Informant Record for Teachers II* [FAIR-T II] rated as 2 or 3), (2) teacher delivered less than one BSP statement every 5 min during a screening observation, and (3) the student engaged in disruptive behavior during 20% or more of the observed intervals during the screening observation. The rate of 0.20 praise statements per minute, was selected as the criteria cutoff based on previous studies examining praise and generalization (Coffee & Kratochwill, 2013; Duncan et al., 2013; Riley-Tillman & Eckert, 2001). Students whose behaviors were not hypothesized to be maintained by attention would have been excluded from the study in order to increase the probability that praise from the teacher would decrease problem behavior, which may reinforce teacher's praise behaviors (i.e., encountering natural consequences).

Teacher-Student dyad 1

Teacher 1 was a Caucasian female, who taught 2nd grade, with 0-5 years of teaching experience. The classroom consisted of 27 students. Student 1 was an eight year old, Black male, referred for disruptive behaviors (e.g., off-task, playing with objects, out-of-seat behaviors and inappropriate vocalizations). Teacher 1 reported that his behaviors often occurred during individual and group instruction for English. He did not have any diagnoses prior to the study and had received behavioral intervention by the school counselor, in the form of a sticker chart with minimal improvement in behavior, prior to the study.

Teacher-Student dyad 2

Teacher 2 was a Caucasian female, who taught Kindergarten, with 10-20 years of teaching experience. The classroom consisted of 26 students. In addition to the main classroom teacher, there was one assistant in the classroom. Student 2 was a five year old, Caucasian male. He was referred to the behavior consultant for disruptive behaviors (e.g., off-task behaviors, playing with objects and inappropriate vocalizations) which occurred during group instruction (on the carpet or at the table) for math. He did not have any diagnoses prior to the study. A classroom-wide token economy was in place but no individualized intervention plan had been implemented at the time of the referral. .

Teacher-Student dyad 3

Teacher 3 was a Caucasian female, who taught 2nd grade, with over 20 years of teaching experience. The classroom consisted of 27 students. Student 3 was an eight year old, Black female, referred for disruptive behaviors (e.g., off-task, playing with objects, out-of-seat behaviors, inappropriate vocalizations, and destruction of property) during English. She did not have any diagnoses prior to the study and had received behavioral intervention by the school counselor, in the form of being sent to the office for disruptive behaviors in the classroom on three prior occasions.

Teacher-Student dyad 4

Teacher 4 was a Caucasian female, who taught 3rd grade, with 10-20 years of teaching experience. The classroom consisted of 26 students. Student 4 was a nine year old, Black male, referred for disruptive behaviors (e.g., off-task behaviors, playing with objects, out-of-seat behaviors, inappropriate vocalizations, and destruction of property) during English. He did not have any diagnoses prior to the study and had received

behavioral intervention by the school counselor, in the form of being sent to the office for disruptive behaviors in the classroom on two prior occasions.

<div align="center">Materials</div>

Bug-In-The-Ear (BITE)

A BITE is a one-way radio consisting of a receiver attached to a headphone which was used by the teachers to receive prompts during training. The consultant had a one-way radio, consisting of a transmitter and a microphone, to deliver the prompts during training. The purpose of using the BITE during training was to reduce the possible disruption and intrusiveness to both teachers and students during classroom instruction.

Functional Assessment Informant Record for Teachers II (FAIR-T II)

The FAIR-T II is a teacher completed rating scale that is a modified version of the original FAIR-T (Edwards, 2002), and is used to generate hypotheses about the function of problem behaviors exhibited by students in the classroom (Appendix D). The original FAIR-T has been demonstrated to be useful for generating hypotheses and aiding in developing interventions for problem behaviors (Doggett, Edwards, Moore, Tingstrom, & Wilczynski, 2001; Doggett, Mueller, & Moore, 2002). These hypotheses are based on information collected regarding antecedent conditions and consequential events. The FAIR-T II consists of three sections: problem behaviors defined, antecedents identified, and consequences identified. The first section where problem behaviors are defined involves asking teachers to select and rank three behaviors of most concern and describe when they are likely to occur during the school day and how manageable, disruptive, how often and how long these behaviors occur. The antecedent events section is divided into eight parts with teachers rating different antecedent events on a 4-point Likert scale

where a score of 0 indicates *never* and a score of 3 indicating *always*. The consequent events section is divided into seven parts with teachers rating different consequent events on a 4-point Likert scale where a score of 0 indicates *never* and a score of 3 indicating *always*.

Each teacher in the study completed a FAIR-T II at the beginning of the study. The FAIR-T II was used to generate hypotheses for behavioral function and examine if there was a possible attention function. The investigator examined the consequent event section and noted if any items were endorsed in the third section labeled Positive Reinforcement: Access to Peer and Teacher Attention for the inclusion criteria. Students' disruptive behavior had to be hypothesized to be at least partially maintained by teacher attention (i.e., teacher attention items on the *FAIR-T II* rated as 2 or 3) to be included in the study.

Behavioral Intervention Rating Scale (BIRS)

The BIRS (Von Brock & Elliott, 1987) was used to measure teachers' perceptions of the social validity of the praise intervention (Appendix E). The BIRS consisted of 24 items rated on a 6-point Likert scale where a score of 1 indicates they *strongly disagree* and a score of 6 indicates they *strongly agree*. The teachers were asked to rate statements such as "I like the procedures used in the intervention", and "The intervention would be an appropriate intervention for a variety of children." Scores on the BIRS had a possible range of 24 to 144. Total scores were calculated by summing all items with higher scores reflective of greater acceptability. All teachers in the study completed the BIRS following the conclusion of the intervention phase. Elliott and Von Brock Treuting's (1991) factor analysis of the BIRS resulted in three factors: acceptability, effectiveness, and time of

effectiveness. In terms of internal consistency, the researchers reported a coefficient alpha of .97 for the entire instrument, with all items and α coefficients of .97, .92, and .87 for Acceptability, Effectiveness, and Time of Effectiveness, respectively.

Children's Intervention Rating Profile (CIRP)

The CIRP used in the study was adapted from the original CIRP by Witt and Elliott (1985), a seven item, 6-point Likert scale used to assess children's perceptions of the acceptability of a behavioral intervention (Appendix F). Children are asked to rate items on a scale of 1 to 6 where a score of 1 indicates they *strongly agree* and a score of 6 indicates they *strongly disagree*. The instrument was written so that questions can be adopted for the intervention so for the purpose of this study all questions will have the word intervention replaced with the word praise. The target students were asked to rate statements such as "I liked the praise from my teacher", and "My teacher should use praise with other students." Scores on the CIRP had a possible range of 6 to 42. Total scores were calculated by summing all items, with lower scores reflective of greater acceptability. The internal consistency of the original CIRP ranged in alpha from .75 to .89 (Carter, 2010; Witt & Elliott, 1985). The CIRP is a single factor scale with all items loading on the General Acceptability factor. The CIRP was completed by all of the target students in the study following the conclusion of the study.

Consultation Acceptability rating scale

A consultation acceptability rating scale (Appendix G) was created for this study and included 12 items with items rated on a 6-point Likert scale and the items were modeled after items from the BIRS and Intervention Rating Profile (IRP; Witt and Elliott, 1985). Items were rated from 1 to 6 where a score of 1 indicated they *strongly disagree*

and a score of 6 indicated *strongly agree*. The rating scale was designed to measure teachers' perception of the quality of the consultation process. The rating scale contained statements such as "The consultant seemed knowledgeable about effective classroom practices", "The consultation process seemed appropriate given the referral concerns" and "Other teachers would benefit from working with this consultant." Scores on the scale had a possible range of 12 to 72. Total scores were calculated by summing all items, with higher scores reflective of positive perceptions of the consultation process. The rating scale was completed by all teachers in the study following the conclusion of the study.

Procedural Fidelity

The consultant used the procedural fidelity protocol (Appendix I) to ensure consistent training for all of the teachers. The protocol consisted of a checklist that included items such as: provided the BITE to the teacher at the beginning of each training session, provided prompting to teacher if praise does not occur once every two min, provided feedback to the teacher at the end of each training session, and retrieved the BITE at the end of the training session. An observer collected procedural fidelity data for all training sessions (training and generalization training). The percentage of procedural fidelity was calculated by dividing the number of procedural steps implemented correctly by the number of total procedural steps on the protocol and multiplying by 100. The procedural fidelity was 100%. IOA data for procedural fidelity were collected for 61% of training sessions. IOA for procedural fidelity measurement was calculated by dividing the number of steps agreed upon as occurring by the number of agreed upon and disagreed upon steps. IOA for procedural fidelity was 100%.

Dependent Measures, Data Collection, and Inter-observer Agreement

Dependent Measures

Teacher behavior. The primary dependent variable was BSP provided by the teacher toward the target students and the other students in the classroom. BSP toward target students and any other student in the classroom were coded separately. BSP was defined as a verbal statement expressed toward a specific student suggesting approval of the student's actions (e.g., "I like how you are working", "good job staying in your seat", etc.). Praise not directed toward a specific student and/or labeling the behavior were excluded from the study. Frequency within interval data were collected for praise statements by the teacher directed to the target student and all other students. The frequency of praise statements were converted to rate per minute by dividing the total number of praise statements by total number of minutes observed during the session (i.e. 10 min).

Student behaviors. Due to the similarity in teacher referral for disruptive behaviors, each student was coded for disruptive behavior in the classroom. Each student had an individualized definition of which behaviors were considered disruptive behaviors based on the FAIR-T II.

Disruptive behaviors included: inappropriate vocalizations, off-task behaviors, playing with objects, out-of-seat, and destruction of property. Inappropriate vocalizations were defined as talking without permission. Off-task behaviors were defined as looking away from academic work or the teacher for more than three seconds. Playing with objects was defined as using any part of the body to play with an inanimate object (e.g., hair, pencils or toys). Out-of-seat behaviors were defined as student's buttocks not

touching seat for longer than three seconds unless directed by the teacher or for Student 2, if the student was outside of their assigned area for longer than three seconds unless directed by the teacher. Destruction of property was defined as destroying items (e.g., ripping or crumpling paper, breaking writing utensils) provided by the teacher.

Students' target behaviors were recorded using momentary time sampling with observers recording the presence or absence of target behavior at the beginning of each 10 s interval.

Data Collection

Data were collected by doctoral students in a school psychology program during the selected core academic instructional times determined during the teacher interview. Observers positioned themselves in the back or side of the classroom in a location that allowed them view of the teacher and students, while remaining as unobtrusive as possible. All observers were trained in direct observation procedures by reviewing the operational definitions of the target behaviors of both teacher and students and by conducting direct observations in the classroom. Each observer was required to meet a 90% agreement criterion with the primary experimenter or a trained observer for two consecutive sessions in order to independently collect data.

Observers coded for occurrence of target behaviors manually using the data collection form (Appendix H), a writing utensil and a MP3 player with an audio track that provided prompts for the beginning of each 10 s interval. Each session was 10 min in length.

Each observer coded for occurrence of disruptive behaviors displayed by the target student using a 10 s, momentary time sampling procedure along with the frequency

of praise provided from the teacher towards the target student and to the other students in the classroom. Teacher praise was coded for any occurrence of behavior specific verbal praise directed at a specific student. Observers counted the frequency of praise statements directed toward the target student and the frequency of praise statements directed towards all other students in the classroom.

<div align="center">Experimental Design and Data Analysis</div>

An ABCDE multiple baseline across teachers design was used to assess the effects of training teachers to implement praise on the target students' behavior and the possible generalization effect on the selected generalization students' behavior. The phases consisted of: (a) baseline, (b) BITE training, (c) maintenance, (d) generalization training, and (e) follow up. Phase change decisions were based on teacher praise. Phase changes from baseline were contingent on a stable or decreasing trend in teacher praise towards the target student. Phase changes from BITE training to maintenance occurred only after the teacher met the criterion of praising the target student at a rate of 0.50 praise statements per min or higher (at least once every two minutes) for three consecutive sessions. Data collection during maintenance occurred for three or more sessions. Teachers who maintained praise use near the criterion rate from training, and praise generalized toward non-target students (i.e., visually discernible difference between praise to non-target students during baseline and praise toward non-target students during maintenance) then the maintenance phase was terminated and follow-up data were collected one month later. Teachers who maintain praise toward the target student (i.e., rate of praise toward target student was similar to training phase and above baseline level), but did not generalize praise toward non-target students, began

generalization training. During the generalization training phase, teachers were prompted again to deliver BSP at a rate of .50 praise statements per min; however, the teachers were prompted to praise the target student at a rate of .25 praise statements per min and the non-target students at a rate of .25 praise statements per min, which equaled .50 praise statements per min total. Teachers who did not maintain praise toward the target student and/or did not generalize praise to non-target students, were provided with booster training plus generalization training phase. During the booster training plus generalization training phase, the teachers were trained to meet the same praise criteria described for the generalization training phase (i.e., .25 praise statements per min to target student and .25 praise statements per min to non-target students).

Visual analysis

The rate of praise from each teacher towards target student and other students was graphed and visually inspected. All data were graphed starting from screening observations to maintenance/generalization phase. Student problem behaviors were also graphed. All decisions for phase changes and whether to include a booster training and/or generalization training phase were based on visual analysis of teacher praise data only.

<center>Procedures</center>

Teacher Interview

Upon teachers referring a student for consultation services, the consultant delivered the FAIR-T II to the teacher, briefly reviewed directions for completing the instrument, and then scheduled a follow-up meeting to collect the FAIR-T II and review the teacher's responses. The consultant then met individually with each teacher to review

information provided in the FAIR-T II. Teachers who endorsed any of the teacher attention items with a rating of 2 or 3, were scheduled for a screening observation.

Screening

All teachers and target students were screened to determine if they met the inclusion criteria for the study. To meet the inclusion criteria, teachers had to provide BSP at a rate of less than 0.20 praise statements per min (less than once every five minutes) toward the target student and target students had to display disruptive behaviors in 20% or more of intervals.

During the screening observation, teachers were asked to conduct class in their typical manner and received no further instructions. Observer(s) positioned themselves in an unobtrusive location in the classroom (in the back or to the side of the classroom) and did not interact with the teacher or any students. At the end of the screening observation, teachers and students were not provided with any feedback.

During the screening observation, the target student was observed with observers scoring the selected problem behaviors based on the FAIR-T II on a momentary time sampling with observers noting occurrence or nonoccurrence of behavior at the beginning of each 10 s interval. If the student engaged in problem behaviors during 20% or more of the observed intervals during the observation, the student was included in the study. If the student failed to meet criterion, the student was excluded from the study and the teacher was provided consultation services outside the context of the study. During the screening observation, student 1 demonstrated problem behavior during 28% of the observation, and no BSP was provided by teacher 1 towards student 1. Teacher-student dyad 2 demonstrated problem behaviors during 40% of the observation, and no BSP towards

student 2. Teacher-Student dyad 3 demonstrated problem behaviors during 73% of the observation and no BSP towards student 3. Teacher-Student dyad 4 demonstrated problem behaviors during 63% of the observation intervals and no BSP towards student 4. All teacher-student dyads met the inclusion criteria.

Baseline

Baseline data were collected in the classroom of each selected teacher during the time identified by the teacher as most problematic. The consultant did not provide any instructions to the teacher and the teachers conducted class in their typical manner. Observers positioned themselves in an unobtrusive location in the classroom and did not interact with the teacher or any students during baseline. Additionally, no feedback was provided to the teacher or any students regarding their performance. Baseline data were collected on teachers' praise towards the target student and all other students along with the target student's problem behavior. Phase changes were contingent on a decreasing trend and/or a stable trend of teachers' praise provided to the target student.

Praise Training Towards Target Student

All pre-training sessions were conducted in the teachers' classrooms during a time when teachers were not instructing and were available. The pre-training consisted of explaining how to use the BITE, how the consultant would use the BITE to provide the teacher with immediate prompts, and what the teacher should do when they received the prompts. Pre-training also included discussion and education about the purpose of praise treatment. Pre-training sessions lasted approximately five minutes for each teacher.

Training was conducted in the teachers' classrooms during the selected observation period (i.e., instructional time in which student problem behaviors reported

by teacher as occurring most often). All teachers were trained to provide praise to the target students to a criterion of once every two minutes (rate of 0.50 praise statements per min), through the use of prompting by way of the BITE.

The consultant provided a BITE device to the teacher at the beginning of session, and provided the teacher with prompts to ensure praise rates increased to a minimum of one praise statement every two minutes (0.50 praise statements per min) towards the target student. Phase changes were contingent on teachers meeting the requirement praise rate. No prompting was provided concerning praise towards the other students in the classroom.

Maintenance 1

Teachers were told that the BITE would be removed but observers would continue to conduct observations. No other instructions were provided to the teacher during this time. Teachers whose BSP rates decreased back to baseline levels in praise rates towards target student but demonstrated generalization of BSP towards other students were provided with performance feedback regarding their performance in the form of a graph shown to them at the beginning of the next observation (teacher 4).

Generalization Training

Throughout the course of the study, the topic of praising other students was not discussed with the teachers. Generalization training was conducted only if teachers' praise towards the other students in the classroom did not increase and meet training criterion of a minimum of 0.25 praise statements per min during the training and maintenance phases (teachers 2, 3 and 4). Teachers meeting the minimum praise criterion towards the other students in the classroom received followed-up observations

approximately seven days following the last maintenance session (range 7-19 days). Then, the dyads were provided with the appropriate rating scales. Teachers who did not meet the minimum praise criterion towards the other students in the classroom, were provided with generalization training.

Praise criterion was reduced to 0.25 praise statements per min (once every four min) for non-target peers during this phase, compared to the praise criterion for target students during the initial training (0.50 praise statements per min). One of the research questions within this study was to observe if BITE training would increase praise towards non-target students without explicit training for generalization and if not, if sequential modification would result in generalization to non-target students. Teachers included in the study originally provided praise at a rate lower than 0.20 praise statements per min towards the target student and therefore an increase in praise rate above 0.20 praise statements per min would demonstrate improvement in praise rate compared to the screening observations. An increase in praise rate towards non-target peers (at least 0.25 praise statements per min) would suggest that generalization of the praise training occurred. Therefore, the criterion was set to 0.25 praise statements per min for non-target students and target students during the generalization training phase.

Generalization training consisted of a sequential modification procedure whereby the consultant reintroduced the BITE to the teacher and prompted them to provide praise to any student in the classroom (other than the target student) displaying appropriate behavior. At the beginning of generalization training, the consultant discussed with the teacher that additional training was required. It was explained to the teacher that though praise towards the target student increased during the previous training, another goal had

been to increase praise towards other students. Therefore during this training, the aim was to increase praise towards other students while continuing to praise the target student. Every four minutes a prompt was issued to praise a randomly selected student in the classroom (only if they were displaying appropriate behavior). Training continued until the training criterion of a minimum of 0.25 praise statements per min towards other classroom students was met and there was an increasing and/or stable trend in teacher praise towards non-target peer students.

Teachers whose BSP decreased back to baseline levels towards target student, received prompts to praise the target student in addition to non-target peers during generalization training.

Maintenance 2

Teachers were again told that the BITE would be removed but observers would continue to conduct observations. No other instructions were provided to the teacher. Teachers whose BSP decreased back to baseline levels towards target and/or peer students were provided with performance feedback regarding their previous performance in the form of a graph shown to them before the observation (teachers 2, 3, and 4).

Follow-Up

Teachers meeting the minimum praise criterion towards the other students in the classroom during maintenance 1 or 2 received follow-up observations approximately 11 days following the last maintenance session (range 7-19 days).

Interobserver Agreement (IOA)

IOA data were collected for at least 29% of the sessions in each phase of the study. IOA was calculated separately for teacher praise and the target student's behavior.

The percentage of agreement for praise statements was calculated by dividing the number of agreed upon praise statements within intervals by the total number of agreed and disagreed upon praise statements within intervals and then multiplying by 100. The percentage of agreement for target student behavior was calculated on an interval-by-interval basis by taking the number of agreements of occurrence and non-occurrence of a behavior and dividing by the number of agreements plus the number of disagreements, multiplied by 100 for the target behavior.

For teacher-student dyad 1, IOA was collected for 50% of all observations. IOA was collected for 33% of baseline observations with 92% agreement for student behaviors and 100% agreement for teacher behavior, 33% of training 1 observations with 85% agreement for student behaviors and 98% for teacher behaviors, 60% of maintenance 1 observations with a mean of 99% (range, 97-100%) for student behaviors and 96% (range, 93-100%) for teacher behaviors, and 100% of follow up observations with agreements for 95% of student behaviors and 100% of teacher behaviors.

For teacher-student dyad 2, IOA was collected for 60% of all observations. IOA was collected for 40% of baseline observations with a mean agreement of 93% (range, 92-95%) for student behaviors and 100% for teacher behaviors, 67% of training 1 observations with a mean of 96% (range,92-100%) for student behaviors and 100% for teacher behaviors, 100% of maintenance 1 observations with a mean of 98% for student behaviors and 100% for teacher behaviors, 67% of training 2 observations with a mean of 98% (range, 97-100%) for student behaviors and 99% (range, 98-100%) for teacher behaviors, 50% of maintenance 2 observations with a mean of 100% for student

behaviors and 99% (range, 97-100%) for teacher behaviors, and 100% of follow up observations with 95% for student behaviors and 100% for teacher behaviors.

For teacher-student dyad 3, IOA was collected for 48% of all observations. IOA was collected for 29% of baseline observations with mean agreement of 98% (range, 97-98%) for student behaviors and 100% for teacher behaviors, 67% of training 1 observations with mean of 94% (range, 93-95%) for student behaviors and 99% (range, 99-100%) for teacher behaviors, 50% of maintenance 1 observations with 100% for student and teacher behaviors, 33% for training 2 observations with 87% for student behaviors and 98% for teacher behaviors, 57% for maintenance 2 observations with 97% (range, 95-98%) for student behaviors and 99% (range, 97-100%) for teacher behaviors, and 100% for follow up observations with 92% for student behaviors and 100% for teacher behaviors.

For teacher-student dyad 4, IOA was collected for 69% of all observations. IOA was collected for 50% of baseline observations with a mean agreement of 92% (range, 83-97%) for student behaviors and 100% for teacher behaviors, 100% of training 1 observations with a mean of 93% (range, 87-100%) for student behaviors and 98% (range, 95-100%) for teacher behaviors, 89% of maintenance 1 observations with a mean agreement of 95% (range, 92-100%) for student behaviors and 97% (range, 95-100%) for teacher behaviors, 33% for training 2 observations with 90% agreement for student behaviors and 98% for teacher behaviors, 50% of maintenance 2 observations with mean agreement of 93% for student behaviors and 100% for teacher behaviors, and 100% of follow up observations with 93% for student behaviors and 98% for teacher behaviors.

CHAPTER IV

RESULTS

Teacher 1 Dyad

During the FAIR-T II interview, Teacher 1 indicated that Student 1 engaged in frequent disruptive behaviors (e.g., off-task behaviors, plays with objects, out-of-seat/area and inappropriate vocalizations) that resulted in escape from task demands and access to peer attention and teacher attention in the form of reprimands and redirections. During the screening observation, it was observed that he engaged in problem behaviors during 28% of the observation. Teacher 2 provided no BSP towards Student 1 during the observation but did provide BSP towards generalization students at a rate of 0.10 per minute. Based on the screening observation, all inclusion criteria were met and data collection continued. Figure 1 includes teachers' rate of praise toward target and generalization students.
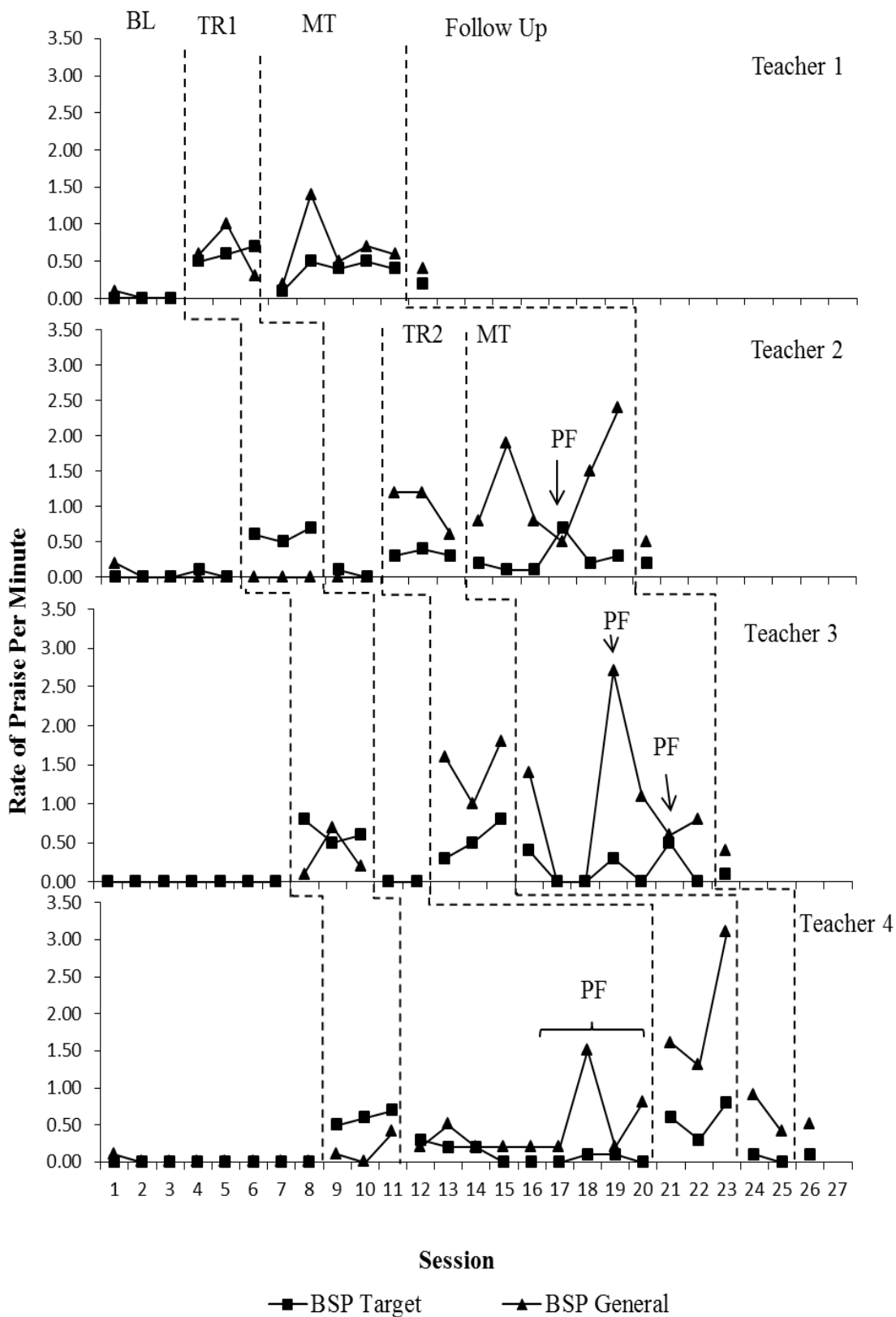
Figure 1. Praise Across All Dyads. Baseline (BL) occurred during the first phase for all four dyads. BSP training towards target student (TR1) occurred in the second phase for all four dyads. Maintenance (MT) occurred in the third phase for all dyads and again, in the fifth phase for dyads 2, 3, and 4. Generalization training (TR2) occurred in the fourth phase for dyads 2, 3 and 4. Additional performance feedback (PF) was provided during MT phase, for dyads 2, 3 and 4. Follow-up occurred for dyad 1 during phase four and during phase six for dyads 2, 3 and 4.

During baseline, problem behaviors were variable, and occurred at a mean of 24% (range, 17-28%) of observations. Teacher 1 provided no BSP towards Student 1 and BSP towards generalization students were low, mean of 0.03 per minute (range, 0.00-0.10 rpm). During praise training, BSP towards Student 1 were on an increasing trend, with a mean rate of 0.60 per minute (range, 0.50-0.70 rpm). BSP towards generalization students were variable, with a mean rate of 0.63 rpm (range, 0.30-1.00 rpm). Problem behaviors were on a decreasing trend, with behaviors occurring at mean of 16% (range, 12-18%) of observations. Due to the stable increasing trend in BSP towards Student 1, training was withdrawn and maintenance observations were conducted. During maintenance 1, BSP towards Student 1 were stable and high, following a low initial session, with a mean of 0.38 rpm (range, 0.10-0.50 rpm). BSP towards generalization students were variable and high, with a mean of 0.68 rpm (range, 0.20-1.40 rpm). Problem behaviors were variable and on the last three sessions of the phase showed a decreasing trend, mean of 10% (range, 0-25%) of observations. Due to praise rates towards Student 1 and generalization students meeting the criteria, no additional training was provided. Follow-up was conducted 19 days following the last maintenance observation. Student 1 engaged in problem behaviors during 5% of the observation and

Teacher 1 provided BSP at 0.20 rpm towards Student 1 and 0.40 towards generalization

students in the class. Figure 2 includes target student's level of problem behavior.
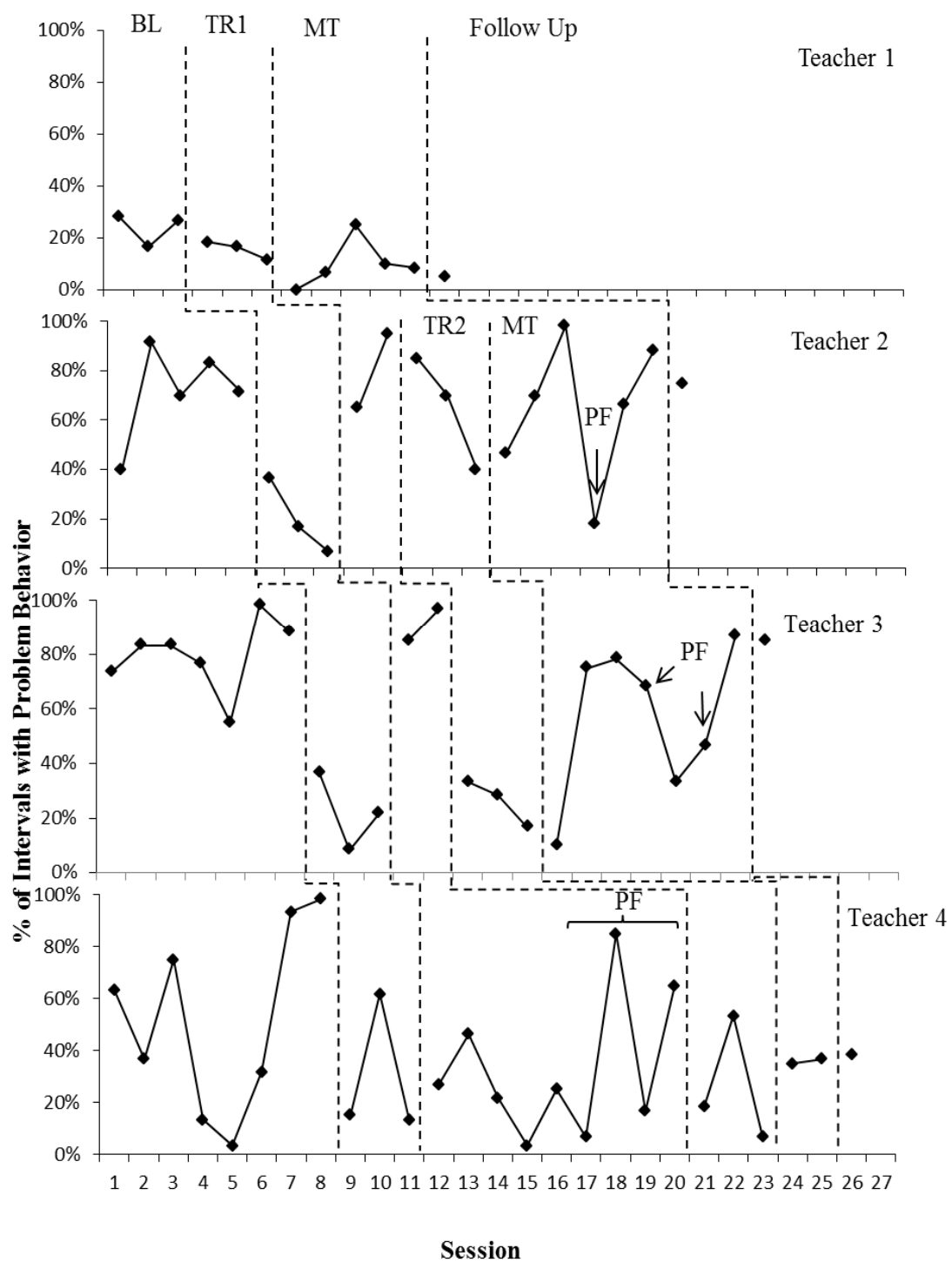
Figure 2. Problem Behavior Across All Dyads

Teacher 2 Dyad

During the FAIR-T II interview, Teacher 2 indicated that Student 2 engaged in frequent disruptive behaviors (e.g., off-task behaviors, plays with objects, and inappropriate vocalizations) that resulted in escape from task and access to peer attention and teacher attention in the form of reprimands and redirections. During the screening observation, it was observed that he engaged in problem behaviors during 40% of the observation. Teacher 2 provided no BSP towards Student 2 during the observation but did provide BSP towards other students at a rate of 0.20 praise statements per min. Based on the screening observation, all inclusion criteria were met and data collection continued.

During baseline, problem behaviors for Student 2 were variable with an overall increasing trend, and occurred at a mean of 71% of the observed intervals (range, 40-92%). BSP towards Student 2 and generalization students was low, with a mean rate of 0.02 praise statements per min (range, 0.00-0.10 rpm) and 0.04 praise statements per min (range, 0.00-0.20 rpm) respectively. During praise training, BSP towards Student 2 were stable, with a mean rate of 0.60 praise statements per min (range, 0.50-0.70 rpm) and did not occur with generalization students. Problem behaviors were on a decreasing trend, with a mean of 20% (range, 7-37%) of observations. During maintenance 1, BSP towards Student 2 were low, and occurred at a mean of 0.05 praise statements per min (range, 0.00-0.10 rpm) and did not occur with generalization students. Problem behaviors were high, with a mean of 80% (range, 65-95%) of observations. During generalization training, BSP towards Student 2 was stable, with a mean rate of 0.33 praise statements per min (range, 0.30-0.40 rpm) and BSP towards generalization students were on a decreasing trend, with a mean rate of 1.0 praise statements per min (range, 0.60-1.20

rpm). Problem behaviors were on a decreasing trend, mean of 65% (range, 40-85%) of observations. During maintenance 2, BSP towards Student 2 were low, with a mean rate of 0.27 praise statements per min (range, 0.10-0.70 rpm). BSP towards generalization students were variable and on an increasing trend, with a mean rate of 1.32 rpm (range, 0.50 – 1.90 rpm). Problem behaviors were variable and high, mean of 65% (range, 18-98%) of observations. Due to low BSP towards Student 2 during sessions 14, 15 and 16, the primary researcher provided performance feedback just before observing session 17. Follow-up was conducted 12 days following the last maintenance observation. Student 2 engaged in problem behaviors during 75% of the observation and Teacher 2 provided BSP at 0.20 rpm towards Student 2 and 0.50 towards generalization students in the class.

Teacher 3 Dyad

During the FAIR-T II interview, Teacher 3 indicated that Student 3 engaged in frequent disruptive behaviors (e.g., off-task behaviors, plays with objects, out-of-seat, destruction of property and inappropriate vocalizations) that resulted in escape from task and access to peer attention and teacher attention in the form of reprimands and redirections. During the screening observation, it was observed that he engaged in problem behaviors during 73% of the observation. Teacher 3 provided no BSP towards Student 3 nor towards generalization students during the observation. Based on the screening observation, all inclusion criteria were met and data collection continued.

During baseline, problem behaviors were variable, and occurred at a mean of 80% (range, 55-98%) of observations. Teacher 3 provided no BSP towards Student 3 or generalization students in the class. During praise training, BSP towards Student 3 were variable and high, with a mean rate of 0.63 per minute (range, 0.50-0.80 rpm). BSP

towards generalization students were variable, with a mean rate of 0.33 rpm (range, 0.10-0.70 rpm). Problem behaviors were variable, occurring at a mean of 22% (range, 8-37%) of observations. During maintenance 1, no BSP were provided towards Student 3 or any of the generalization students in the classroom. Problem behaviors were high, occurring at a mean of 91% (range, 85-97%) of observations. Due to low BSP towards Student 3 during maintenance 1, booster training was added to the generalization training. During generalization/booster training, BSP towards Student 3 increased and was on an increasing trend, with a mean of 0.53 rpm (range, 0.30-0.80 rpm). BSP towards generalization students were high and variable, with a mean of 1.47 rpm (range, 1.00-1.80 rpm). Problem behaviors were on a decreasing trend, and occurred at a mean of 26% (range, 17-33%) of observations. During maintenance 2, BSP towards Student 3 and towards generalization students were variable, with a mean of 0.17 rpm (range, 0.00-0.50 rpm) and 0.94 rpm (range, 0.00 – 2.70) respectively. Problem behaviors were variable, and occurred at a mean of 57% (range, 10-87%) of observations.

During maintenance 2, due to low BSP towards both Student 3 and generalization students for sessions 17 and 18, Teacher 3 received performance feedback regarding the previous session's observation before the start of session 19. BSP towards both Student 3 and generalization students increased immediately following the performance feedback but decreased towards Student 3 during the next observation (session 20). Due to the decrease in BSP towards Student 3 during session 20, performance feedback was provided prior to the start of session 21. An increase in BSP was observed during session 21 towards Student 3 while BSP towards generalization students remained high. During session 22, a drop in BSP towards Student 3 was again observed. Follow-up occurred

seven days following the last maintenance observation. Student 3 engaged in problem

behaviors during 85% of the observation and Teacher 3 provided BSP at 0.10 rpm

towards Student 3 and 0.40 towards generalization students in the class.

<div align="center">Teacher 4 Dyad</div>

During the FAIR-T II interview, Teacher 4 indicated that Student 4 engaged in

frequent disruptive behaviors (e.g., off-task behaviors, plays with objects, out-of-seat,

destruction of property and inappropriate vocalizations) that resulted in escape from task

and access to peer attention and teacher attention in the form of reprimands and

redirections. During the screening observation, it was observed that she engaged in

problem behaviors during 63% of the observation. Teacher 4 provided no BSP towards

Student 4 during the observation but did provide BSP towards generalization students at a

rate of 0.10 per minute. Based on the screening observation, all inclusion criteria were

met and data collection continued.

During baseline, problem behaviors were variable with an increasing trend, and

occurred at a mean of 52% (range, 3-98%) of observations. No BSP were provided

towards Student 4 and BSP towards generalization students were stable and low, with a

mean of 0.01 per minute (range, 0.00-0.10 rpm). During generalization training 1, BSP

towards Student 4 were high and on an increasing trend, with a mean rate of 0.60 per

minute (range, 0.50-0.70 rpm). BSP towards generalization students were variable, with a

mean rate of 0.17 rpm (range, 0.00-0.40 rpm). Problem behaviors were variable, mean of

30% (range, 13-62%) of observations. During maintenance 1, BSP towards Student 4

were low and on a decreasing trend, with a mean of 0.10 rpm (range, 0.00-0.30 rpm).

BSP towards generalization students were variable, with a mean of 0.44 rpm (range,

0.20-0.50 rpm). Problem behaviors were variable and occurred at a mean of 33% (range, 3-85%) of observations. Due to low BSP rates towards Student 4 and generalization of BSP towards generalization students, performance feedback were provided at the beginning of sessions 17, 18, 19, and 20 during the maintenance phase. Due to BSP towards Student 4 remaining low, training was re-implemented. During generalization training 2, BSP towards Student 4 and generalization students were variable, with a mean of 0.57 rpm (range, 0.30-0.80 rpm) and 2.0 rpm (range, 1.30 – 3.10 rpm) respectively. Student 4's problem behaviors were variable, and occurred at a mean of 26% (range, 7-53%) of observations. During maintenance 2, problem behaviors were low, and occurred at a mean of 36% (range, 35-37%) of observations. BSP towards Student 4 were low, mean of 0.05 rpm (range, 0.00-0.10 rpm) and BSP towards generalization students were variable, with a mean of 0.65 rpm (range, 0.40-0.90 rpm). Follow-up occurred seven days following the last maintenance observation. Student 4 engaged in problem behaviors during 38% of the observation and Teacher 4 provided BSP at 0.10 rpm towards Student 4 and 0.50 towards generalization students in the class.

<div align="center">Acceptability</div>

Each target student completed the CIRP within a week following the end of data collection sessions. The mean score across all students was 1.9 (range 1.3-2.9). The mean score for each student was: 1.3 (range 1-3), 2 (range 1-5), 1.4 (range 1-3) and 2.9 (range 1-6), respectively. Student scores were similar, with some mixed results for specific questions. Students 2 and 4 strongly disagreed that their teachers should praise other students. Student 4 endorsed that there may be a better way than praise to decrease their behavior. All students agreed that their teacher using praise was fair, that praise would

not cause problems with their friends and that praise helped them do better in class. Table

1 includes mean item rating scores across all students.

Table 1

CIRP Results

	Mean Score
1. My teacher using praise was fair.	1
2. My teacher was too harsh on me.	2 (range 1-3)
3. Praise may cause problems with my friends.	1
4. There are better ways than praise to stop my behaviors	3 (range 1-6)
5. My teacher should use praise with other students.	3.25 (range 1-6)
6. I liked the praise from my teacher.	1.75 (range 1-3)
7. I think the praise helped me do better in class.	1.25 (range 1-2)

Each teacher completed the Consultation Acceptability rating scale within a week

following the end of data collection sessions. The mean scores across teachers were: 6,

5.7 (range 5-6), 5.8 (range 5-6), and 5.3 (range 5-6), respectively. According to the

scores, the results were similar across all teachers, with all questions scored as agree or

strongly agree. Table 2 includes mean scores for each item across all teachers.

Table 2

Consultation Acceptability Rating Scale Results

	Mean Score
1. The consultant seemed knowledgeable about effective classroom practices.	5.5 (range 5-6)

Table 2 (continued).

	Mean Score
2. The consultant effectively answered my questions.	6
3. The consultant provided recommendations that were appropriate given the concerns about the student.	5.75 (range 5-6)
4. The consultant clearly explained the assessment and/or intervention procedures.	5.75 (range 5-6)
5. The consultant effectively taught me how to implement their recommendations.	5.75 (range 5-6)
6. The consultant provided me with the resources to implement their recommendations.	5.5 (range 5-6)
7. The consultation process seemed appropriate give the severity of the student's referral concern.	5.25 (range 5-6)
8. The consultation process did not significantly interfere with classroom activities.	5.5 (range 5-6)
9. The consultation process was completed in a timely fashion.	5.75 (range 5-6)
10. The referred student benefited from the consultation process.	5.5 (range 5-6)
11. I would like to work with this consultant again in the future.	5.75 (range 5-6)
12. Other teachers would benefit from working with this consultant.	6

Each teacher completed the BIRS following the end of data collection sessions. The mean scores across teachers were: 5.3 (range 3-6), 5 (range 4-6), 5.7 (range 4-6) and,

5 (range 4-6), respectively. Items loading onto the acceptability factor had a mean score of 5.4 (range 5-5.9). Items loading onto the effectiveness factor had a mean score of 4.8 (range 4.3-5.3). Items loading on to the time factor had a mean score of 5.4 (range 4.5-6). All teachers agreed that the intervention was acceptable, appropriate for other behavior problems, they would be willing to use it in the classroom, is reasonable, and would not result in negative side-effects for the child. Table 3 includes mean scores for each item across all teachers.

Table 3

BIRS Results

	Mean Score
1. This would be an acceptable intervention for the child's problem behavior.	5.25 (range 5-6)
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	5
3. The intervention should prove effective in changing the child's problem behavior.	5
4. I would suggest the use of this intervention to other teachers.	5.25 (range 5-6)
5. The child's behavior problem is severe enough to warrant use of this intervention.	5.5 (range 5-6)
6. Most teachers would find this intervention suitable for the behavior problem described.	5 (range 4-6)
7. I would be willing to use this in the classroom setting.	5.25 (range 5-6)

Table 3 (continued).

	Mean Score
8. The intervention would *not* result in negative side-effects for the child.	5.5 (range 5-6)
9. The intervention would be appropriate intervention for a variety of children.	5.75 (range 5-6)
10. The intervention is consistent with those I have used I have used in classroom settings.	5.75 (range 5-6)
11. The intervention was a fair way to handle the child's problem behavior.	5.75 (range 5-6)
12. The intervention is reasonable for the behavior problem described.	5.5 (range 5-6)
13. I like the procedures used in the intervention.	5.5 (range 5-6)
14. The intervention was a good way to handle this child's behavior problem.	5.5 (range 5-6)
15. Overall, the intervention would be beneficial for the child.	5.75 (range 5-6)
16. The intervention would quickly improve a child's behavior.	5.25 (range 4-6)
17. The intervention would produce a lasting improvement in the child's behavior.	5

Table 3 (continued).

	Mean Score
18. The intervention would improve a child's behavior to the point that it would not noticeably deviate from other classmates' behavior.	5
19. Soon after using the intervention, the teacher would notice a positive change in the problem behavior.	5.5 (range 5-6)
20. The child's behavior will remain at an improved level even after the intervention is discontinued.	3.75 (range 3-4)
21. Using the intervention should not only improve the child's behavior in the classroom, but also in other settings (e.g., other classrooms, home).	5 (range 4-6)
22. When comparing this child with a well-behaved peer before and after the use of the intervention, the child's and the peer's behavior would be more alike after using the intervention.	5 (range 4-6)
23. The intervention should produce enough improvement in the child's behavior so the behavior no longer is a problem in the classroom.	4.75 (range 4-5)
24. Other behaviors related to the problem behavior also are likely to be improved by the intervention.	5 (range 4-6)

CHAPTER V

DISCUSSION

The current study extended the consultation and generalization literatures by testing the efficacy of specific teacher training procedures while evaluating effects on generalization. The study demonstrated that the use of the BITE training procedure resulted in increases in BSP from all teachers towards their target students although for teachers 2, 3, and 4 the maintenance of BSP towards the target students was not stable over the course of the study. For Teacher 1, the use of the BITE training procedure resulted in increases in BSP towards non-target students without explicit training. When BSP towards non-target students had not occurred, generalization training in the form of sequential modification, resulted in increases in BSP towards non-target students which maintained during follow-up.

Research Question 1

BITE training resulted in immediate increases in BSP toward target students. Across all teachers, immediate increases in BSP towards the target students were observed, above those prompted by the research with the BITE. Additionally, it was observed that for all students except for Student 4, as BSP increased, there was a corresponding decrease in problem behavior by the target students. These findings are consistent with Dufrene et al. (2012) and Dufrene et al. (2014) in which BITE training resulted in immediate increases in teachers' praise.

While the primary dependent measure focused on teachers' BSP, data were collected on the target student's problem behavior. An issue observed during the study was that while teachers demonstrated increased BSP towards the target student initially during and following training, BSP towards the target student did not maintain over the

course of the study for many of the teachers. These results are inconsistent with Dufrene et al. (2012) and Dufrene et al. (2014) in which teachers' increased praise following BITE and students' disruptive behaviors concomitantly decreased. Failure of students to maintain decreases in disruptive behavior may account for some teachers inconsistently maintaining BSP following BITE training because their BSP was not reliably followed by improved student behavior.

<div align="center">Research Question 2</div>

Some generalization towards other students by teachers 1, 3, and 4 occurred without explicit training. Teachers 1, 3, and 4 demonstrated some generalization of BSP. Teacher 1 demonstrated high rates of BSP towards other students in the classroom that no additional praise training was required throughout the rest of the study. Teachers 3 and 4 demonstrated BSP towards other students, but the rates were variable and did not consistently meet the 0.25 criterion and therefore they received the generalization training. The consultation literature evaluating teachers' generalized praise is limited, and results indicate that the use of a generalization prompt (Coffee & Kratochwill, 2013; Riley-Tillman & Eckert, 2001) produces limited generalization to other students. Moreover, generalization techniques such as incorporating self-generated mediators of generalization (Duncan et al., 2013) may produce limited generalization to other students, but those gains may not maintain. Results from this study are promising in that the BITE training procedure did not explicitly target generalization, but some teachers demonstrated generalized praise use. Future research is needed to determine the extent to which BITE training for teachers that targets one student results in teachers increasing their praise toward other students.

Research Question 3

BSP maintaining immediately following training was variable. Teachers 1, 2, and 3 showed an immediate decrease in BSP following the withdrawal of BITE training. Teacher 1 recovered BSP rates towards the target student following the first maintenance session and BSP rates remained high during the duration of the maintenance phase. Teacher 4 demonstrated high BSP immediately following the withdrawal of praise training but following the first maintenance session, there was a drop in BSP towards the target student. The drop in BSP rates toward the target student required additional praise training. Immediately following withdrawal of BITE training, Teacher 3 demonstrated a drop in BSP rates back to baseline rates and required additional praise training. These results are inconsistent with Dufrene et al. (2012) and Dufrene et al. (2014) in which the majority of teachers maintained praise use following BITE training. Future research is needed to clarify these inconsistent findings.

Teachers who were trained to generalize their praise, demonstrated maintenance of BSP towards non-target students, but Teachers 1, 3, and 4 had difficulty maintaining BSP towards the target student and all teachers provided BSP towards the target student below criterion during follow-up. It may be that teachers may be more likely to praise students who demonstrate appropriate behavior consistently and demonstrate difficulty in praising students who engage in problem behaviors in the class. Whether this decrease in praise towards students exhibiting problem behaviors is due to limited opportunity due to problem behaviors, difficulty recognizing other appropriate behavior that is not the specific behavior of interest or increased frustration towards the student due to the

problem behavior, additional research is required to identify barriers for teachers in providing BSP towards students with a history of engaging in problem behaviors.

Research Question 4

Through sequential modification, Teachers 2, 3 and 4 demonstrated increases in BSP towards non-target students. Both Teachers 2 and 4 provided BSP at or above criterion rate towards non-target students following generalization training. Teacher 3 demonstrated an initial high rate of BSP towards non-target students but the rate dropped following the first maintenance observation (session 17) and additional performance feedback was required. Following the performance feedback, BSP towards non-target students remained above criterion. Teachers 2 and 4 demonstrated maintenance of BSP towards non-target students following generalization training which continued up through the follow-up observation. Previous research (Coffee & Kratochwill, 2013; Riley-Tillman & Eckert, 2001) found limited generalization to other students following a generalization prompt. Moreover, Duncan et al. (2013) used a multi-component consultation package, which resulted in initial increases in generalized praise toward other students, but those gains did not maintain. This study included a unique generalization programming technique, sequential modification, which resulted in generalized praise use for teachers that did not initially generalize their praise use following BITE training, and generalized praise maintained following sequential modification. Future research should continue to test the effects of sequential modification via BITE training on teachers' generalized praise use.

Limitations

Though the results of this study suggest BITE training may be an efficient way to train teachers to increase BSP towards target students and generalize BSP towards others, several limitations should be noted.

Teachers were interviewed using the FAIR-T II to hypothesize possible functions of the target student's behavior. Common consequences for problem behaviors in classrooms include attention and therefore the probability attention would be identified as a possible function may be overestimated. All of the teachers in the study endorsed attention as a possible function for the student's problem behaviors but escape from activities were also endorsed by all the teachers. There is a high probability of attention being a primary function for the students' problem behavior as the data show low percentages of problem behavior when BSP rates are high but this is not conclusive as there are sessions with low percentages of problem behavior even when BSP rates are low.

Another limitation was that Teachers 1, 3, and 4 did not achieve stable BSP rates (at or above criterion) towards their target students prior to follow-up due to time constraints. Towards the end of the study, there were limited opportunities to observe and implement training due to the school year coming to an end and school-wide testing during the final weeks. During maintenance 2, Teacher 2's BSP towards Student 2 was variable and required performance feedback to increase BSP towards Student 2. There was a drop in BSP towards Student 2 during session 18 which recovered to above criterion during session 19. Due to time constraints, maintenance phase was discontinued following the increase in BSP towards Student 2 during session 19 in order to allow for

follow-up to be collected. Teacher 3 demonstrated variability in BSP towards Student 3 during maintenance 2 and received performance feedback to increase BSP, but the increase in BSP was variable and did not maintain during the following observation. Due to time constraints, Teacher 3's BSP maintenance phase concluded prior to her demonstrating consistent BSP rates (at or above criterion). Teacher 4 demonstrated low BSP towards the Student 4 which should have received additional training but due to limited time, no additional training was provided.

A third limitation is that the differences in academic tasks in each of the classrooms may have resulted in higher levels of teacher attention towards individual students which may signal to the teachers an opportunity to provide BSP. For example, calling on students to answer questions provided more opportunity for the teacher to call on a specific student and provide BSP as the rationale for selecting the student (e.g., "Adam, I like the way you are sitting quietly, answer question number five"). Therefore, variability in BSP may have been due to the academic activity provided rather than the BITE training or performance feedback provided.

Despite these limitations, the current study demonstrates BITE training as an efficient method to train teachers to provide BSP, and training may result in generalization without explicit training. For one of the teachers, the initial BITE training was sufficient to maintain and generalize BSP until follow-up. For three of the teachers, generalization training using the BITE resulted in maintained BSP towards non-target students throughout the duration of the study and into follow-up. Further study may be required to determine an efficient manner of training for BSP towards students who

engage in problem behavior that will maintain, but the current study shows that BITE

training alone may result in high rates of praise towards students.

APPENDIX A

TEACHER CONSENT FORM

Dear Teacher,

I am a doctoral student in the School Psychology Program at The University of Southern Mississippi. I currently work under the guidance of Dr. Brad Dufrene and as part of my Doctorate's dissertation project, I am researching praise training for teachers with students displaying problem behaviors in the classroom. A student in your classroom has been referred by you for exhibiting problem behaviors; therefore, we hope you will consent to participating in the project.

If you agree to participate in this study, you will be asked to complete some tasks. Prior to the implementation of the intervention, you will be asked to complete an interview to obtain information pertaining to the referred student's behaviors. The purpose of this interview will be to identify the target behaviors of concern, the setting in which it occurs, and the events which may be maintaining the behavior(s). If the student does not qualify for participation and you are willing, we may ask for additional student recommendations until students meet qualification. If the students do not meet qualification for participation, or parental consent is not provided, other services will be made available to you.

I or other trained graduate students from the School Psychology program at The University of Southern Mississippi will be collecting classroom observations throughout all the phases of this study. Initially you will be asked to instruct in your usual manner and observers will collect data on your behaviors and the target students' behaviors. In the next phase, you will be trained on the intervention procedures using a one-way radio

device consisting of a receiver and a headphone to provide prompting and instructions. At the end of the training, you will be asked to complete a questionnaire to assess your satisfaction with the consultation. You will then be asked to continue implementing the recommended intervention. There may be additional training based on the data collected. At the end of the study, you will be asked to complete a questionnaire to assess your satisfaction with the intervention.

Your participation in this study may result in benefits for you and your students such as: (a) decrease in problem behaviors displayed compared to prior to the intervention, (b) increase in appropriate behaviors displayed compared to prior to the intervention, and (c) a skill that can be used with other students. The possible risks due to participation in this study are: (a) disruption in the classroom due to the observers being present, and (b) disruption in the classroom due to the use of the one-way radio to communicate with you during training sessions.

If your students' behaviors display undesired effects due to the intervention, modifications can be made or the discontinuation of participation in the study can occur and the student(s) can be provided with other services to address the problem.

All non-classwork materials required for this study will be provided to you from myself or other trained graduate students.

All information including interviews and observations obtained during this study will be confidential. Your name and your students' names and other identifying information will not be shared to anyone not related to this study. If the results from this project are to be shared at professional conferences or submitted for publication in any

scholarly journals, all identifying information will be removed. Participation in this study is voluntary and you may withdraw from this study at any time without any consequences.

If you have any questions or concerns regarding this study, please direct questions to Linda-Mai Nguyen or Dr. Brad Dufrene at (601) 266 - 5256   or via email at lindamai.nguyen@eagles.usm.edu or brad.dufrene@usm.edu.

Sincerely,

_____   _____

Linda-Mai Nguyen, M. A., BCBA   Brad A. Dufrene, Ph.D.

School Psychologist-in-Training   Supervising Licensed Psychologist

Department of Psychology   MS License # 50-881

The University of Southern Mississippi   Department of Psychology

          The University of Southern

          Mississippi

To Be Completed By Teacher

If you agree to participate, please read, sign, and return this form.

I have received and read the consent document and have decided to participate in this project. The purpose and procedures have been explained to me. I have had an opportunity to ask questions and I understand that if I have questions at any time in the future, I can ask and expect to receive a reply in a timely manner. I am voluntarily signing this form to participate under the conditions as stated.

I understand that I will be asked to implement an intervention and that observations will be conducted in the classroom. In order to participate in this study, I understand that I will be required to complete interview(s), implement the intervention and complete some questionnaires. I understand that I will be trained in the intervention with the use of a radio device by the consultant. I also understand that all data collected in the process of this study will be confidential and that there will be nothing to identify myself or my students in the event that the data from this study be presented or published.

I understand that I may withdraw my consent for participation at any time without penalty.

Name of Teacher	Signature	Date

Name of Witness	Signature

APPENDIX B

PARENT CONSENT FORM

Dear Parent,

I am a doctoral student in the School Psychology Program at The University of Southern Mississippi. I currently work under the guidance of Dr. Brad Dufrene and as part of my Doctorate's dissertation project, I am researching praise training for teachers with students displaying problem behaviors in the classroom. Your child has recently been referred for displaying problem behaviors in the classroom by his or her teacher.

If you agree to allow your child to participate in this study, your child's teacher will be asked to complete some tasks. Prior to the implementation of the intervention, the teacher will be asked to complete an interview to obtain information pertaining to your child's behaviors. The purpose of this interview will be to identify the different aspects of the behavior of concern.

Following the interview, observations within the classroom will be conducted by myself and/or trained graduate students from the School Psychology Program at The University of Southern Mississippi. If your child qualifies for participation, your child's teacher will be trained to implement an intervention consisting of praise. If your child does not qualify for participation in this study, other services will be made available to the teacher.

Your child's participation in this study may result in benefits such as: (a) a decrease in problem behaviors, (b) increase in appropriate behaviors, and (c) your child's teacher acquiring or improving upon a skill that can be used with other students.

The possible risks due to participation in this study are: (a) disruption in the classroom due to observers being present, and (b) disruption in the classroom due to communication between teacher and consultant.

If your child's behaviors display undesired effects due to the intervention, modifications can be made or the discontinuation of participation in this study can occur and your child can be provided with other services to address the problem.

All information including interviews and observations obtained during this study will be confidential. Your child's name and other identifying information will not be shared to anyone not related to this study. If the results from this project are to be shared at professional conferences or submitted for publication in any scholarly journals, all identifying information will be removed. Participation in this study is voluntary and you may withdraw your child from this study at any time without any consequences.

If you have any questions or concerns regarding this study, please direct questions to Linda-Mai Nguyen or Dr. Brad Dufrene at (601) 266 – 5256 or via email at lindamai.nguyen@eagles.usm.edu or brad.dufrene@usm.edu.

Sincerely,

_____   _____

Linda-Mai Nguyen, M. A., BCBA   Brad A. Dufrene, Ph.D.
School Psychologist-in-Training   Supervising Licensed Psychologist
Department of Psychology   MS License # 50-881
The University of Southern Mississippi   Department of Psychology
    The University of Southern
    Mississippi

To Be Completed By Parent

If you agree to allow your child to participate, please read, sign, and return this form.

I have received and read the consent document and have decided to allow my child to participate in this project. The purpose and procedures have been explained to me. I have had an opportunity to ask questions and I understand that if I have questions at any time in the future, I can ask and expect to receive a reply in a timely manner. I am voluntarily signing this form to participate under the conditions as stated.

I understand that all data collected in the process of this study will be confidential and that there will be nothing to identify my child in the event that the data from this study be presented or published.

I understand that I may withdraw my consent for participation at any time without penalty.

Name of Parent	Signature	Date

APPENDIX C

IRB ACCEPTANCE LETTER

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5116 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional-review-board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 13121204
PROJECT TITLE: Direct Training of Teachers for Classroom Management Implementation and Generalization
PROJECT TYPE: New Project
RESEARCHER(S): Linda-Mai Nguyen
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Psychology
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 12/20/2013 to 12/19/2014

Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX D

FAIR-T II

Functional Assessment Informant Record for Teachers - II   **Teacher No.:**   **Student No.:**

Teacher Information   Teacher Name: _____   School: _____

Please Circle One:

Gender:	Male	Female		Area:	General Education	Special Education

Race/Ethnicit	African American	Asian	Caucasian	Hispanic	Native American	Other _____

Age: 22-25   26-29   30-33   34-37   42-45   46-49   50-53   54-57   58-61   62-65   66+

Years Teaching: 1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20+

Grade Level You Are Teaching (If you teach more than one grade, please circle all that apply):

K   1   2   3   4   5   6   7   8   9   10   11   12

Highest Degree: Bachelors   Masters   Masters +30   Specialist   Doctorate

Experience with Functional Behavior Assessment:

1   2   3   4   5   1 = No Experience   5 = Very Experienced

Experience with Classroom Consultants

1   2   3   4   5   1 = No Experience   5 = Very Experienced

Student Information   Assigned Student Number: _____

Briefly list below the student's typical daily schedule of activities.

Time	Activity	Time	Activity
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please indicate good <u>days</u> and <u>times</u> to observe. (At least two observations are needed.)

Observation #1   Observation #2   Observation #3 (Back-up)
Date: _____   Date: _____   Date: _____
Time: _____   Time: _____   Time: _____

Student Information   FAIR-T II   2

Gender:	Male	Female	Grade: _____	Age: _____

Race/Ethnicit:	African American	Asian	Caucasian	Hispanic	Native American	Other _____

Classification:	General Education	Special Education	Ruling: _____

Please do not reference the student by name. Please put "he" or "she" or the student's initials.

1.   Describe the referred student. What is he/she like in the classroom? (Write down what you believe is the most important information about the referred student.)

_____
_____
_____
_____

2.   Pick a second student of the same sex who is also difficult to teach. What makes the referred student more difficult than the second student?

_____
_____
_____
_____
_____

3.   a. On what grade level is the student reading?   _____
       b. On what grade level is an average student in the class reading?   _____

4.   a. On what grade level is the student performing in math?   _____
       b. On what grade level is an average student in the class performing in math?   _____

5.   a. What is the student's classwork completion percentage (0 - 100%)?   _____
       b. What is the student's classwork accuracy percentage (0 - 100%)?   _____

6.   a. What percentage of adult instructions will the student follow the first time?   _____
       b. What percentage of adult instructions will the student eventually follow?   _____
       c. What is the student's accuracy for compliance with adult instructions?   _____

7.   Is the student taking any medications that might affect their behavior?
       _____ Yes   _____ No   If yes, briefly explain: _____

_____

8.   Do you have any specific health concerns regarding this student?
       _____ Yes   _____ No   If yes, briefly explain: _____

_____

9.   Please describe the student's strengths.

_____

10.   What have you tried in the past to deal with this student's problem behavior?

_____

11.   Describe your current classroom behavior management plan.   FAIR-T II   3

_____

_____

_____

12.   When during the day (two academic <u>activities</u> and <u>times)</u> does the student's problem behavior(s) typically occur?

Academic
Activity #1: _____   Time: _____

Academic
Activity #2: _____   Time: _____

Problem Behaviors   FAIR-T II   4

Please circle **1 to 3** problem behaviors only and rank the behaviors in order of severity
with 1 being the most severe and 3 being the least severe.

Potential Problem Behaviors (only circle 3; rank in order of severity 1= most; 3 = least)   **Rank Order**

Off-task behavior (e.g., looking away from academic work/ teacher; failing to complete work) 1 2 3
Inappropriate Vocalizations (e.g., talking without permission; making sounds; calling out)   1 2 3
Fidgeting or playing with objects (e.g., tapping pencil; playing with toys)   1 2 3
Out of Seat or Area (e.g., leaving assigned seat or area; student leaves classroom)   1 2 3
Non-complaint behavior (e.g., failing to follow adult instructions)   1 2 3
Disrespectful behavior (e.g., arguing with adults, using profanity)   1 2 3
Aggressive Behavior (e.g., hitting, kicking, biting others; throwing objects at others)   1 2 3
Self-injurious Behavior (e.g., hurting oneself)   1 2 3
Bullying (e.g., picking on peers; making fun of others; coercive comments)   1 2 3
Tantrum (e.g., yelling, screaming, crying, throwing oneself on the floor)   1 2 3
Inappropriate social behvaior (e.g., staring at others; too close in physical proximity)   1 2 3
Failure to speak/talk in class (e.g., will not talk to others despite ability to do so)   1 2 3
Emotional behavior (e.g., student shuts down; student cries excessively outside of tantrums) 1 2 3
Sleeping in class (e.g., student lays head down or sleeps during instruction)   1 2 3
Other behavior: _____   1 2 3

1.   Rate how _manageable_ the behavior is:

a. Problem Behavior 1   1   2   3   4   5
                           Manageable   Unmanageable

b. Problem Behavior 2   1   2   3   4   5
                           Manageable   Unmanageable

c. Problem Behavior 3   1   2   3   4   5
                           Manageable   Unmanageable

2.   Rate how _disruptive_ the behavior is:

a. Problem Behavior 1   1   2   3   4   5
                           Mildly   Very

a. Problem Behavior 2   1   2   3   4   5
                           Mildly   Very

a. Problem Behavior 3   1   2   3   4   5
                           Mildly   Very

3.   How often does the behavior occur _per day_ (please circle)?

a. Problem Behavior 1   < 1 - 3   4 - 6   7 - 9   10 - 12   > 13

a. Problem Behavior 2   < 1 - 3   4 - 6   7 - 9   10 - 12   > 13

a. Problem Behavior 3   < 1 - 3   4 - 6   7 - 9   10 - 12   > 13

4.   How many _months_ has the behavior been present?   FAIR-T II   5

a. Problem Behavior 1	< 1	2	3	4	entire school year
a. Problem Behavior 2	< 1	2	3	4	entire school year
a. Problem Behavior 3	< 1	2	3	4	entire school year

5.   How long does the problem behavior last in duration?

        a. Problem Behavior 1   < 1 min   1 - 5 min 6 - 10 min > 10 min

        b. Problem Behavior 2   < 1 min   1 - 5 min 6 - 10 min > 10 min

        c. Problem Behavior 3   < 1 min   1 - 5 min 6 - 10 min > 10 min

6.   For each problem behavior, provide an appropriate replacement behavior that you would like the student to perform instead of the current problem behavior.

        a. Problem Behavior 1   a. Replacement Behavior:_____

        b. Problem Behavior 2   b. Replacement Behavior:_____

        c. Problem Behavior 3   c. Replacement Behavior:_____

FAIR-T II   6

Antecedents:

Behavior 1: _____ Behavior 2: _____ Behavior 3: _____

0= never happens   1 = happens a little   2 = happens some   3 = happens very often

Please circle the corresponding number for each of the three behaviors listed.

	Behavior 1	Behavior 2	Behavior 3
I. Academic Task Demand			
1 Does the behavior occur during a certain *type* of task?	0 1 2 3	0 1 2 3	0 1 2 3
2 Does the behavior occur during *easy* tasks?	0 1 2 3	0 1 2 3	0 1 2 3
3 Does the behavior occur during *difficult* tasks?	0 1 2 3	0 1 2 3	0 1 2 3
4 Does the behavior occur during *certain subject areas*?	0 1 2 3	0 1 2 3	0 1 2 3
5 Does the behavior occur during *new* subject material?	0 1 2 3	0 1 2 3	0 1 2 3
II. Transitions			
6 Does the behavior occur when a request is made to *stop* an activity?	0 1 2 3	0 1 2 3	0 1 2 3
7 Does the behavior occur when a request is made to *begin a new activity*?	0 1 2 3	0 1 2 3	0 1 2 3
8 Does the behavior occur during *transition* periods (academic subjects or locations)?	0 1 2 3	0 1 2 3	0 1 2 3
III. Academic Settings			
9 Does the behavior occur in *certain settings*?	0 1 2 3	0 1 2 3	0 1 2 3
10 Does the behavior occur in *large group*?	0 1 2 3	0 1 2 3	0 1 2 3
11 Does the behavior occur in *small group*?	0 1 2 3	0 1 2 3	0 1 2 3
12 Does the behavior occur during *independent work*?	0 1 2 3	0 1 2 3	0 1 2 3
13 Does the behavior occur in *one-to-one interaction*?	0 1 2 3	0 1 2 3	0 1 2 3
IV. Non-Classroom Settings			
14 Does the behavior occur in the *bathroom*?	0 1 2 3	0 1 2 3	0 1 2 3
15 Does the behavior occur at *recess*?	0 1 2 3	0 1 2 3	0 1 2 3
16 Does the behavior occur in the *cafeteria*?	0 1 2 3	0 1 2 3	0 1 2 3
17 Does the behavior occur on the *bus*?	0 1 2 3	0 1 2 3	0 1 2 3
18 Does the behavior occur in *other situations*? Specify other:	0 1 2 3	0 1 2 3	0 1 2 3
V. Presentation Style			
19 Does the behavior occur when items are presented *auditorily*?	0 1 2 3	0 1 2 3	0 1 2 3
20 Does the behavior occur more often during motor activities?	0 1 2 3	0 1 2 3	0 1 2 3
21 Does the behavior occur when items are presented *visually*?	0 1 2 3	0 1 2 3	0 1 2 3
VI.Time of Day			
22 Does the behavior occur in the morning (before lunch)?	0 1 2 3	0 1 2 3	0 1 2 3
23 Does the behaviuor occur in the afternoon (after lunch)?	0 1 2 3	0 1 2 3	0 1 2 3

VII. Physiological

	Behavior 1	Behavior 2	Behavior 3
24 Does the behavior occur when the student is having complications with a medical condition?	0 1 2 3	0 1 2 3	0 1 2 3
25 Does the behavior occur if the student appears to be hungry?	0 1 2 3	0 1 2 3	0 1 2 3
33 Does the behavior occur if the student appears to be tired?	0 1 2 3	0 1 2 3	0 1 2 3

VIII. Other

	Behavior 1	Behavior 2	Behavior 3
26 Does the behavior occur when a *disruption* occurs in the normal routine?	0 1 2 3	0 1 2 3	0 1 2 3
27 Does the behavior occur when the student's *request has been denied*?	0 1 2 3	0 1 2 3	0 1 2 3
28 Does the behavior occur when a *specific person is in the room*?	0 1 2 3	0 1 2 3	0 1 2 3
29 Does the behavior occur when a *specific person is absent from the room*?	0 1 2 3	0 1 2 3	0 1 2 3
30 Are there any other behaviors that usually *precede* the problem behavior? What?	0 1 2 3	0 1 2 3	0 1 2 3
31 Is there anything you could do that would *ensure* the occurrence of the behavior? What?	0 1 2 3	0 1 2 3	0 1 2 3
32			
Are there any events occurring in the child's home that seem to *precede* the occurrence of the behavior at school? What?	0 1 2 3	0 1 2 3	0 1 2 3
34			
Does anything else precede the problem behavior that is likely to "set it off"?	0 1 2 3	0 1 2 3	0 1 2 3

Consequences:

Behavior 1: _____ Behavior 2: _____ Behavior 3: _____

0 = never happens   1 = happens a little   2 = happens some   3 = happens very often

Please circle the corresponding number for each of the three behaviors listed.

I.   Positive Reinforcement: Access to Preferred Activities or Items

	Behavior 1	Behavior 2	Behavior 3
1 Does someone provide the student with access to an activity after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
2 Does someone provide the student with access to a toy or item after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
3 Does the student take possession of an activity after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
4 Does the student take possession of a toy or item after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
5 Does the student bring activities, toys, or items to school that are associated with the behavior?	0 1 2 3	0 1 2 3	0 1 2 3

II.   Negative Reinforcement: Escape, Delay, Reduction or Avoidance of Demands

	Behavior 1	Behavior 2	Behavior 3
6 Are ongoing task demands removed or terminated during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
7 Are ongoing task demands reduced during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
8 Is the start of a new task demand delayed after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
9 Is the start of a new task demand completely avoided after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
10			
Is there any task you have stopped presenting to the student as a result of the problem behavior? If yes, describe:			

III.   Positive Reinforcement: Attainment of Peer and Teacher Attention

	Behavior 1	Behavior 2	Behavior 3
11 Does the student receive positive attention from peers during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3
12 Does the student receive negative attention from peers during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3

13 Does the student receive positive attention from adults during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
14 Does the student receive negative attention from adults during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
15 Does the teacher re-direct or interrupt the child during or after the behavior is exhibited?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

IV. Negative Social Reinforcement: Escape, Delay, Reduction or Avoidance of Attention

16 Are ongoing social interactions with peers stopped during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
17 Are upcoming social interactions with peers avoided after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
18 Are ongoing social interactions with adults stopped during or after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
19 Are upcoming social interactions with adults avoided after the behavior has occurred?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
20 Specific individuals stopped interacting with this student due to the behavior?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

V. Automatic Reinforcement:

21 Does the student display the behavior when alone without interaction from others?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
22 Does the student appear to be calm or relaxed as a result of performing the behavior?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
23 Does the student appear to be excited or aroused as a result of performing the behavior?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
24 Does the student apper to obtain pleasure or enjoyment from performing the behavior itself?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
25 Does the student appear to obtain stimulation (visual, auditory, motor) as a result of performing the behavior?	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

VI. Other Problems

26

Are there other problem behaviors that often occur after the behavior is exhibited? If yes, describe:

	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

VII. Intervention

27 Does the student typically receive praise or any positive consequence when behavior occurs that you would like to see instead of the problem behavior? If yes, describe:

	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

APPENDIX E

BEHAVIOR INTERVENTION RATING SCALE (BIRS)

Behavior Intervention Rating Scale (BIRS; Elliot and Von Brock Treuting, 1991)
1=Strongly Disagree 2=Disagree 3=Slightly Disagree 4=Slightly Agree 5=Agree 6=Strongly Agree

- 1 -

1.	This would be an acceptable intervention for the child's problem behavior.	1	2	3	4	5	6	
2.	Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	1	2	3	4	5	6	
3.	The intervention should prove effective in changing the child's problem behavior.	1	2	3	4	5	6	
4.	I would suggest the use of this intervention to other teachers.	1	2	3	4	5	6	
5.	The child's behavior problem is severe enough to warrant use of this intervention.	1	2	3	4	5	6	
6.	Most teachers would find this intervention suitable for the behavior problem described.	1	2	3	4	5	6	
7.	I would be willing to use this in the classroom setting.	1	2	3	4	5	6	
8.	The intervention would *not* result in negative side-effects for the child.	1	2	3	4	5	6	
9.	The intervention would be appropriate intervention for a variety of children.	1	2	3	4	5	6	
10.	The intervention is consistent with those I have used I have used in classroom settings.	1	2	3	4	5	6	
11.	The intervention was a fair way to handle the child's problem behavior.	1	2	3	4	5	6	
12.	The intervention is reasonable for the behavior problem described.	1	2	3	4	5	6	
13.	I like the procedures used in the intervention.	1	2	3	4	5	6	
14.	The intervention was a good way to handle this child's behavior problem.	1	2	3	4	5	6	

Behavior Intervention Rating Scale (BIRS; Elliot and Von Brock Treuting, 1991)
1=Strongly Disagree 2=Disagree 3=Slightly Disagree 4=Slightly Agree 5=Agree 6=Strongly Agree

15. Overall, the intervention would be beneficial for the child.

1   2   3   4   5   6

16. The intervention would quickly improve a child's behavior.

1   2   3   4   5   6

17. The intervention would produce a lasting improvement in the child's behavior.

1   2   3   4   5   6

18. The intervention would improve a child's behavior to the point that it would not noticeably deviate from other classmates' behavior.

1   2   3   4   5   6

19. Soon after using the intervention, the teacher would notice a positive change in the problem behavior.

1   2   3   4   5   6

20. The child's behavior will remain at an improved level even after the intervention is discontinued.

1   2   3   4   5   6

21. Using the intervention should not only improve the child's behavior in the classroom, but also in other settings (e.g., other classrooms, home).

1   2   3   4   5   6

22. When comparing this child with a well-behaved peer before and after the use of the intervention, the child's and the peer's behavior would be more alike after using the intervention.

1   2   3   4   5   6

23. The intervention should produce enough improvement in the child's behavior so the behavior no longer is a problem in the classroom.

1   2   3   4   5   6

24. Other behaviors related to the problem behavior also are likely to be improved by the intervention.

1   2   3   4   5   6

APPENDIX F

CHILDREN'S INTERVENTION RATING PROFILE MODIFIED (CIRP; WITT AND

ELLIOTT, 1985)

Observer Name	Classroom/Teacher	Date

Question	Strongly Agree					Strongly Disagree
1. My teacher using praise was fair.	1	2	3	4	5	6
2. My teacher was not too harsh on me.	1	2	3	4	5	6
3. Praise will not cause problems with my friends.	1	2	3	4	5	6
4. Praise is the best way to stop my behaviors.	1	2	3	4	5	6
5. My teacher should use praise with other students.	1	2	3	4	5	6
6. I liked the praise from my teacher.	1	2	3	4	5	6
7. I think the praise helped me do better in class.	1	2	3	4	5	6

APPENDIX G

CONSULTATION ACCEPTABILITY RATING SCALE

Observer Name	Classroom/Teacher	Date

Question	Strongly Disagree					Strongly Agree
1. The consultant seemed knowledgeable about effective classroom practices.	1	2	3	4	5	6
2. The consultant effectively answered my questions.	1	2	3	4	5	6
3. The consultant provided recommendations that were appropriate given the concerns about the student.	1	2	3	4	5	6
4. The consultant clearly explained the assessment and/or intervention procedures.	1	2	3	4	5	6
5. The consultant effectively taught me how to implement their recommendations.	1	2	3	4	5	6
6. The consultant provided me with the resources to implement their recommendations.	1	2	3	4	5	6
7. The consultation process seemed appropriate give the severity of the student's referral concern.	1	2	3	4	5	6
8. The consultation process did not significantly interfere with classroom activities.	1	2	3	4	5	6

9. The consultation process was completed in a timely fashion.	1 2 3 4 5 6
10. The referred student benefited from the consultation process.	1 2 3 4 5 6
11. I would like to work with this consultant again in the future.	1 2 3 4 5 6
12. Other teachers would benefit from working with this consultant.	1 2 3 4 5 6

APPENDIX H

OBSERVATION FORM

Date:_____   Classroom/Teacher: _____   Observer Initials: _____

Phase: _____   Session #: _____   IOA: Y   N

Behavior	1	2	3	4	5	6	7	8	9	10
Prob Bx	P	P	P	P	P	P	P	P	P	P
Target										
Gen										
Behavior	11	12	13	14	15	16	17	18	19	20
Prob Bx	P	P	P	P	P	P	P	P	P	P
Target										
Gen										
Behavior	21	22	23	24	25	26	27	28	29	30
Prob Bx	P	P	P	P	P	P	P	P	P	P
Target										
Gen										
Behavior	31	32	33	34	35	36	37	38	39	40
Prob Bx	P	P	P	P	P	P	P	P	P	P
Target										
Gen										
Behavior	41	42	42	44	45	46	47	48	49	50
Prob Bx	P	P	P	P	P	P	P	P	P	P
Target										
Gen										
Behavior	51	52	53	54	55	56	57	58	59	60
Prob Bx	P	P	P	P	P	P	P	P	P	P
Target										
Gen										

Prob Bx: problem behavior of target student (place a / over P if behavior occurred)
Target: BSP towards target student
Gen: BSP towards any other student in class (excluding target student)

APPENDIX I

PROCEDURAL FIDELITY FORM

| Observer Name | Classroom/Teacher | Date |

Instructions: Mark "Yes" or "No" if step was completed during observation.

Training

	Yes	No	N/A	Procedure Checklist
1				Provide BITE to teacher at beginning of training session
2				Provide prompt to teacher if praise does not occur once every two minutes
3				Retrieved BITE from teacher at end of session

Generalization

	Yes	No	N/A	Procedure Checklist
1				Provide BITE to teacher at beginning of training session
2				Provide prompt to teacher if praise does not occur once every four minutes towards other student(s)
3				Retrieved BITE from teacher at end of session

REFERENCES

Alpert, J. L., & Yammer, D. (1983). Research in school consultation: A content analysis of selected journals. *Professional Psychology: Research and Practice, 14*, 604-612.

Bartholowmew, D. (1993). Effective strategies for praising students. *Music Educators Journal, 80*, 40-43.

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

Bowles, P. J., & Nelson, R. O. (1976). Training teachers as mediators: Efficacy of a workshop versus the bug-in-the-ear technique. *Journal of School Psychology, 14*, 15-26.

Carter, S. L. (2010). *The social validity manual: a guide to subjective evaluation of behavior interventions in applied behavior analysis.* London, UK: Elsevier.

Cherne, J. L. (2008). *Effects of praise on student behavior in the classroom.* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 304528900).

Coffee, G., & Kratochwill, T. R. (2013). Examining teacher use of praise taught during behavioral consultation: implementation and generalization considerations. *Journal of Educational and Psychological Consultation, 23*, 1-35.

Coulter, G. A., & Grossen, B. (1997). The effectiveness of in-class instructive feedback versus after-class instructive feedback for teachers learning direct instruction teaching behaviors. *Effective School Practices, 16*, 21-35.

Doggett, R. A., Edwards, R. P., Moore, J. W., Tingstrom, D. H., & Wilczynski, S. M. (2001). An approach to functional assessment in general education classroom settings. *School Psychology Review, 30*, 313-328.

Doggett, R. A., Mueller, M. M., & Moore, J. W. (2002). Functional assessment informant record: Creation evaluation and future research. *Proven Practice: Prevention and Remediation Strategies for Schools, 4*, 25-30.

Dufrene, B. A., Harpole, L. L., & Zoder-Martell, K. (2014). Direct behavioral consutation: Effects on teachers' praise and student disruptive behavior. *Psychology in the Schools 51*, 567-580.

Dufrene, B. A., Parker, K., Menousek, K., Zhou, Q., Harpole, L. L., & Olmi, D. J. (2012). Direct behavioral consultation in head start to increase teacher use of praise and effective instruction delivery. *Journal of Educational & Psychological Consultation, 22*, 159-186.

Duncan, N. (2012). *The effects of direct training and the STAR problem solving model on teachers' treatment integrity and generalized used of an intervention*. (Doctoral dissertation). Retrieved from http://aquila.usm.edu/theses_and_dissertations/

Duncan, N. G., Dufrene, B. A., Sterling, H. E., & Tingstrom, D. H. (2013). Promoting teachers' generalization of intervention use through goal-setting and performance feedback. *Journal of Behavioral Education*. DOI 10.1007/s10864-013-9173-5

Edwards, R. P. (2002). A tutorial for using the Functional Assessment Informant Record for Teachers. *Proven Practice: Prevention and Remediation Solutions for Schools., 4*, 31-33.

Elliott, S. N., & Von Brock Treuting, M. (1991). The behavior intervention rating scale: Development and validation of a pretreatment acceptability and effectiveness measure. *Journal of School Psychology, 29*, 43-51.

Fagan, T. K., & Wise, P. S. (2007). Chapter 4 Roles and Functions of School Psychologists. In T. K. Fagan, & P. S. Wise, *School Psychology: Past, Present, and Future* (3rd ed., pp. 105-156). Bethesda, MD: National Association of School Psychologists.

Ford, A. D., Olmi, D. J., Edwards, R. P., & Tingstrom, D. H. (2001). The sequential introduction of compliance training components with elementary-aged children in general education classroom settings. *School Psychology Quarterly, 16*, 142-157.

Fox, R. A., & Nicholson, B. C. (2003). *Parenting young children: A facilitator's guide.* Longmont, CO: Sopris West.

Hawkins, S. M., & Heflin, L. J. (2011). Increasing secondary teachers' behavior-specific praise using a video self-modeling and visual performance feedback intervention. *Journal of Positive Behavior Interventions, 13*, 97-108.

Keller, C. L., Brady, M. P., & Taylor, R. L. (2005). Using self evaluation to improve student teacher interns' use of specific praise. *Education and Training in Developmental Disabilities, 40*, 368-376.

Martell, K. A. (2012). *Increasing positive interactions between staff and individuals with disabilities: The impact of training on acquisition and maintenance*. (Doctoral dissertation). Retrieved from http://aquila.usm.edu/theses_and_dissertations/

Martens, B. K., Hiralall, A. S., & Bradley, T. A. (1997). A note to teacher: Improving student behavior through goal setting and feedback. *School Psychology Quarterly, 12*, 33-41.

McAllister, L. W., Stachowiak, J. G., Baer, D. M., & Conderman, L. (1969). The application of operant conditioning techniques in a secondary school classroom. *Journal of Applied Behavior Analysis, 2*, 277-285.

Noell, G. H., & Witt, J. C. (1996). A critical re-evaluation of five fundamental assumptions underlying behavioral consultation. School Psychology Quarterly, 11, 189-203.

Noell, G. H., Witt, J. C., Gilbertson, D. N., Ranier, D. D., & Freeland, J. T. (1997). Increasing teacher intervention implementation in general education settings through consultation and performance feedback. *School Psychology Quarterly, 12*, 77-88.

Noell, G. H., Witt, J. C., LaFleur, L. H., Mortenson, B. P., Ranier, D. D., & LeVelle, J. (2000). Increasing intervention implementation in general education following consultation: A comparison of two follow-up strategies. *Journal of Applied Behavior Analysis, 33,* 271-284.

Olmi, D. J. (1998). *Effective child management strategies: How to prevent "Bratty Kid" syndrome.* [Brochure]. Hattiesburg, MS: University of Southern Mississippi School Psychology Service Center.

Reinke, W. M., Lewis-Palmer, T., & Martin, E. (2007). The effect of visual performance feedback on teacher use of behavior-specific praise. *Behavior Modification, 31*, 247-263.

Riley-Tillman, T. C., & Eckert, T. L. (2001). Generalization Programming and School-Based Consultation: An Examination of Consultees' Generalization of Consultation-Related Skills. *Journal of Educational and Psychological Consultation, 12*, 217-241.

Scheeler, M. C. (2008). Generalizing effective teaching skills: the missing link in teacher preparation. Journal of Behavior Education, 17, 145-159. doi:10.1007/s10864-007-9051-0

Sheridan, S., Welch, M., & Orne, S. (1996). Is consultation effective? A review of outcome research. *Remedial and Special Education, 17*, 341-354.

Sloat, K. C. M., Tharp, R. G., & Gallimore, R. (1977). The incremental effectiveness of classroom-based teacher-training techniques. *Behavior Therapy, 8*, 810-818.

Snider, L. A., Seligman, L. D., Ketchen, B. R., Levitt, S. J., Bates, L. R., Garvey, M. A., et al. (2002). Tics and Problem Behaviors in School Children: Prevalence, Characterization, and Associations. *Pediatrics, 110*, 331-336.

Sterling-Turner, H., & Watson, T. S. (1999). Consultant's guide for the use of time-out in the preschool and elementary classroom. *Psychology in the Schools, 36*, 135-148.

Sterling-Turner, H. E., Watson, T. S., & Moore, J. W. (2002). The effects of direct training and treatment integrity on treatment outcomes in school consultation. *School Psychology Quarterly, 17*, 47-77.

Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis, 10*, 349-367.

Stokes, T. F., & Osnes, P. G. (1989). An operant pursuit of generalization. *Behavior Therapy, 20*, 337-355.

Sugai, G., & Horner, R. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child & Family Behavior Therapy, 24*, 23-50.

Sutherland, K., Webby, J., & Copeland, S. (2000). Effect on varying rates of behavior-specific praise on the on-task behavior of students with EBD. *Journal of Emotional and Behavioral Disorders, 8*, 2-8.

Thompson, M. T., Marchant, M., Anderson, D., Prater, M. A., & Gibb, G. (2012). Effects of tiered training on general educators' use of specific praise. *Education and Treatment of Children, 35*, 521-546.

Thompson, T. (1997). Do we need to train teachers how to administer praise? Self-worth theory says we do. *Learning and Instruction, 7*, 49-63.

Tillman, T. C. (2000). Generalization programming and behavioral consultation. *The Behavior Analyst Today, 1*, 30-34.

Van Houten, R., & Sullivan, K. (1975). Effects of an audio cueing system on the rate of teacher praise. *Journal of Applied Behavior Analysis, 8*, 197-201.

Vannest, K. J., Davis, J. L., Davis, C. R., Mason, B. A., & Burke, M. D. (2010). Effective
intervention for behavior with a daily behavior report card: a meta-analysis.
School Psychology Review, 39, 654-672.

Von Brock, M., & Elliott, S. N. (1987). Influence and treatment effectiveness information
on the acceptability of classroom interventions. *Journal of School Psychology, 25*,
131-144.

Watson, T.S., & Sterling-Turner, H. E. (2008). Best practices in direct behavioral
consultation. In A. Thomas & J. Grimes (Eds.), *Best practices in school
psychology* (5th ed., pp. 1661-1672). Washington, DC: National Association of
School Psychologists.

White, M. A. (1975). Natural rates of teacher approval and disapproval in the classroom.
Journal of Applied Behavior Analysis, 8, 367-372.

Witt, J. C., & Elliott, S. N. (1985). Acceptability of classroom intervention strategies. In
T. R. Kratochwill, *Advances in school psychology* (4th ed., pp. 251-288).
Mahwah, NJ: Erlbaum.

Witt, J. C., Gresham, F. M., & Noell, G. H. (1996). What's behavioral about behavoral
consultation? *Journal of Educational and Psychological Consultation, 7*, 327-
344.

Workman, E. A., Watson, P. J., & Helton, G. (1982). Teachers' self-monitoring of praise
vs praise instructions: effects on teachers' and students' behavior. *Psychological
Reports, 50*, 559-565.

Wright, M. R., Ellis, D. N., & Baxter, A. (2012). The effect of immediate or delayed video-based teacher self-evaluation on Head Start teachers' use of praise. *Journal of Research in Childhood Education., 26*, 187-198.

Zoder-Martell, K. A., Dufrene, B. A., Tingstrom, D. H., Olmi, D. J., Jordan, S. S., Biskie, E. M., & Sherman, J. C. (2014). Training direct care staff to increase positive interactions with individuals with developmental disabilities. *Research in Developmental Disabilities*, *35*, 2180-2189.