

GENERALIZATION OF TEACHER PROVIDED
BEHAVIOR SPECIFIC PRAISE ACROSS CLASSROOM
INSTRUCTIONAL PERIODS

BY

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Abstract: Lack of classroom management skills is one of the largest contributors to teacher burnout and job dissatisfaction. Teachers are often ill-equipped to handle problematic behaviors due to lack of training which can lead to displaying higher rates of punishment for undesired behaviors instead of reinforcing positive behaviors (Evertson & Weinstein, 2006). This can lead to teachers' attempts to decrease the problem behaviors only to have them increase instead (Farmer, Reinke, & Brookes, 2014). Teachers could change this by increasing positive reinforcement provided in the classroom (Evertson & Weinstein, 2006). Providing praise to a student not only rewards the student for engaging in appropriate behaviors, but also identifies to others what behaviors are appropriate (Simonsen, et al., 2008).

The use of teacher praise is an effective intervention which can be implemented with little or no cost (Sutherland, Wehby, & Copeland, 2000). Research (Simonsen, Fairbanks, Briesch, Meyers & Sugai, 2008) has shown the use of behavior-specific praise has the strongest research-backed evidence base out of all of the well-known methods to improve classroom management. However, studies indicate the use of praise within the classroom is used infrequently in comparison to the rates the existing research recommends (Allday et al., 2012).

While much has been researched on the generalization of child behaviors, there is little research regarding the generalization of teacher behaviors. Research has shown teachers have the ability to generalize in multiple settings but do not do this automatically (Coffee & Kratochwill, 2013). Often the use of goal setting and performance feedback increases teacher generalization (Duncan, Dufrene, Sterling, & Tingstrom, 2013).

This study evaluated the generalization of teacher behaviors in an inclusive classroom across different classroom instructional periods. In this multiple baseline design, all four teachers taught in K-5 inclusive educational settings and were referred through a volunteer basis or through administrator referral. Two thirty-minute time periods during the school day were identified by teacher nomination and used in this study. Visual analysis was utilized to evaluate differences in teacher provided statements and percentage of students on-task.

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CHAPTER I

INTRODUCTION

School psychology uses the public health model as a framework for the basis of all psychological services provided (Strein, Hoadwood & Cohn, 2003). The use of this model allows practicing school psychologists to be able to provide best practices while also ensuring that the services being provided are the most efficient, have a great deal of efficacy and have social validity within the school. The use of behavioral expectations within the school helps students to know what the behavioral expectations that are expected of them are (Lewis & Sugai 1999). Using behavior specific praise within the individual classroom increases the rate of on task behavior for students (Sutherland, Wehby, & Copeland 2000). Using this behavior specific praise in the classroom provides reinforcement for the prosocial behaviors and the behaviors that are expected of them while at the same time helping to decrease the behaviors that are not welcomed within the classroom. The majority of the time within the school system, generalization will not be the focus due to the specific nature of skills being improved upon (Stokes & Osnes 1989). However, generalization may be necessary for a student or a teacher to use with a particular skill. There are still areas in need of future research before anything can be said conclusively.

There is currently a general lack of understanding about the generalization of teacher behavior throughout the school day. The existing research focuses on generalizing teacher behavior from one student to additional students. Additional research is necessary to understand what generalization conditions work and how the conditions can impact teacher consultation.

Positive Behavior Interventions and Supports

Positive Behavior and Intervention and Supports (PBIS) is an implementation framework which emphasizes the use of teaching as the main method of behavior change and focuses on replacing punishment with redesigning the environment in order to attain meaningful changes in the behavior of students (Sugai et al., 2000). Within this framework of PBIS, the practices implemented are organized in such a way as to provide different levels of support such as school-wide, class-wide and for the individual student. The class-wide support includes components such as active supervision and high rates of praise to all students (Sugai & Simonsen, 2012). The existing empirical literature supports the use of PBIS as an effective means to increase the use of data-based decision-making which guide the implementation of behavioral interventions, reduce the occurrence of problem behaviors from students and improve the overall school climate (Horner, Sugai & Anderson, 2010).

Behavior Specific Praise

Teacher attention, provided through behavior specific praise, has been found to be the one type of attention which is effective to increase correct academic response, on-task behavior and task completion (Allday, Hinkson-Lee, Hudson, Neilsen-Gatti, Kleinke, & Russel, 2012). Praise is seen to be an effective reinforcer to use within the classroom because it is a free tool to include and it defines for students what the desired behavior being

performed is. Studies of classroom praise, however, indicate that praise occurs infrequently compared to the amount it should be occurring (Brophy, 1981).

Teacher Generalization

Research indicates there is general consensus for a need for generalization when it comes to certain behaviors. However, generalization does not occur solely because a behavioral change has occurred. Generalization is a separate skill which needs to be taught as well when causing a behavioral change (Stokes & Baer, 1977). Yet, generalization is the process most commonly accounted for when the acquisition of an untaught stimulus-response relationship occurs without any evidence to show that generalization did occur (Alessi, 1987). Horton conducted a study in 1975 which looked at generalization of behaviors. His research found that just because training directed at one set of behaviors causes a behavioral change, that does not ensure the behavioral change will occur when another set of teaching conditions is provided. The data suggests generalization programming tactics have to take several things into consideration in order to be successful (Stokes & Osnes, 1989). The tactics need to take into account the relevant behaviors that will meet particular natural consequences and also will need to take into consideration how natural the training contingencies are. Generalization, while little research has been conducted on it, has been shown to be applied as a prevention service (Coffee & Kratochwill, 2013). When teachers generalize the skills to manage a student's problem behaviors, the teacher then has the ability to use those skills to help address any similar problem behaviors any additional students may have. This can help decrease the amount of consultation required and allow the teacher to have better classroom management skills.

Current Study

The current study seeks to add to literature on teacher consultation and the generalization of a specific teacher behavior within the classroom. Specifically, increasing the use of teacher applied behavior specific praise will be used, in this study, along with performance feedback and generalization training. The teachers participating in this study will be trained on providing behavior specific praise within the classroom. Two 30-minute time periods will be observed and the number of behavior specific praises provided within each time period will be counted. The current study will utilize the existing research to provide generalization training for the secondary time period. The study seeks to build upon the current literature to evaluate how much training is needed for teacher behavior to generalize from the training setting to a nontraining setting. Performance feedback will be provided to the teachers throughout the study to inform the teachers of their performance in regards to behavior specific praise. The aim is to identify if teacher generalization can occur when training on providing behavior specific praise is conducted.

CHAPTER II

REVIEW OF LITERATURE

Positive Behavior Interventions and Supports

The relationship between a student's academic achievement and social behavior is a symbiotic relationship and is supported notably through the implementation of Positive Behavioral Intervention and Supports (PBIS). The relationship itself is considered symbiotic due to the impact each has on the other. If a student is struggling academically, then the student is less likely to want to engage in the academic tasks they find difficult. In turn the student will then begin to display negative behaviors within the classroom as a way to avoid completing the academic task provided by the teacher. Due to these negative behaviors, the student will have less time in which they are engaging in on-task behaviors. This will then lead to the student learning less information which will only increase the discrepancy in the knowledge the student has and the knowledge the student should have. PBIS also supports the relationship between positive school-wide culture, positive class-wide culture and the success of individual students. PBIS is defined as an implementation framework that is designed to enhance student outcomes, both behavioral and academic, by using student outcomes data to inform decisions about the selection, implementation and progress monitoring of evidence-based behavioral practices (Sugai & Simonsen, 2012).

PBIS is a model of service delivery that emphasizes the allotment of school resources both effectively and efficiently as determined by student outcome data. The empirical literature supports PBIS as an effective means to increase the use of data-based decisions to enhance school climate, guide behavioral intervention determinations, and reduce the frequency of problem behaviors amongst the students (Horner, Sugai & Anderson, 2010; Bradshaw, Mitchel & Leaf, 2010; Sadler & Sugai, 2009). The framework of PBIS is used to help students achieve paramount outcomes both academically and behaviorally through the analysis of student outcomes data. The data used in the decision-making processes are applied to a continuum of evidence-based interventions and decisions are made with the data throughout the school year. The reasoning is to ensure students are receiving the intervention that is most applicable to the student's skill deficit in order to best serve the needs to the student (Sugai et al., 2000). The skill deficit a student has is directly relational to the amount of supports that particular student will need. The more need the student has then the greater the amount of supports that will be required in order to help the student meet the level of his or her peers.

The PBIS framework has a select number of key characteristics (Sugai & Simonsen, 2012). The first characteristic is that student outcomes data are the basis for all data collection, selection of intervention implementation and evaluation of intervention implementation. All decisions made within the PBIS model are based on student outcomes data. The data are collected for the purpose of determining what level of supports are needed by each student. The data determine how each individual student is functioning in comparison to his or her peers. Second is the implementation of evidence- and research-based practices and the specification of these practices to match the school setting in which

they are enacted. These practices are determined to be evidenced based due to the fact the practices contain an explicit description of the procedure being implemented, there is a clear definition of what settings the practices occur in, identification of who the practice will benefit, and specific outcomes which are expected are listed (Horner, Sugai & Lewis, 2015). These practices support students at multiple levels of support throughout the school climate. Some of the levels are school-wide, while others are grade-wide and at the classroom level (Sugai & Simonsen, 2012). The third characteristic is the use of data in a relevant, efficient and effective manner to guide the decision-making process. The data is not used for just problem admiration but instead is used with the application of set decision rules which indicate what level of supports the student will receive. Finally, the fourth characteristic is the establishment of behavior support practices and systems to support all students based on the level of support needed. The supports are designated as being universal, meaning that all students receive these supports, targeted, meaning the supports are provided to small groups of students and are more intensive than universal supports, or specialized, meaning the supports are provided on an individual basis only and are more intensive than the targeted levels of support (Sadler & Sugai, 2009).

The use of data is central to determining the level of support a student receives based on need. For the data to be used data as effectively as possible a set of rules are established to determine if a student receives supports at the level of Tier 1, universal supports, Tier 2, targeted supports, or Tier 3, specialized supports (Sadler & Sugai, 2009). Performance data is collected for all students three times during the school year. This data is then evaluated by having the rules guide the decision making to determine what level of supports match the level of student need. The use of this data ensures the level of support a student receives is

adequately matched the level of supports the student is receiving. The process of identifying which students need Tier 2 and Tier 3 supports is completed during the fall after all students' performance data has been collected. The students who then receive the Tier 2 or Tier 3 services are progress monitored on a regular basis in order to determine if the intervention chosen is adequate or not. If the intervention is determined to not be adequate then a change in the intervention the student is receiving will occur.

The application of PBIS is the application of a behaviorally based system to enhance the capacity of the school, community, and families within the school community by designing an effective environment in which teaching and learning can occur through the implementation of research-validated practices (Sugai et al., 2000). PBIS focuses on teaching as the primary tool to elicit behavioral changes and replacing punishment a school environment which is redesigned to obtain reasonable and meaningful behavioral changes amongst the students. The focus on attaining these changes amongst the student population leads to a consideration of what possible factors could help or hinder the behavioral changes amongst the students. One important factor to consider are the adult behaviors which are occurring within the school.

While the main focus of PBIS is to implement changes that will change children's behavior, it is not possible to implement the system of PBIS without changing some of the behaviors of the staff members. The use of the school-wide expectations, implementing the methods of teaching the expectations, providing the token reinforcers and the other components that make up the PBIS system are different components that are not going to be automatically used by some of the staff members within the school (Bradshaw, 2013). Not all staff members are going to automatically view the implementation of PBIS the same way.

It will be important to provide training to the staff members to ensure they have the same understanding of why PBIS is being implemented and why it is important to implement it (Netzel & Eber, 2013). Because the staff members will have a specific way of handling the behaviors they experience within the classroom, both positive and negative behaviors, it will take some training to change the way the staff members react to the behaviors of the students in school in order to provide consistency across all contexts found within the school (Bradshaw, 2013). Teaching the staff members the way in which PBIS needs to be implemented in order to be effective requires some changes in the behaviors of the staff members. It may be difficult for staff members to change their behavior initially, however supporting the reasoning of why the behavioral changes need to occur with data will help staff members to understanding the reasoning for why the change is occurring (Netzel & Eber, 2013). Some of the possible changes to adult behaviors that will need to occur in order to effectively implement PBIS are creating changes to the daily schedules, changing what the behavioral expectations within different areas of the school are and how those behavioral expectations are taught to the students, how adults respond to students within the classroom, whether it is to deal with positive behaviors or negative behaviors, or even implementing different school-wide assemblies focused specifically on those set behavioral expectations and what type of reinforcement is provided in response to the displays of those behavioral expectations.

Behavior Specific Praise

A behavioral intervention which can be implemented within the classroom without additional resources or materials is to increase teacher praise (Sutherland, Wehby, & Copeland, 2000). Praise is free to provide to students, teachers, or other staff members and is

seen as a desirable reinforcer to use because of its effectiveness. When teachers use praise in the classroom, research has found that behavior-specific praise is the most effective form of praise (Brophy 1981). Behavior-specific praise is defined as providing a praise statement to an individual which explicitly describes the behavior for which the individual is receiving the praise. When teacher attention is provided in the form of behavior specific praise, it is found to be the one type of attention which can increase task completion, on-task behaviors, and academic responses. The research suggests the optimal ratio of praise to corrections is four praise statements for every correction (Allday et al., 2012).

However, in spite what the literature says about the ratio of praise statements to correction statements, research has found that teachers do not rely on the use of praise within the classroom as a reinforcement technique. On average, teachers will provide one praise statement every five minutes. In the average sized classroom, this would mean each student would receive praise once every two hours. For a reinforcer, such as teacher praise, to have an impact when it is given, the praise needs to be provided contingently. Meaning, praise cannot be provided until the behavior has occurred (Brophy 1981). If praise is provided to a student, especially praise that is not specific enough to determine what the reason the praise is being provided is, then the student will not learn what are the appropriate and inappropriate behaviors. The student will become confused regarding what the behavior that the person who provided the praise is wanting. If the praise occurs after the specific behavior, then the student is able to understand that the reason why he or she received the praise is because he or she displayed a behavior that was an appropriate behavior. Since praise is seen as positive reinforcement, children are able to very quickly see how displaying certain behaviors can cause an adult, or teacher, to provide additional praise to that child. Research has shown

teacher praise is an effective strategy for classroom management (Sutherland, Wehby, & Copeland, 2000). However, studies of praise used within the classroom indicate praise occurs infrequently compared to the rates at which it should be occurring. Studies have found professional development regarding the use of behavior-specific praise in the classroom can increase the rate at which behavior-specific praise is used by both general education and special education teachers (Allday et al., 2012). Teachers specifically trained in behavior modification provide praise contingently upon the expression of target behaviors; however, the majority of teachers do not praise at rates as high as the teachers explicitly trained (Brophy 1981).

Classroom Management

There is not a standardized definition of what classroom management is. Instead, there is a set of procedures and techniques which can help teachers better manage their classrooms (Johansen, Little, & Akin-Little, 2011). Classroom management is an integral part of training for both current teachers and those who are about to begin teaching. It is comprised of three main components which are, one, arranging instructional activities to maximize academic achievement and engagement from the students, two, ensure the maximum amount of time to provide instruction and, three, establish the use of proactive behavior management within the classroom (Simonsen, Fairbanks, Briesch, Meyers & Sugai, 2008). However, classroom management is not typically seen as what was just defined within the educational setting. Instead, it is seen as ways inappropriate behavior is disciplined over supporting positive behavior (Johansen, Little, & Akin-Little, 2011).

Research has shown that academic failure and problem behaviors are so closely related that the two measures of success are better compared together rather than separately.

Due to this dual relationship of academic and behavior, a learning environment is deemed a positive learning environment when there is not only a focus on students' academic development but also a focus on the students' behavioral competencies as well (Johansen, Little, Akin-Little, 2011). It is important to ensure both of those facets are considered within the classroom environment. PBIS provides a foundation to support effective classroom management (Reinke, Stormont, Herman, Wang, Newcomer, & King, 2014). PBIS specifically highlights teaching and reinforcing positive behaviors instead of punishing negative behaviors to increase the number of occurrences of positive behaviors and to decrease the number of occurrences of negative behaviors (Farmer, Reinke, & Brooks, 2014).

Despite PBIS practices put into place to support teachers use of effective classroom management, many teachers report they continue to struggle with managing the problems behaviors of their students within the classroom (Reinke et al., 2014). Out of the multiple methods to help classroom management, providing behavior specific praise is the method which has the strongest research-backed evidence base (Simonsen, Fairbanks, Briesch, Meyers & Sugai, 2008). Despite this and the fact that research has found behavior-specific praise is the most effective procedure to implement with classroom management, it is the procedure teachers use the least (Johansen, Little, & Akin-Little, 2011). Previous research conducted indicates the rates at which teachers provide positive reinforcement to reinforce positive behaviors within the classroom are not as high as the research recommends (Evertson & Weinstein, 2006).

Teachers may even be causing the problematic behaviors in their classrooms to worsen without realizing it. Teachers tend to display higher rates of punishment for undesired behaviors such as not engaging in on-task behaviors, talking to peers whenever

specifically instructed not to, engaging in out of seat behaviors or any other behaviors deemed as inappropriate, or unwanted, within the classroom such as verbally or physically aggressive behaviors displayed towards peers and staff. Teachers will use punishment instead of reinforcing the positive behaviors that occur within their classrooms such as engaging in on-task behaviors, performing a specific behavior when the teachers' requests said behavior, or displaying any behavioral expectations that occur throughout the classroom (Evertson & Weinstein, 2006). When this occurs, teachers may be inadvertently reinforcing those undesired behaviors because the teacher is providing attention to those undesired behaviors (Strain, Lambert, Kerr, Stagg & Lenkner, 1983). It is necessary for teachers to be aware of these consequences, which reinforce the undesired behaviors. Determining what responses reinforce the desired and undesired behaviors will help the teacher prevent any unintentional reinforcing of undesired behaviors (Farmer, Reinke, & Brooks, 2014).

One important caveat to consider when it comes to reinforcing positive behaviors, however, is that when teachers provide positive reinforcement, the reinforcement needs to be provided contingent upon the behavior occurring. If the teacher provides reinforcement noncontingently, without the occurrence of the behavior, then the reinforcement will not be effective. Providing positive reinforcement within the context of the classroom is a method of increasing classroom management skills which can easily be integrated into what any teacher is already implementing within the classroom (Evertson & Weinstein, 2006). When a student is engaging in an on-task, prosocial, or another type of desired behavior, the teacher provides a praise statement to the student to inform the student of the desired behavior they are engaging in. This communicates to the student what the desired behavior is and rewards the student for engaging in that particular behavior (Simonsen et al., 2008).

Teacher Consultation

One way to show teachers the benefits of using behavior specific praise is through teacher consultation. When working with a teacher in a consultation setting, a practitioner within the field of school psychology needs to be able to consult with the teacher without overwhelming him or her. If a school psychologist is consulting with a teacher and provides an overly complicated intervention to the teacher without discussing the teacher's level of comfort with implementing an intervention, then the teacher is going to become quickly overwhelmed by the amount of information presented to her. The school psychologist needs to be able to explain to the teacher specifically what is happening in the intervention, what the teacher's role in the intervention is going to be, what steps the teacher is going to follow and anything other pertinent information that will be related to the reason why the consultation is occurring. For a school psychologist to consult with a teacher in the most effective manner possible will not only help ensure the teacher will feel confident in his or her abilities to implement the intervention within their classroom, but it will also ensure the teacher will be more willing to participate in an intervention that occurs within their classroom. Any teacher will be more likely to agree to an intervention happening within his or her classroom if the school psychologist has a friendly demeanor and ensures the teacher is able to complete the task being asked of him or her. Research has found that treatment integrity increased when performance feedback was used on a daily basis with teachers as compared to just training the teachers on what they were supposed to do and then not providing regular feedback or any type of check-in process for those in the consultative role to see what the progress of the intervention being implemented was (Witt, Noell, LaFleur, & Mortenson 1997).

Mortenson and Witt (1998) looked at using weekly performance feedback to increase teacher implementation of an academic intervention. They found that per what is stated in the literature, teacher adherence went down after the training despite explicit instructions on how to maintain adherence. Once performance feedback was provided however the teachers' adherence increased. Reinke, Lewis-Palmer, and Martin (2007) looked at using performance feedback on teacher use of behavior specific praise. They used Visual Performance Feedback instead of performance feedback that is only delivered orally. The study found Visual Performance feedback caused the teachers to increase the amount of behavior specific praise provided to the select students involved in the study. While this study focused on providing feedback for working with a select number of children, it could be argued that this system of providing performance feedback to the teachers could be applied to teachers who are focusing on working with the entire class.

Research conducted by Allday, Hinkson-Lee, Hudson, Neilsen-Gatti, Kleinke, & Russel (2012) has also indicated that an increase in the number of behavior specific praises provided in the classroom can lead to a decrease in the use of corrective statements in the classroom. The study looked to determine increase the amount of behavior specific praise provided by teachers to students with emotional or behavioral disabilities. The study found that teachers in the study increased their use of behavior specific praise and also found that task engagement increased for all students who were provided with behavior specific praise. With the increase in the amount of behavior specific praise provided in the classroom, there was also a decrease in the amount of corrective feedback each student received. This correlation points back to the public health model where the focus is increasing positive behaviors to decrease negative behaviors instead of punishing individuals for negative, or

unwanted, behaviors as a method of attempting to decrease the number of instances the negative behaviors occur (Strein, Hoagwood, & Cohn, 2003).

Other research by Noell, Witt, LaFleur, Mortenson, Rainer, and LeVelle (2000) looked into the impact providing performance feedback to teachers implementing interventions can have. The study found that when teachers are provided with performance feedback the fidelity of implementation for the intervention can increase. The study also found it can be difficult for the teachers to have any social validity regarding the intervention being implemented if feedback is not provided to the teachers on a regular basis. Other research also found that the implementation of performance feedback through consultation not only increase the percentage of treatment integrity provided by the teacher, but the teacher also maintained high levels of treatment integrity throughout the maintenance phase of the intervention as well (Noell, Witt, Gilbertson, Ranier & Freeland, 1997).

Teacher Generalization

Generalization is the process most commonly referred to when accounting for any development of the acquisition of untaught stimulus-response relationships (Alessi, 1987). Stokes and Baer (1977) state that generalization is fundamental concern when using applied behavior analysis to teach new behaviors. The use of generalized outcomes of behaviors are the overall goals of teaching new behaviors which are of critical importance when teaching new those behaviors (Stokes & Osnes, 1989). However, when the behavior is not a skill which could be applied to multiple setting directly, it is not always realized that even though a change in the behavior occurs, the generalization of said behavior change is not going to occur without generalization training (Stokes & Baer, 1977). The behavior change of a particular behavior will not generalize to other settings unless generalization training for that

particular behavioral change occurs. The training ensures the individual who is exhibiting the behavioral change will display the behavioral change in all settings in which the relevant behavior change is needed. If training does not occur, then the individual will not have learned to display the behavioral change within any settings in addition to the training setting. The literature also states that the usage of generalization suggests all appropriate behavioral changes, which occur in non-training settings, are a result of particular behavioral processes known as response generalization.

There are three essential points to recognize with regards to generalization. The first essential point is stimuli may not cause the responses in all settings due to the controlled relationship between the stimuli and the responses (Stokes & Baer, 1977). Responses are conditioned to occur in response to specific stimuli. The second is stimuli that is not explicitly defined to cause a particular response may cause the response through unintended conditioning of the stimulus-response relationship. Lastly, even if a stimulus appears to be a simple stimulus, there could be multiple components which control the behavior and therefore the stimulus could impact the response in ways not anticipated (Kirby & Bickel, 1988). Whenever generalization training of behavioral changes occur, it is important to keep in mind the three points in order to ensure the behavioral changes being addressed through generalization training do occur and thus cause the generalization training to be effective and efficient.

Horton (1975) looked at the specific behavioral mechanisms which could increase or maintain stimulus conditions but were different mechanisms than the ones provided during training and found one which revolves around stimulus control of behavior. This particular procedure establishes stimulus control over a targeted behavior in a way that a myriad of

stimulus conditions could evoke the target behavior. Because generalization does not occur solely when a behavior change occurs, there is a need to program generalization when causing a behavioral change instead of expecting the generalization to occur because the behavior changed (Stokes & Baer, 1977).

When engaging in behavioral consultation, the eventual goal is generalization to fade the services provided at some point in the future (Stokes & Baer, 1977). Generalization is the goal to help reach the final of the individual no longer needing additional services (Coffee & Kratochwill, 2013). Behaviors will generalize under vastly different teaching conditions only when the behaviors are trained within the all the different conditions.

According to Horton (1975), those who consult with and train teachers should not be surprised when the training directed towards a set of teaching conditions does not cause the new behavior to occur when used under a different set of teaching conditions. Behaviors will also need a performance feedback component programmed into the different situations for the behaviors to occur as well. When considering the occurrence of generalization, an analytic assessment of the behavioral variables is important to ensure there is a complete understanding of what is causing the generalization (Stokes, 1992).

When attempting to cause generalization, there are three important things to consider. First, all settings where the behavior is desired should be considered before training begins to eliminate any chance of generalization failure due to settings. Second, any stimuli impacting the behavior should be examined to determine if the stimuli are available in both the training setting and the generalization setting. The third item that is important to consider is, if generalization does not occur after training, it will be necessary to conduct an examination of

all the different setting in which the desired behavior needs to occur. This examination needs to occur to determine why a failure of generalization has occurred at all.

Stokes and Baer (1977) define generalization as the occurrence of relevant behavior under different nontraining conditions without the scheduling of the behaviors in conditions which were different from the training conditions. The existing data suggests tactics used for programming generalization should include the choice of appropriate behaviors which will have natural consequences and also attention should be paid to the naturalness of the contingencies of training provided (Stokes & Osnes, 1989). Research has shown teachers have the ability to generalize their behavior in some settings but are unable to generalize their behavior to all relevant settings automatically. Studies have found teachers can generalize behavioral changes from one student to additional students. When teachers can generalize the skills they have learned, behavioral consultation can turn into a form of prevention for the classroom. Teachers can use the skills they have learned as a way to prevent the occurrence of future classroom problems (Coffee & Kratochwill, 2013).

Train and Hope is a passive method of training for generalization (Stokes & Osnes, 1989). It is deemed a passive method because generalization outcomes are measured without using any specific program to train for generalization. Train and Hope is used to determine if generalization will occur whatsoever without additional generalization training occurring and will occurring during the implementation of training for the desired behavior to occur.

Sequential modification is a secondary generalization technique which is implemented if Train and Hope is not successful (Stokes & Baer, 1977). Sequential modification involves providing reinforcement in all settings relevant to the desired behavior including the training setting and the generalization setting. This then causes the behavior

itself to generalize from the original training setting to the generalization settings because of the application of positive reinforcement whenever the desired behavior occurs. Sequential modification will also be accompanied with the use of goal setting and performance feedback (Duncan, Dufrene, Sterling, & Tingstrom, 2013).

Current Study

Providing students with praise within the classroom is a classroom management technique which has the strongest evidence base (Johansen, Little, & Akin-Little, 2011). However, research has found the majority of teachers do not use praise within the classroom as much as the research recommends (Evertson & Weinstein, 2006). Instead teachers will use punishment or corrective statements to decrease the number of negative behaviors occurring within the classroom. The current study is intended to extend the current research to examine the how teacher consultation can be used to generalize teacher behaviors within the classroom. Specifically, the study will provide training on the use of behavior specific praise within the classroom and then apply a generalization treatment to determine what is needed to have teacher behaviors generalize from one time of the day to another. Research has been conducted to study the generalization of teacher behavior from one student to other students, however, this study will examine the generalization of teacher behavior from one time in the day to a different time in the day, using single case design methodology, to increase the amount of teacher provided behavior specific praise within the classroom in different instructional periods.

Research Questions

1. Will the amount of behavior specific praise provided by the teacher increase in both the training setting and the generalization setting when training is delivered only in the training setting?
2. Will the amount of behavior specific praise provided by the teacher increase in the generalization setting once sequential modification has been applied to the generalization setting?

CHAPTER III

METHODOLOGY

Research Design

A nonconcurrent multiple baseline design was utilized to demonstrate experimental control of the treatment condition and the generalization effect across time periods. The baselines occurred across teachers and across treatment phases. Treatment phases proceeded in an additive nature until the designated criterion has been reached in teacher data.

Participants and Setting

The target population for teacher consultation were teachers who were either self-identified or peer nominated as needing additional supports with their classroom management skills. Teachers were recruited for the study upon referral for additional classroom management skills through peer nomination or self-nomination. A total of four teachers used as participants in the study. The treatment took place at the teachers' schools and was implemented by the researcher.

There were two settings within this study. The first setting was termed the training setting. The second setting was termed the generalization setting. The first setting was the setting which training focused on. The generalization setting was the setting where training did not directly occur. Generalization training of sequential modification was implemented in the secondary setting if the data indicated generalization did not automatically occur due when training was initially provided. These settings were both determined based upon the teacher's classroom schedule and when the rates of behavior specific praise occurred naturally in the classroom.

Materials

Performance feedback was provided to the teacher through e-mail communication throughout Phase 1 and Phase 2 of the study. Tablets were used to record the classrooms during the specified times. The videos of the predetermined times were selected from the video recordings of the classrooms and sent to additional observers who determined inter-observer agreement (IOA).

Independent Variable

The independent variable utilized in this study was the treatment procedure of teaching the teachers how to provide behavior specific praise within the classroom for Phase 1. Then the generalization technique was applied in Phase 2 to assist the teachers in generalizing the application of behavior specific praise from the training setting to the nontraining setting within the classroom. Performance feedback was provided to the teachers across Phase 1 and Phase 2.

Dependent Variable

One dependent variable was measured in the study to determine phase changes. The dependent variable was the number of behavior specific praises the teacher provides to the students in the classroom. Graduate students in school psychology conducted all direct observations

Interobserver Agreement: Interobserver agreement (IOA) was utilized to validate the observation measures. IOA data was obtained by three independent observers for each time period selected within the classroom. IOA data was collected for 33% of observations within each phase across the study.

Procedures

Initial Inclusionary Procedures: Teachers were referred for the intervention through either self-nomination or peer nomination. Upon referral, the teacher determined two separate time periods of 30 minutes, during which classroom instruction occurred. Those times were chosen as Training Setting and Generalization Setting.

Training in Behavior Specific Praise: The teachers selected for the study received training to review the use of behavior specific praise within the training setting for the purpose of the current study.

Baseline: Baseline measures of the dependent variable, were obtained before the teachers were trained on providing behavior specific praise within the classroom. Baseline measures were collected during two thirty minutes instructional times during the school day based on when classroom instruction occurs. The teachers identified the two thirty-minute periods which were used for the study during which classroom instruction occurs. The first time selected was referred to as the training setting and the second time selected was referred

to as the generalization setting. Teachers were uninformed regarding what measure the researcher will be collecting data in order to gather accurate baseline data and prevent the Hawthorne effect (Cooper, Heron & Heward, 2007).

Behavior Specific Praise Training (Phase 1): This phase incorporated training provided to the teachers regarding the implementation of behavior specific praise during the training setting. The teachers attended a training which taught how to provide behavior specific praise within the classroom. Data was also collected on the number of behavior specific praises provided during the generalization setting to see any generalization occurs without training or prompting. If the teacher reached a goal of 15 behavior specific praises during phase 1, then the teacher moved to phase 3 without the administration of phase 2 or phase 2b.

Performance Feedback (Phase 2): In this phase, teachers were provided with performance feedback regarding the amount of behavior specific praises provided to students within the classroom. The teachers received an email every morning, before school started, which contained a graph of the amount of behavior specific praises they provided during the training setting the three previous school days. A specific goal of the number of behavior specific praises was not given to the teacher. Instead, the teachers were instructed to provide as many, or more than, the number of behavior specific praises provided during the three previous school days. If the teachers reached a goal of 15 behavior specific praises during this phase, then the teacher was moved to phase 3 without the administration of phase 2B.

Visual Cueing (Phase 2B): The researcher used visual cueing to prompt the teachers to provide behavior specific praise every two minutes during the training setting. If the

teacher provided behavior specific praise unprompted during any of the two-minute intervals, then the researcher didn't provide any prompting for the interval.

Generalization (Phase 3): This phase added generalization training for the teachers to generalize the application of behavior specific praise to the second setting, as known as the generalization setting. Generalization training occurred through the use of Goal Setting and Performance Feedback. The empirical literature suggests that the optimal ratio of praise to corrections is four praise statements for every correction provided (Allday et al., 2012). Through the use of sequential modification, the experimenter instructed the teacher to increase behavior specific praise during the nontraining setting. A goal of how much behavior specific praise was determined for the nontraining setting. Feedback was also provided during this phase for both the training setting and the nontraining setting. A goal of 15 behavior specific praises was for both 30-minute time periods, training and generalization settings. To determine the social validity of the goal, the teacher's input was provided to determine if 15 behavior specific praises was feasible within the time period. If the teacher determined the goal of 15 behavior specific praises during the 30-minute time period, for both setting, was not feasible, then the researcher determined a more attainable goal with the teacher. If the teacher reached the goal of 15 behavior specific praises in both settings during this phase, then the study was discontinued with the teacher reached the criteria for this study.

Visual Cueing (Phase 3B): The research used visual cueing to prompt the teacher to provide behavior specific praise every two minutes during both the training and generalization settings. If the teacher provided behavior specific praise unprompted during any of the two-minute intervals, then the researcher didn't provide any prompting for the

interval. The researcher provided prompts for any two-minute intervals when behavior specific praise was not given.

Fidelity of Procedures

Treatment fidelity was measured and reposted as a percentage of steps completed during the trainings of providing behavior specific praise and generalization as a checklist. Graduate students in school psychology monitored the fidelity of implementation of the trainings. Inter-observer agreement of procedural fidelity was collected utilizing the training protocol checklists. Inter-observer agreement was calculated for at least 20% of sessions per setting per phase.

Data Analyses

Visual analysis was used to answer the proposed questions of this study and determine phase changes. A criterion of 3 days was set to establish response or nonresponse to treatment for each phase.

CHAPTER IV

RESULTS

A total of four elementary school teachers at two different schools in the Midwest participated in this study. Data was collected during both the fall and spring during the study. Each participant's data was collected during the semester, so there were no long holiday breaks to interrupt data collection. During the baseline phase, Teacher A provided a mean of 0 behavior specific praises, 4.17 non-behavior specific praises and 51 corrections. Teacher B provided a mean of 2.4 behavior specific praise, 3.4 non-behavior specific praise, and 5 corrections. Teacher C provided a mean of 1 behavior specific praise, 5.33 non-behavior specific praises and 3 corrections. Teacher D provided a mean of 1.75 behavior specific praises, 2 non-behavior specific praises, and 4 corrections. In table 1 there are the means of behavior specific praise each teacher provided in each phase in the training setting. Table 2 shows the means of the amount of behavior specific praise each teacher provided during each phase in the generalization setting. Teacher A received all phases of the study. Teacher B and Teacher D did not receive phase 2B or 3B because they met the criteria to not receive those phases. Teacher C did not receive phase 2, phase 2B, or phase 3B due to meeting the criteria for those phases in phase 1 and phase 3.

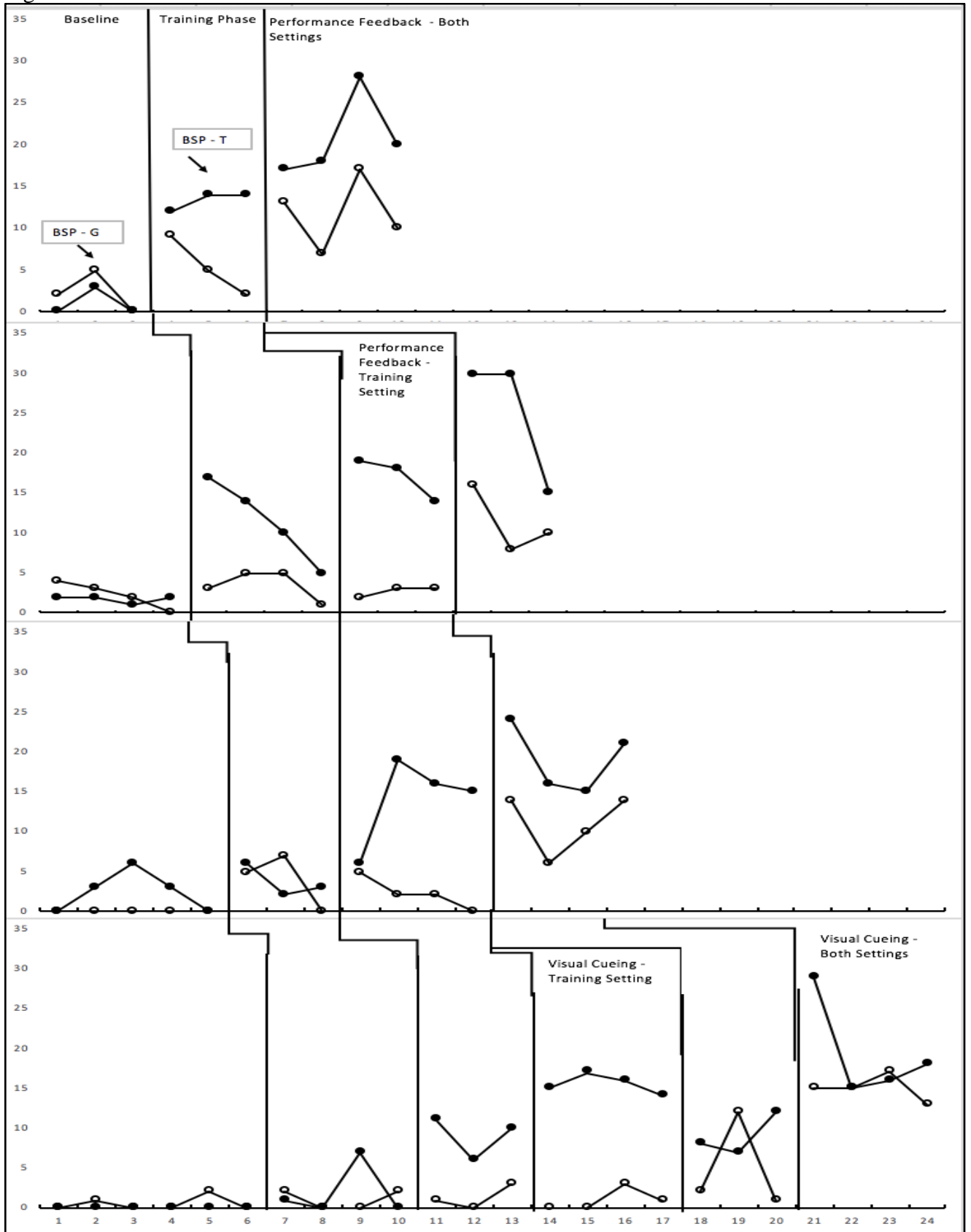
Table 1. Behavior Specific Praise Provided in Training Setting

BSP-T	Baseline	Training Phase	Performance Feedback – Training Setting	Visual Cueing – Training Setting	Performance Feedback – Both Settings	Visual Cueing – Both Settings
Teacher A	1	13.33	NA	NA	20.75	NA
Teacher B	1.75	11.75	17	NA	25	NA
Teacher C	2.4	3.67	14	NA	19	NA
Teacher D	0	2	9	15.5	9	19.5

Table 2. Behavior Specific Praise Provided in the Generalization Setting

BSP-G	Baseline	Training Phase	Performance Feedback – Training Setting	Visual Cueing – Training Setting	Performance Feedback – Both Settings	Visual Cueing – Both Settings
Teacher A	2.33	5.33	NA	NA	11.75	NA
Teacher B	2.25	3.5	2.67	NA	11.33	NA
Teacher C	0	4	2.25	NA	11	NA
Teacher D	0.5	1	1.33	1	5	15

Figure 1. Teacher Performance



The figures 1-4 show the results of the amount of behavior specific praise each teacher provided in each phase in both settings. Every teacher increased the amount of behavior specific praise provided in the classroom by the end of the study. Some teachers did not need as many phases to meet criteria for the study as other teachers did. All teachers provided at most five behavior specific praises during the baseline phase. All teachers increased the amount of behavior specific praise they provided by the final phase each teacher participated in. The number of sessions per teacher ranged from 10 sessions to 24 sessions. Each session was a school day. Days were classroom instruction did not occur during the selected time periods or days when the teacher was absent during the selected time periods did not count as a session. School holidays such as Thanksgiving Break or Spring Break were also not included in the number of sessions because the schools were closed on those days.

During baseline, teacher A provided a mean of 1 behavior specific praise in the training setting and a mean of 2.33 behavior specific praises in the generalization setting. In the training phase, Teacher A provided a mean of 13.33 behavior specific praises in the training setting and a mean of 5.33 behavior specific praises in the generalization setting. Because Teacher A met the criteria in the training phase, the performance feedback for both settings was initiated as opposed to the training setting performance feedback or training setting visual cueing. In the both settings performance feedback phase Teacher A provided a mean of 20.75 behavior specific praises in the training setting and a mean of 11.75 behavior specific praises in the generalization setting. Teacher A had thus met the goal for this phase so the study was discontinued as opposed to administering the both settings visual cueing phase.

Teacher B provided a mean of 1.75 behavior specific praises in the training setting and 2.25 behavior specific praises in the generalization setting. In the training phase, she provided a mean of 11.75 behavior specific praises in the training setting and a mean of 3.5 behavior specific praises in the generalization setting. In training setting performance feedback phase, teacher B provided a mean of 17 behavior specific praises in the training setting and a mean of 2.67 behavior specific praises in the generalization setting. Because teacher B met the goal for the number of behavior specific praises provided in the training setting, the both settings performance feedback phase was initiated as opposed to the training setting visual cueing phase. In the both settings performance feedback phase, teacher B provided a mean of 25 behavior specific praises in the training setting and 11.33 behavior specific praises in the generalization setting. Teacher B met the criteria for the amount of behavior specific praises provided in the training and generalization settings so the study was discontinued.

Teacher C provided a mean of 2.4 behavior specific praises in the training setting and zero behavior specific praises in the generalization setting. In the training phase, Teacher C provided a mean of 3.67 behavior specific praises in the training setting and a mean of 2.25 behavior specific praises in the generalization setting. Because Teacher C did not meet the goal for the training phase, so the training setting performance feedback phase was initiated. In the training setting performance feedback phase, Teacher C provided a mean of 14 behavior specific praises in the training setting and a mean of 2.25 behavior specific praises. Teacher C reached the goal for the number of behavior specific praises in the training setting, so she was moved to the both settings performance feedback as opposed to the training setting visual cueing phase. In the both setting performance feedback phase, the teacher

provided a mean of 19 behavior specific praises in the training setting and a mean of 11 behavior specific praises in the generalization setting. The teacher met the criteria for generalization within the both setting performance feedback phase so the study was discontinued.

Teacher D's baseline phase had few behavior specific praises provided. At most Teacher D provided two behavior specific praises during the time period. That happened only twice during the generalization setting and the rest of the data points collected were at zero. The mean of behavior specific praises provided during the training setting was zero and the mean of behavior specific praises provided during the generalization setting was 0.5. The training phase was initiated for Teacher D and she provided a mean of 2 behavior specific praises in the training setting and 1 behavior specific praise in the generalization setting in the phase. The most behavior specific praises she provided was seven behavior specific praises during the training setting. In the training setting performance feedback phase, Teacher D provided a mean of 9 behavior specific praises in the training setting and 1.33 behavior specific praises in the generalization setting. Because Teacher D did not meet the goal of providing 15 behavior specific praises during the training setting, the training setting visual cueing phase was initiated. During this phase, Teacher D provided a mean of 15.5 behavior specific praises in the training setting and a mean of 1 behavior specific praise in the generalization setting. Because she met the goal for the training setting visual cueing phase, the both setting performance feedback phase was initiated. In the both setting performance feedback phase, Teacher D provided a mean of nine behavior specific praises in the training setting and five behavior specific praises in the generalization setting. Teacher D did not meet the goal for this phase so the both setting visual cueing phase. Teacher D

provided a mean of 19.5 behavior specific praises in the training setting and a mean of 15 behavior specific praises in the generalization setting. Because Teacher D met the goal for both setting, the study was discontinued.

CHAPTER V

DISCUSSION

Discussion

This study sought to determine if the amount of behavior specific praise provided by the teacher increase in both the training setting and the generalization setting when training is delivered only in the training setting. This study also sought to determine if the amount of behavior specific praise provided by the teacher increases in the generalization setting once sequential modification has been applied to the generalization setting. The teachers in this study required varying amounts of support through the intervention implemented in this study. Every teacher who participated in this study increased the amount of behavior specific praise they provided during both settings. The most behavior specific praise a participant provided in any session during baseline data collection was 6 behavior specific praises. The means for the amount of behavior specific praise provided in either setting was between zero behavior specific praises and 2.4 behavior specific praises. Every teacher was about to increase the amount of behavior specific praise they provided in both settings. The means for the end of the study ranged from 11 to 25 behavior specific praises provided.

The training provided to every teacher, as part of the training phase, did increase the amount of behavior specific praise provided during the training setting. Every teacher increased the mean of the amount of behavior specific praise provided during the training setting. The amount the mean increased ranged from 2 – 12.33. The training was effective enough that for one teacher the both setting performance feedback phase was initiated instead of the training setting performance feedback setting. The other three teachers required more additional phases which focused specifically on the teacher's performance in the training setting. This indicates teachers need more support than just training in order to change the amount of behavior specific praise they provide in the classroom. More research is warranted to follow up on this. The training setting performance feedback phase increased the amount of behavior specific praise provided in the training setting for the majority of the teachers who received this phase. The teachers responded well to the performance feedback and expressed their gratitude for the graphs which were provided to the teachers. Having the graphs as part of the performance feedback instead of just providing numbers to the teachers caused the teachers to be able to better understand where they were performing in the classroom on a daily basis. Out of the three teachers who received this phase of the study, only one teacher needed additional support in the form of the training setting visual cueing phase. While this study does have a small sample size, it does indicate providing regular performance feedback to teachers can be enough to make an impact on the teacher's behavior in the classroom. For the one teacher who received the training setting visual cueing phase, the amount of behavior specific praise provided in the training setting did increase enough to meet the goal predetermined for this phase.

While the phases targeting the training setting specifically did increase the amount of behavior specific praise provided in the training setting, it did not create a significant increase in the amount of behavior specific praise provided in the generalization setting as determined before the start of this study. Because the amount of behavior specific praise provided in the generalization setting did not significantly increase, the both settings performance feedback phase and both settings visual cueing phase were implemented to increase the amount of behavior specific praise provided in the generalization setting while ensuring the amount of behavior specific praise provided in the training setting did not decrease. All four teachers who participated in the study were willing to increase the amount of behavior specific praise provided in both settings. However, generalizing their behavior from the training setting to the generalization setting did not occur without any supports in place. All teachers generalized their behavior once sequential modification was used. While a few of the teachers stated to the researcher they were unsure of their ability to reach the goal of 15 behavior specific praises in both settings, all teachers were willing to work towards to the goal after being prompted by the researcher. Multiple teachers stated that while they were willing to work towards the goal of 15 behavior specific praises, they expressed concern regarding the amount of behavior specific praises they provide in the classroom when the students stop responding to the praise. They stated they experienced students being more receptive to the praise provided when less praise was provided in the classroom. While this was not the focus of the study, further research is warranted to follow up on this topic.

The both setting performance feedback phase provided daily performance feedback to the teachers for both settings of the amount of behavior specific praise they provided. All

four teachers had an increase in the amount of behavior specific praise provided. However, the amount of increase that occurred for both settings, and in comparison, to the amount of praise from the previous phase, was not equal across the four participants. Teacher A, Teacher B and Teacher C all had an increase the amount of behavior specific praise provided in both the training setting and the generalization setting. Teacher D had an increase in the amount of behavior specific praise in the generalization setting but had a decrease in the amount of behavior specific praise provided in the training setting, as compared to the amount of behavior specific praise provided in the previous phase. Three out of the four teachers who participated in the study displayed a significant increase in the amount of behavior specific praise provided in both the training setting and the generalization setting. All three of the teachers met the goal for the both setting performance feedback phase, so the study was discontinued for those three teachers. Only one teacher did not meet the goal set for the both setting performance feedback phase, and thus required additional support in order to meet the goal for the phase. This indicates changes in teachers' behavior throughout the classroom day can occur with regular performance feedback.

This study sought to determine if the amount of behavior specific praise provided by the teacher increase in both the training setting and the generalization setting when training is delivered only in the training setting and also sought to determine if the amount of behavior specific praise provided by the teacher increases in the generalization setting once sequential modification has been applied to the generalization setting. Based on the results from the study, the amount of behavior specific praise provided in the training setting did increase when training was provided specifically to the training setting, however there was not a significant increase in the amount of behavior specific praise provided in the generalization

setting. Once sequential modification was provided to the generalization setting, then the amount of behavior specific praise provided in the generalization setting did increase.

Limitations

One of the limitations of this study is the applied setting in which the study occurred. Due to the study occurring in an applied setting, as opposed to a completely closed environment, not all external variables were able to be controlled for. Another limitation of the study was the technological difficulties which came with video recording. Internet access was required for the recordings of the observation and if there were technical difficulties at the school site then it caused difficulties with the collection of the data.

Future Research

For future research, this study can be replicated with teachers in different grades. All of the teachers in this study taught in a kindergarten or second grade classroom so the difference in grade level would be important to determine if there is a difference as teachers teach older students. Another future research possibility is to conduct this study without video recording and to instead conduct all observations in the classroom. Another route for future research is to look at what amount of praise, that teachers provide within the classroom, do students stop responding to the praise. Future research can also look at the minimum number of praise needed in the classroom in order to change student behavior. Additional research which can occur from this study is what level of frequency should teachers be provided with performance feedback in order to make an impact on teacher behavior.

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APPENDICES

Sequential Modification Script

“You have been doing a great job of providing behavior specific praise during the (*subject*) time. Since you have been providing so much behavior specific praise during this time of the day in your classroom, let’s try to also provide behavior specific praise during (*different subject*) time in your classroom. In order for you to not become overwhelmed with having so much to do, let us set a goal that you think is a reasonable goal of how much behavior specific praise you could provide during that time. Based on the research, the best ratio to provide in a classroom is 4 praise statements to every correction. Is this something that you think you would be able to do?”

If teacher says yes, skip this next section. If teacher says no, read the following statement: “That is definitely understandable. 4 to 1 is a high ratio. What is a ratio that you would be able to reach during the day? (Teacher provides an answer of a ratio he/she thinks is an acceptable goal).

If teacher says 4 to 1 is an acceptable goal, read the following section: “Let’s start out with that as our goal. I will also now provide you with a graph every morning to reflect the amount of praise you gave in the classroom during these two time-periods. This is not to point out any flaws or anything you are doing wrong. The purpose of this is to show you how much you are growing and improving every day.”

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