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**THE EFFECTS OF A SELF-MONITORING INTERVENTION ON THE FREQUENCY
OF TEACHER PRAISE**

A Thesis in
Special Education

by

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ABSTRACT

This study examines the relationship between a self-monitoring intervention and a special education teacher's rate of praise and behavior specific praise. The participant, a second year emotional support teacher, was selected based on low rates of praise and the stated need to develop more effective behavior management strategies to deal with his students' challenging behaviors. An AB research design was used to establish the relationship between the independent variable, a self-monitoring intervention, and the dependent variable, rate of praise. The results suggest that the self-monitoring intervention directly related to an increase in the teacher's rate of praise. The study was found to have a high level of social validity based on high scores on a 12 question treatment acceptability form, in addition to positive anecdotal statements given by the participant.

TABLE OF CONTENTS

	PAGE
List of Figures	v
Chapter 1—Introduction	1
Chapter 2—Review of Literature	8
Chapter 3—Method	21
Chapter 4—Results	31
Chapter 5—Discussion	36
References	41
Appendix: Sample Pages and Forms	46

LIST OF FIGURES

	PAGE
Table 1 -- Summary of Research Studies involving Self-Monitoring Interventions	9
Figure 1 -- Frequency of Total Praise	32
Figure 2 -- Frequency of Behavior Specific Praise	32

CHAPTER 1

Introduction

In today's classroom teachers are increasingly coming into contact with students who are violent, dangerous, and disruptive (Todd, Horner, & Sugai, 1999). These students display an array of challenging and severe behaviors that impede their learning and often impede the learning of others. In special education, these students are most often classified as having emotional behavioral disorders (EBD) and they typically have difficulties attending to instruction, managing their behavior, completing tasks, and are consistently achieving below expectations (Kalis, Vannest, & Parker 2007; Vannest, Temple-Harvey, & Mason, 2008). Statistically, 91% of students with EBD were found to be academically deficient and failed to learn skills necessary to be successful in school (Trout, Nordness, Pierce, & Epstein, 2003). Additionally, many of these students lack the necessary math, reading, and writing skills to maintain employment and live independently. Students with EBD have been found to have higher rates of being held back, receive lower grades, and have a higher rate of dropping out (Locke & Fuchs, 1995). Factors that increase the difficulties students with EBD experience in school include frustration in class because of difficult subject matter. Students who lack the necessary academic skills are more likely to exhibit low levels of task engagement and completion (Templeton, Neel, & Blood, 2008). Therefore, when students are frustrated and not engaged in instruction they are more likely to engage in problem behavior (Wehby, Symons, Canale, & Go, 1998).

Students who exhibit disruptive and difficult to manage behavior face higher rates of disciplinary exclusions in the form of suspensions, expulsion, and transfers to a more restrictive environment (Crimmins & Berotti, 1996; National Center for Education Statistics, 1997).

Disciplinary exclusions, a reactive form of discipline, remove a child from the classroom and interrupt the flow of instruction. Reactive discipline strategies have been shown to be only minimally effective (Colvin, Kameenui, & Sugai, 1993). Research suggests that zero-tolerance programs or additional sanctions may have an initial effect in reducing problem behavior, but these results are often short lived and those behaviors often return with greater intensity (Sugai & Horner, 2002). Consequently, removing a student from the school for a temporary suspension or long term expulsion may reduce the problem behavior by masking it. This only serves to disrupt that child's education while doing little to correct the problems which lead to the behavior in the first place. In short, exclusionary forms of discipline put the student 'out of sight' and 'out of mind' while doing nothing to teach positive behavior. As an added concern, the majority of students with EBD are significantly behind their peers academically, and are likely to fall further behind through disciplinary exclusions.

National education law and policy makers have become increasingly aware of the need to improve post-school outcomes for all students with disabilities through the passage of such acts as No Child Left Behind (NCLB), and the reauthorization of the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA). School Districts are now required to complete a functional behavioral assessment (FBA) and design a positive behavior support plan (PBSP) for students who are identified as having behaviors that impede their learning or the learning of others. As expectations for schools to ensure the success of all students increase, a larger burden of dealing with student behavior is being placed on the classroom teacher (Todd et al., 1999; Lo & Cartledge, 2006). Therefore, in order to maintain students with EBD in the least restrictive environment, it is essential for teachers to implement effective behavior management strategies.

Since reactive discipline measures have been proven to be ineffective, teachers need to employ proactive behavior management strategies (Colvin et al., 1993). Unfortunately, research suggests that effective instructional strategies are underutilized by teachers (Vannest et al., 2008; Heward, 2003). Some examples of underutilized behavior management strategies include scripted lessons, altering instructional interactions, hypothesis-driven accommodations, opportunities to respond, functional analysis, and teacher praise. One specific strategy that is highly effective but underutilized is contingent teacher praise, which is given as a consequence to a required or expected behavior (Kalis et al., 2007). Examples of specific praise include praise for students when they follow classroom procedures, participate appropriately, or exhibit other academically and socially appropriate behavior. Opportunities for praise exist each time a student engages in a behavior that is desirable or appropriate; therefore, praise can be used in a variety of situations in any classroom.

Despite being an effective behavior modification strategy, praise is not used by teachers often enough (Vannest et al., 2008; Kalis et al., 2007). In one research study it was found that a teacher ratio of reprimand to praise was 3:1 (Sutherland & Wehby, 2001). Further, research studies suggest that rates of praise for students with EBD range from 1.2 to 4.5 per hour for each student (Kalis et al., 2007; Wehby, Symons, & Shores, 1995; Van Acker, Grants, & Henry, 1996; Shores et al., 1993). Based on current findings, praise, a relatively simple strategy to implement, is not being used with enough frequency in the class room. Students with EBD exhibit challenging behaviors making it easier for teachers to resort to reprimands or reactive behavior management strategies. However, it is necessary for teachers to find ways to implement positive behavior strategies whenever possible. When teachers fail to implement effective

behavioral strategies they miss a valuable opportunity to positively affect their students both academically and behaviorally.

The benefits of using praise are wide spread, and teacher praise of desired student behavior has demonstrated a positive effect on academic success for students with EBD (Sutherland & Wehby, 2001). Researchers have shown that higher levels of contingent teacher praise correlate with an increase in correct student responses, task engagement, and completed problems (Kirby & Shields, 1972; Luiselli & Downing, 1980; Sutherland, Wehby, & Yoder, 2002). In another study, students increased their percentage of accurate responses on curriculum based measurement probes when their classroom teacher dramatically increased the average rate of praise (Kalis et al., 2007). Sutherland, Wehby, and Copeland (2000) found a strong correlation between teacher rate of praise and student time on-task. Within these studies it was frequently noted that the most effective form of praise was behavior specific.

Behavior specific praise is defined as teacher verbal praise of a desired or expected student behavior. Some examples include, “John, that was a wonderful example of how to enter class;” “You two are working together nicely;” and “Excellent work reading that passage for the class.” Despite being considered the most effective form of praise, (Sutherland et al., 2000; Kalis et al., 2007) behavior specific praise statements make up as little as 5% of total praise statements (Anderson, Everston, & Brophy, 1979), even though students benefit when teachers increase the quality and quantity of behavior specific praise.

Behavior praise is a relatively simple teacher strategy to implement. It requires no additional material, is a positive behavior intervention, and student behaviors worthy of praise occur frequently. Based on (a) the poor performance of students with EBD, (b) the fact that positive behavior interventions are more effective than reactive discipline, and (c) that behavior

specific praise is used infrequently in the emotional support classroom; educators should ask themselves, "How can we increase teacher rate of behavior specific praise?"

There are several different ways to increase teacher rate of praise in the classroom including peer coaching, self-evaluation, and self-monitoring (Kalis et al., 2007). Peer coaching is a cooperative strategy where two teachers work together providing support, observation, and feedback to promote more effective teaching practices (Strother, 1989). Often an experienced teacher will be paired with a new teacher. This strategy encourages open conversations between two professionals and would reduce feelings of isolation, while being relatively simple to implement. The target teacher will receive feedback which may increase the appearance of effective teaching practices. In order for this strategy to work, the teacher must believe that the target strategy, in this case praise, is effective and that the peer coach's feedback is helpful. A drawback of this strategy includes the lack of instant behavioral reinforcement. For example, if a teacher implements the target strategy, the positive feedback (reinforcement) provided by the coach is frequently given at the end of a lesson or at the end of the day. This delay in reinforcement can reduce the effectiveness of the intervention. Further, the target teacher is relying on the feedback of the coach to serve as reinforcement and is thus dependent on the coach. Additionally, the implementation of this strategy requires certain logistical considerations that may not be feasible. In many cases the peer coach is another teacher, and for that teacher to collaborate with the target teacher, time must be allotted from the daily schedule of classes, meetings, and other professional responsibilities. Given the logistical challenges and considering the potential drawbacks of the reinforcement schedule, a simpler strategy was desired for the purpose of this current study.

Another strategy available to increase teacher rate of praise is self-evaluation. Self-evaluation allows the teacher to observe and critique his or her own instruction. This is most often completed by videotaping the classroom teacher during lessons and reviewing the video later. While this strategy provides teachers accurate data to inform their instruction it can be time consuming and more expensive to implement (Kalis et al., 2007). Additionally, videotaping a classroom of students with special needs can require additional release forms and may not be feasible in some settings. The teacher would be required to inform the students that they are being recorded. Elements of experimental control could conceivably be skewed using this method. It is possible that student behavior, in the presence of a video recorder, may change in ways that could disrupt the validity of the study. Self-evaluation offers the most accurate way to record data, and has many potential uses, however, for the scope of this study, a less costly and intrusive strategy was desired.

A third way to increase teacher rate of praise is self-monitoring, which is heavily supported by research as an effective way to increase the frequency of a desired behavior (Kalis et al., 2007; Allinder et al., 2000; Gulchak, 2008; Todd et al., 1999). Implementation of self-monitoring is relatively simple and requires only two steps, which are the identification of target behavior and the recording of target behavior. First, the participant must identify and operationalize a target behavior. Common target behaviors to self-monitor include: time on-task, correct responses, raising hand, praise statements, and asking for help. Second, the participant must record the occurrence of that target behavior (Amato-Zech, Hoff & Doepke, 2006). Once the target behavior is identified, the individual is trained to recognize it with a high degree of accuracy, and will then self-record the occurrence of that behavior (Seligson-Petescher & Bailey,

2006; Todd et al., 1999). For example, a teacher is taught to discriminate, “Did I just praise my student(s)?” The teacher would then record a tally if that statement was true (Kalis et al., 2007).

While all three of the aforementioned strategies of peer coaching, self-evaluation, and self-monitoring, have unique benefits, self-monitoring was selected as the independent variable in this study because of the (a) ease of implementation (free of cost and did not require time outside of the classroom), (b) focus on immediate feedback in the form of self-recording behavior, and (c) large body of special education literature that supported the use of self-monitoring to increase target behavior. Therefore, this study seeks to determine the effects of self-monitoring to promote the use of effective behavior management strategies by teachers. More precisely the two research questions to be addressed are: Will a teacher increase his or her use of praise when given a self-monitoring intervention; and are the results socially valid?

CHAPTER 2

Review of Literature

A review of special education literature on self-monitoring interventions was conducted to determine its effectiveness. There were only a limited number of studies which focused solely on teacher self-monitoring and the effect it had on effective teaching strategies. Much more common were studies conducted with student participants where self-monitoring interventions were employed. Therefore, a broad search of self-monitoring interventions was conducted to include both teachers and students as participants. A search of ERIC multiple education databases was conducted to find articles. Search terms used included “self-monitoring” and “special education.” Further criteria was extended to studies which were peer reviewed journal articles written between 1995 and 2011. Results yielded 47 articles. Fourteen of the articles were direct research studies that used self-monitoring as a behavior intervention and are summarized in table 1. The remaining 33 articles were not included because they were not direct classroom studies. To review and synthesize these studies the following organizational categories were used: (a) participants, (b) dependent variable, (c) independent variable, (d) results, and (e) discussion.

Table 1

Summary of research studies involving self-monitoring interventions

Authors	Participants	Independent Variable	Dependant Variable	Results
Allinder et al. (2000)	31 teachers in a variety of inclusive and special education classrooms	Self-monitoring of instructional practices related to math	Student performance on CBM probes, and teacher instructional practices	Teachers who self-monitored instructional practices had a greater impact on their students achievement
Amato-Zech, Hoff, and Doepke (2006)	3 students who exhibited low rates of on-task behavior and task completion	Self-monitoring of on-task behavior	Percent of on-task intervals	All three students increased their rates of on-task behavior
Freeman and Dexter-Mazza (2004)	1 student in a residential treatment facility	self-monitoring of off-task behavior and matching with classroom staff	Percent of off-task intervals	When matching was included in the intervention the student's rate of off-task behavior was reduced
Gerdtz (2000)	1 student with autism who exhibited severe behavior problems	Antecedent manipulation (breaks, access to preferred staff, warnings about schedule change) self-monitoring expected behavior	Major behavioral referrals and moderate behavioral referrals	Major behavior referrals reduced to zero and moderate behavior referrals reduced significantly
Gulchak (2008)	1 student with EBD	Self-monitoring of on-task behavior using hand held computer	Percent of on-task intervals	On-task behavior increased
Harris et al. (2005)	6 students with ADHD	Self-monitoring of spelling strategy and on-task behavior	Performance on spelling assessments	increased performance on classroom tests
Jitendra, Hoppes, and Xin (2000)	33 students who were 2 years behind in reading	Self-monitoring of paragraph summarization strategy	Curriculum based assessments in reading class	Students in the treatment group out performed students in the control group
Kalis, Vannest, and Parker (2007)	1 teacher in an emotional support classroom	Self-monitoring of rate of praise	Frequency of praise and behavior specific praise	the teacher significantly increased his rate of praise
Lo and Cartledge (2006)	4 students with EBD or at risk for behavior problems	Self-monitoring of working quietly, checking class work, asking for help, and being polite	Percent of off-task intervals	Rate of off-task behavior decreased over the course of the study
Mathes and Bender (1997)	3 students with ADHD who struggled to stay on task	Self-monitoring of on-task/off-task behavior	Percent of on-task intervals	Rate of on-task behavior increased significantly
Moore, DuPaul, and White (2006)	3 middle school students who exhibited low rates of preparedness	Self-monitoring of preparedness for class (having notebook, pencil, and homework)	Student preparedness for class	increases in student preparedness for class
Rock (2005)	9 students	Self-monitoring and frequent teacher mini-conferences	Intervals of on-task behavior, work completion	Increased accuracy, time on task, and work completion
Seligson-Petscher and Bailey (2006)	3 teacher assistance	Self-monitoring of verbal behavior associated with classroom behavior system (praise and feedback)	Percent of accurate responses based on classroom behavior system	increase in staff accuracy when presented opportunities to praise or give feedback to students
Todd, Horner, and Sugai (1999)	1 student with behavioral problems	Self-monitoring on-task behavior and self-recruitment of teacher attention	Frequency of problem behavior, accuracy on class work, and intervals of on-task behavior	Self-monitoring and recruiting teacher attention yielded increases in on-task behavior and reduced problem behavior

Participants

A total of 100 participants were represented within the 14 studies. Allinder et al. (2000) and Jitendra et al. (2000) used group research designs that included an experimental and control group (31 special education teachers and 33 students with special needs respectively). The remaining studies used single subject research designs. Of the remaining 12 studies, 10 involved students with special needs (n=32 participants). These students were aged between 6 and 16 years old. The following disability categories were represented: autism spectrum disorder (n=2), attention-deficit hyperactivity disorder (n=16), specific learning disability (n=6), emotional/behavioral disorder (n=3), and speech and language disability (n=1). Additionally, one student was identified as being gifted but exhibiting problem behaviors during class, and three students were described as non-disabled but at risk for an emotional/behavioral diagnosis based on challenging behavior. Of the 32 students, 29 were male and 3 were female. The final two studies represented one teacher and three para-educators. When including the large group teacher study completed by Allinder et al. only three studies included educators as participants, which suggests a need for more studies examining self-monitoring and its effect on educator behavior.

Dependent Variable

The dependent variables examined within the 14 studies reviewed fit into the one of the following areas: Educator behavior, student academic behavior, or student problem behavior. Three studies were located involving educators as participants and utilized self-monitoring to increase desired educator behaviors (Allinder et al., 2000; Kalis et al., 2007; Seligson-Petscher & Bailey, 2006). Seligson-Petscher and Bailey (2006) examined the effect self-monitoring and the use of tactile prompts had on para-educators' accuracy in implementation of a classroom

behavior system. Kalis et al. (2007) investigated the effect of a self-monitoring intervention on a classroom teacher's rate of contingent behavior praise. Allinder et al. (2000) investigated the effect self-monitoring had on teachers' implementation of curriculum based measurement (CBM) and math computation instruction. The other studies included in this review focused on either student academic or problem behavior as the dependent variable.

The remaining 11 studies used self-monitoring as an intervention to address student behavior and academic needs. Four of the eleven studies examined the relationship between self-monitoring and its effect on student academic performance (Jitendra, Hoppes, & Xin, 2000; Harris, et al., 2005; Moore, DuPaul, & White, 2006; Rock, 2005.) The academic skills that were dependent variables in these studies included: spelling accuracy, reading comprehension, math seatwork task completion, and organizational skills. The variety of academic skills measured suggest that self-monitoring interventions may be used across subject areas.

Student behavior was the dependent variable for 7 of the 14 studies (Amato-Zech, Hoff, & Doepke, 2006; Freeman & Dexter-Mazza 2004; Gerdtz, 2000; Gulchak, 2008; Lo & Cartledge, 2006; Mathes & Bender, 1997; Todd et al., 1999). Frequent behaviors that needed to be addressed in these studies included: Cursing, hitting peers, failing to complete assigned tasks, leaving assigned area, damaging property, and disrupting the class. Of these 7 studies, 6 listed percent of intervals on-task (n=4) or off-task (n=2) as the dependent variable. The students who participated in these studies were frequently disrupting class and creating behavioral challenges for the classroom teacher. A common characteristic of these students was that while they were misbehaving (e.g. hitting a peer or cursing at teacher) they were also off-task. Therefore, a common approach that researchers took was to focus on increasing the percent of intervals a student was on-task (or decreasing off-task intervals). The expectation being, if a student was

"on-task" (completing class work in assigned area) he or she would engage in disruptive behavior less frequently. Gertdz (2000) used behavioral referrals (indirect observation) as the dependent variable to measure student improvement. The majority of the studies investigating self-monitoring interventions and the effect on student problem behavior used direct observation data (percent of interval recording) as the dependent variable suggesting that direct observation data was preferred over indirect data. Another interesting characteristic these 7 studies shared was the completion of a functional behavioral assessment (FBA).

The FBA process consisted of teacher and student interviews, direct observation, indirect observation, and hypothesis formulation (Mathes & Bender, 1997; Lo & Cartledge, 2006; Gertdz, 2000). This comprehensive procedure was most appropriate in circumstances when previous interventions failed to satisfactorily address the problem. The added benefit of completing an FBA includes gaining a better understanding of why a student was exhibiting specific problem behavior and subsequently helps in developing an appropriate behavioral intervention. Some of the studies only completed partial FBA procedures. For example, in Moore et al. (2006) a behavior rating scale and direct observation were completed without hypothesis formulation. The dependent variable in these 7 studies were similar suggesting that a fair amount of research exists on evaluating self-monitoring intervention effects on students' on-task behavior.

Independent Variable

All of the studies focused on promoting behavior change in the participant through the use of self-monitoring interventions. The self-monitoring interventions were frequently combined with a variety of other strategies. These effective strategies included: Training sessions (Freeman & Dexter-Mazza, 2004), supportive technology (Lo & Cartledge, 2006),

praise and positive verbal attention (Mathes & Bender, 1997), positive reinforcement (Todd et al., 1999), and behavior graphing (Harris et al., 2005).

Training sessions.

Intervention training sessions were included throughout all of the studies reviewed. These training sessions occurred between the baseline phase and the intervention phase. While seemingly a simple necessity, the inclusion of training sessions deserves further explanation. It is during this phase that skills are taught that will promote the success of the intervention. In Kalis et al. 2007 the classroom teacher lacked sufficient training in giving praise to her students. In the studies involving student behavior those students were found to lack either important social or academic skills (Amato-Zech et al., 2006; Freeman & Dexter-Mazza, 2004; Gerdtz, 2000; Gulchak, 2008; Lo & Cartledge, 2006; Mathes & Bender, 1997; Todd et al., 1999). During the training sessions, one of the researchers or teachers involved in the study trained the participant in the use of these skills. Training sessions that address not only how to self-monitor, but also teach the behavior that is going to be self monitored are essential to the intervention's success (e.g. showing a student how to record staying on task, and teaching a student how to check their work problems and ask for help as needed) (Todd et al., 1999). A logical conclusion would follow that if the training sessions only taught the participant to self-monitor, the outcome of the intervention would be dependent on the participant's current mastery of that behavior. In the studies reviewed, the majority of the participants lacked the skills necessary to be successful without additional training (Amato-Zech et al., 2006; Freeman & Dexter-Mazza, 2004; Gerdtz, 2000; Gulchak, 2008; Lo & Cartledge, 2006; Mathes & Bender, 1997; Todd et al., 1999). Therefore every self-monitoring intervention should include several training sessions that teaches not only the self-monitoring procedure, but also relevant behavioral skills. These trainings

should include contrived situations or role plays and have a mastery criteria that the participant must reach in order to complete the training. An example of a training session could include role playing giving praise and completing a short assessment identifying examples and non-examples of praise. After the training sessions were complete, the participants then began to self-monitor their behavior in the classroom.

Once the interventions began the central component that each participant engaged in was a self-recording procedure. The participant needed some way to record when a target behavior occurred. The self-recording procedure varied depending on the participant's needs and the environmental conditions. In certain cases a simple paper and pencil sheet was used to tally behavior (Freeman & Dexter-Mazza, 2004). In other studies more complex hand held computers were used to record behavior (Gulchak, 2008). When the participant needed to move around the classroom a hand held counting device was used (Kalis et al., 2007). There are countless different ways that an individual could self-monitor a given behavior, and when developing an intervention the needs of the individual should be taken into account. For example, students with significant behavioral problems may need visual cues such as a picture of a student sitting doing class work, and an accompanying audio prompt to cue them to record their behavior (Lo & Cartledge, 2006).

Supporting technology.

To provide greater support and accuracy, some self-monitoring interventions included the use of technology that gave the participant a tactile or audible prompt (Amato-Zech et al., 2006; Mathes & Bender, 1997; Lo & Cartledge, 2006; Gulchak, 2008). Within these studies, the devices were most frequently used with young students with behavioral needs. The MotivAider was used in multiple self-monitoring studies to signal students to record their behavior. Other

technologies used include an audio file that chimes a signal and handheld computers to record data (Todd et al., 1999; Gulchak, 2008). These devices clip to a student's waist and vibrate at fixed intervals. The use of technology increased student accuracy and fidelity with the interventions being used. Students were reminded without teacher prompting, thus promoting student independence (Lo & Cartledge, 2006). When technology was included students made rapid improvements in their behavior and maintained those improvements throughout the studies. Adding technology may be highly effective for today's student who may exhibit problems with traditional paper and pencil tasks. Some technology may save time and allow data to be more quickly analyzed. However, using technology may increase the time needed to implement the intervention by making the intervention more complicated or costly than needed. When developing a self-monitoring intervention, one should weigh the costs and benefits of including different technological devices.

Contingent praise and attention.

Another effective strategy that was used within several studies included contingent teacher praise and positive attention (Todd et al., 1999; Freeman, & Dexter-Mazza, 2009; Gerdtz, 2000). In these studies, when the target student exhibited appropriate behavior or self-monitored behavior accurately, the classroom teacher would praise the student. The teacher's praise was contingent upon the student's appropriate or expected behavior and was a powerful reinforcer within the studies. Praise was found to be most effective when the student had previously engaged in problem behavior as a means to seek attention. Freeman and Dexter-Mazza (2004) used matching to improve student accuracy with self-monitoring procedures. Matching required the teacher to record data while the student was self-monitoring. Then, at pre-arranged intervals, the student and the teacher compared their behavior recording and the

teacher provided feedback to the student. This was an effective procedure that increased participant accuracy with self-monitoring.

When working with a teacher as the participant, Kalis et al. (2007) used goal statements and feedback to improve the strength of the self-monitoring intervention. Prior to each observation the researchers encouraged the teacher to aim for a specific goal. After each session was concluded the teacher was provided with feedback. Even though the participant in this case was an adult, the use of positive attention was still a valuable factor and contributed to the overall positive effect of the self-monitoring intervention. These results suggest that self-monitoring interventions, when targeting either students or teachers should include positive attention in the form of goal statements, praise, and matching. Overall, all forms of positive reinforcement increased participant self-monitoring accuracy and should be considered a necessary component to any self-monitoring intervention package.

Behavior graphing.

A final strategy that was found to be effective was graphing of self-monitoring behavior (Harris et al., 2005). When the participants finished recording their behavior for a given session they then graphed the results on paper. Graphing encouraged the participants to work harder to make improvements because the visual depiction of behavior was simple for the students to understand and make goals. Graphing also created a running record for the student to view, making the self-monitoring more of a daily routine than a one-time event. Adding this strategy to a self-monitoring intervention package should be considered when gaining participant buy-in is a concern. Some students may not be able to understand their behavior without graphing and viewing their behavior on paper. However, in certain cases graphing may not be necessary or appropriate. Students with severe learning disabilities may lack the skills to be able to graph

their own behavior making the exercise more frustrating than it would be beneficial. It will be necessary for the individual designing the intervention to determine whether graphing behavior is appropriate for the individual receiving the intervention.

Aside from the strategies that contribute to the strength of self-monitoring intervention, it is interesting to note that self-monitoring was used to increase the success of multi-step problem solving strategies. In Jitendra et al. (2000) the class room teacher instructed students to use a summarization strategy to identify the main points of a reading passage. Students used a cue card and then guided themselves through a series of complex reading comprehension behaviors. Similarly, Rock (2005) found that the students were taught to use the ACT-REACT strategy during math and reading assignments. This multi-step strategy included the following steps: articulating goals, creating a work plan, taking pictures, reflecting using self-talk, and evaluating progress. Both of these multi-step strategies were used to increase the completion of more difficult academic tasks by teaching the students to chunk assignments into more manageable steps. Finally, in a study by Seligson-Petscher and Bailey (2006), classroom para-educators were taught to implement a token economy through the use of a self-monitoring intervention. In each of these three studies the participants struggled to accurately complete the multi-step task that was demanded of them. When these participants were taught to break the multi-step task into smaller chunks and then self-monitor upon completion of each portion of the task, they were significantly more successful. The results from these studies strongly support the use of self-monitoring to increase participant acquisition of multi-step procedures such as solving challenging math problems, writing essays, or implementing classroom routines.

Results

When self-monitoring was used as a key part of an intervention for students with behavioral problems, the results indicated improvements in desired behavior. In a year-long study Gertdz (2000) reported a 100% decrease in severe behavior problems and an 80% reduction in mild behavior problems for a 16 year old student with autism. In seven studies that measured student change in class time spent on-task the following data were reported: the average baseline on-task behavior rate for the participants was 51% of intervals, which increased to an average of 89% of intervals during the intervention phase. The average increase of 38% of time spent on-task was considered a significant increase (Amato-Zech et al., 2006; Freeman & Dexter-Mazza 2004; Gerdtz, 2000; Gulchak, 2008; Lo & Cartledge, 2006; Mathes & Bender, 1997; Todd et al., 1999).

The studies that examined the effect self-monitoring had on student academic performance also reported improvements in participant behavior. Moore et al. (2006) reported 100% accuracy in class preparation behaviors for three students with attention deficit hyperactivity disorder after implementing the intervention. Harris et al. (2005) reported that students spelled more than 70 words correct during trials when given a self-monitoring intervention that included positive attention. Jitendra et al. (2000) and Rock (2005) reported that students who were trained to follow a summarization strategy by self-monitoring their behavior scored higher on reading comprehension and math assessments.

Studies involving teachers and para-educators also support the use of self-monitoring interventions to improve educator's instructional abilities. Allinder et al. (2000) found that teachers who self-monitored their instructional practices made better use of student data to plan lessons and increased student performance on classroom based assessments. In Kalis et al.

(2007) a classroom teacher increased her rate of praise by a factor of 10 after given a self-monitoring intervention. Seligson-Petscher and Bailey (2006) reported that three para-educators went from less than 5% accuracy when it came to providing feedback to students based on the classroom behavior system and token economy to more than 90% accuracy. These three studies support the use of self-monitoring interventions to improve desired teacher and educator behavior.

Self-monitoring is a powerful tool that has been used to promote behavior change in students and educators alike. Many of the studies reviewed used self-monitoring, along with other strategies, to reduce difficult problem behaviors while simultaneously increasing desired behaviors. The students in these studies had broad range of individual needs; their improvements during the studies support the conclusion that self-monitoring can be used across any academic domain. Given the current requirement in special education to implement research based interventions, self-monitoring meets this standard. Special education teachers can use self-monitoring to encourage students to take responsibility for their own behavior. Instead of constantly prompting a student each time he or she engages in a problem behavior, that student can be taught to record their own behavior. When combined with other contingencies such as positive reinforcement based on accurate self-monitoring, that student will likely make improvements. Promoting student independence is one of the primary goals of special education, and self-monitoring is research based strategy that can be used to meet a variety of educational needs.

Despite the strong body of research supporting the use of self-monitoring for student participants, there is a shortage of research investigating self-monitoring and its effect on teacher behavior. Three studies were found for this review that directly examined self-monitoring and

teacher behavior (Allinder et al., 2000; Kalis et al., 2007; Seligson-Petscher & Bailey, 2006). These studies support the use of self-monitoring to increase teacher rate of praise (Kalis et al., 2007), fidelity with behavior systems (Seligson-Petscher & Bailey, 2006), and planning of instruction (Allinder et al., 2000). Considering the high stakes atmosphere surrounding education and the close scrutiny of teacher effectiveness, any research that supports strategies to increase teacher effectiveness is highly valuable. Praise is a highly effective behavior management strategy and is relatively simple to implement; yet, special education teachers underutilize praise (Kalis et al., 2007; Wehby et al., 1995; Van Acker et al., 1996; Shores et al., 1993). The fact that teachers are underutilizing a simple but highly effective behavior management strategy (praise), and the current need for more research involving self-monitoring interventions and teacher participants, there is a clear rationale for additional research in this area. With this said, the study that follows seeks to add to the current body of research involving teacher participants and self-monitoring interventions. The research questions this study will attempt to answer: Will a teacher increase his or her use of praise when given a self-monitoring intervention? Additionally this study will examine whether the intervention is socially valid.

CHAPTER 3

Method

Setting

The study took place at a self-contained suburban alternative high school on the east coast of the United States. The high school serves approximately 70 students, grades 9 to 12 and age 14 to 20, with emotional behavioral disorders. All of the students are currently receiving special education services and have an Individual Education Program (IEP), or were referred to the program for evaluation for special education. The school population is a heterogeneous group made up of students from 14 surrounding school districts. Although the school itself is situated in a suburban area, a large percentage of the students are from urban areas of the county. Over half of the students are eligible for free lunch and many students live in home where the income is at or below the poverty level. The family structure is often nontraditional. Many students live with a non-parent family member (aunt, grandmother, older sibling), or live with only one parent. More than half of the student body had been involved or currently are involved in the juvenile justice system.

The educational staff is made up of 10 teachers, 10 para-educators (classroom aides and hallway support staff), 7 mental health counselors, 1 social worker, and 1 school psychologist. There is 1 full time special education supervisor. Additional non-educational staff include school nurse, maintenance worker, and two secretaries. All classroom teachers are certified in their particular content area, and all academic classroom teachers are additionally certified in special education. Overall, there is a very low staff to student ratio of approximately 3 staff to 7 students. When speaking with the school personnel, they cited some of the following concerns about student behavior: Vulgar and abusive language, sexual harassment, physical aggressive

(fighting), absenteeism, and non-compliance in the classroom. Other frequent problem behaviors noted were students using cell phones during the school day, leaving class without permission, and walking the hallways. In short, student problem behavior was a major concern to all staff at this program and interrupted student education on a daily basis.

When looking through student Individual Education Program's (IEP's) the following information was noted regarding the academic abilities of the students at this program: (a) Seventy-two percent of the students had deficits in math problem solving or computation; (b) all of these students had specially designed instruction in the area of mathematics and academic goals for progress monitoring; (c) classroom teachers reported that math was a common area of need for most of the student body; (d) and students typically functioned on an early middle school grade level (4-5 grade levels behind in math). Teachers also noted that about 1 in 5 students with math deficits were functioning at the early elementary school level (9-10 grade levels behind in math). The school currently did not employ any supplemental math instruction beyond the students' regularly scheduled math class.

Student academic performance in reading was also a common deficit, however deficits were not as severe as math. Fifty-seven percent of the students participated in the schools supplementary reading program, and 65% percent of the students had reading listed as an academic deficit in their IEP. Of the students who were identified as having academic deficiencies in the area of reading, 75% were working at the 5 to 7 grade reading level, and 25% were working below the 5th grade reading level. Teachers reported that academic deficiencies in both reading and math were a significant issue that they took into consideration when planning instruction. The teachers at this program also noted that the students who were academically

deficient were more likely to exhibit disruptive behaviors, fail to complete assignments, and be absent from school.

The lead researcher, who also was the math teacher for this program, noted that the classroom teachers struggled on a regular basis to manage student behaviors. The program frequently and ineffectively used suspensions to attempt to reign in problem behaviors. Additionally, there was a positive behavior support system in place, but it was largely underdeveloped. School referral data yielded 529 behavioral referrals between September and May of the 2010-2011 school year. The five most frequently occurring problem behavior areas were as follows: 28.3% abusive or inappropriate language; 10.7% physical aggression; 10.2% disrespect or non-compliance; 8.3% other behavior (not clearly defined); 7.3% fighting. Over the course of the 2010-2011 school year 153 full day out of school suspensions were issued. Suspensions were spread out between only 43 different students. There were 33 major incidents where the police were called and citations given. The program was clearly struggling to manage student behaviors and teachers were largely on their own with regard to managing mild to moderate behavior challenges in the classroom. Several teachers in the program expressed frustration and frequently resorted to reprimands, office referrals, and in certain cases ignoring behaviors that were unacceptable rather than attempt to manage them. It is within this context that this study took place.

Participants

In order to find potential candidates for the study an informational letter was sent to all classroom teachers at the alternative high school. Included in the letter was a brief description of the study and what would be required of the participant should they wish to participate. After the letters were sent out the researcher spoke with each potential candidate to see if he or she had

any questions or interest in the study. Of the 10 teachers at the school, one teacher responded indicating that he was interested in participating.

Adam, a second year teacher at the alternative school, was interested in participating in the study. He was selected after an informal observation of one of his classes followed by a short discussion. It was noted that Adam displayed low levels of behavior praise during the informal observation. During the brief conference Adam said that he was concerned about the high rates of problem behavior and was frustrated that the interventions he had implemented had not been successful. Adam was certified in special education and secondary science and considered highly qualified by state standards for teacher certification. He held a Bachelor's of Science in Special Education from a public university. Adam was informed that the study would involve measuring his behavior in the classroom during his reading class, however the specifics of the study were withheld in order to maintain control over the dependent variable.

There were 10 students assigned to the direct instruction reading class. Student ages ranged from 15-18 years old. All students in the classroom had an IEP and were identified as having emotional behavioral problems and had been referred to the program from a prior placement. The reading curriculum consisted of the SRA Corrective Reading Program, Level C. This is a scripted direct instruction reading intervention program. Class instruction is delivered in a systematic and well organized manner. The students in the class had been enrolled in the reading program throughout the school year. The class began at 11:55 a.m. and concluded at 12:35 p.m. Monday through Friday. Observations were conducted over the course of 12 weeks.

The SRA Corrective Reading Program is designed as an intervention for grades 3 to 12. The materials used for the implementation of the program include a teacher presentation booklet, student book, and workbook. The teacher presentation booklet organizes each lesson around a

central story and breaks the lesson down into several distinct exercises: word attack and practice, vocabulary building, story reading, timed reading, fluency assessment, and comprehension questions. Lessons are scripted and teachers are trained to follow the direct instruction format. The program was developed for students who misidentify words, omit words, incorrectly decode syllables, lack fluency (read too slowly), lack motivation, and have negative attitudes about reading (Marchand-Martella, Martella, & Pryzhodzin-Haves, 2008).

During a lesson there are ample opportunities for students to respond and for teachers to provide feedback. Student desired behaviors during reading lessons include group responding, individual responding, reading aloud, reading silently, and writing short response answers. Each lesson can take between 30-50 minutes depending on the rate of success (incorrect responses receive feedback and are repeated correctly), speed of readers, and length of particular lesson. Most lessons are able to be completed in one class period.

The study was conducted during the direct instruction reading class for several reasons. First, no other classes used a lesson format that was as consistent and organized as the direct instruction reading program. The consistency and organization of the SRA reading program would help mitigate variability in daily classroom lessons such as independent seat work, group instruction, and watching a movie, etc. Second, students in this program were at least 3 years behind in reading and often exhibited severe problem behaviors in reading class. If teachers used effective behavior management strategies in the reading classroom they would be able to impact students positively during a very important subject.

Dependent Variable

The purpose of this study was to examine the effect of a self-monitoring intervention on a classroom teacher's rate of praise. The dependent variable was the frequency of praise

statements used in the classroom by the teacher to either the whole class, a group of students, or an individual student. Prior to beginning the active research phase of the study the target behaviors to be measured (dependent variables) were explicitly defined. For this study praise was defined as: verbal behaviors indicating the positive quality of a behavior beyond the evaluation of accuracy ("great" or "excellent"). Statements such as "right" and "ok" are not considered praise statements (Gunter, & Reed, 1996). Behavior Specific Praise was defined as: verbal praise for a desired student behavior specified in the praise statement (i.e., "excellent job being prepared for class by getting your materials," or "You did a nice job waiting patiently for me to begin the next example on the board" (Sutherland, 2000).

Independent Variable

The independent variable during this study was the teacher self-monitoring of each instance of specific teacher praise used in the classroom. Self-monitoring consisted of teacher self-recording immediately after each instance of praise was given. The teacher self-monitored during all sessions of the intervention phase. The exact steps involved with the implementation of the self-monitoring intervention are described below.

Research Design

An AB design was used for this study to determine the effect self-monitoring had on a teacher's rate of praise in the classroom. This study consisted of three phases: (a) the baseline phase where no intervention or change to the regular environment was made, (b) the intervention phase where the teacher would then self-monitor praise behavior, and (c) the maintenance phase where the intervention component would be removed. A statistical comparison would then be made between the baseline and the intervention phases of the study to answer the research question: Can teacher self-monitoring of praise increase teacher rate of praise.

Baseline

The teacher was observed during reading class to record the frequency of praise and behavior specific praise. During this phase the teacher conducted class as usual using the direct instruction reading program as the format for daily lessons. During the first several minutes of class students entered, obtained their materials, and took their seats. The teacher gave the following prompt when ready to begin, "We are ready to begin the lesson," and at that time the data recorder would commence taking data. Data on frequency of teacher praise was taken for 10 minutes out of the 40 minute class. During the baseline phase no guidance was given to the teacher other than instructions to follow the direct instruction script as closely as possible. Transition from the baseline phase to the intervention phase would occur after visual analysis of baseline data yielded a stable trend in rates of praise or behavior specific praise.

Intervention

Prior to beginning the intervention the researcher met with the teacher to explain the details of the study. He was informed that the study would measure his use of praise in the classroom. Training ensued which consisted of two, 20 minute sessions after school. Research on the effectiveness of praise was shared. The researcher shared examples of praise and detailed studies where teachers were able to use praise to increase the occurrence of desired behaviors in the classroom. The difference between simple praise and behavior specific praise, as well as non-examples of praise were given to help the teacher distinguish between them and to fully understand what praise is. The teacher was asked to identify different examples as either praise or behavior specific praise, and was taught how to use the hand held counter. The participant needed to accurately discriminate simple praise, behavior specific praise, and non-examples with

95% accuracy when given a written exam in order to meet the expected criteria for the training component.

During the intervention phase the teacher continued to teach using scripted direct instruction literacy lessons. When the teacher stated, “We are ready to begin the lesson,” the data recorder would record every instance of praise and behavior specific praise for 10 minutes. At that same time the teacher would begin using the hand held behavior counter to self-monitor praise. The teacher was instructed to count both simple praise and behavior specific praise. As the lesson progressed the teacher would click the counter for every instance of praise, and at the end of 10 minutes would inform the data recorder of the total. The frequency count of the data recorder and the teacher would then be compared. If data between the teacher and the data recorder was consistent, positive feedback was given. If there was a discrepancy between the data, then the data recorder would review the self-monitoring procedure with the teacher. Feedback was given at the end of the class period, after the students left. This process, known as “matching,” compared both data sets and the provided feedback would likely reinforce the self-monitoring behavior of the teacher, consequently making the intervention more powerful (Todd et al., 1999; Freeman & Dexter-Mazza, 2004). The intervention phase would take place over the course of 9 sessions. At that time an analysis of the data would take place to determine whether a change in teacher rate of praise was observed.

Maintenance

After the completion of the intervention phase, several follow up sessions were planned to take maintenance data. This phase would take place at least 5 weeks after the intervention phase was concluded. During the maintenance phase the teacher would not self-record his behavior and no initial prompt or goal would be given as a target. This phase would determine

the long term treatment effects. The maintenance phase took place over 3 sessions in two weeks.

Observer

The primary researcher served as the data recorder throughout the study. The primary researcher was a graduate student and special education teacher who had been teaching for 4 years. To collect behavioral data, a paper and pencil chart was used to record the frequency of praise during each session. Every instance of praise would be recorded in the praise column. Every instance of behavior specific praise would be recorded in the behavior specific praise column (Appendix). To minimize recorder influence on student or teacher behavior, the data recorder sat in the back of the class and quietly observed. Prior to the observations the teacher informed the class that periodically someone would observe the class and that students should behave as they normally do.

Reliability was addressed by having a second trained observer record data during 6 sessions. The second observer was a second year school counselor and a doctoral student in a social work program. Training was completed over a 20 minute session where the second observer was taught to discriminate praise and behavior specific praise from non-examples. When reliability between the primary and secondary observers was 95% the training session was complete. Data from both the primary and secondary data recorders would be compared and interrater reliability data would be calculated using a point-by-point formula.

Treatment Acceptability

At the conclusion of the study, the participating teacher was asked to rate 12 statements using a rating profile (Appendix). These statements evaluated the teacher's satisfaction with the study and intervention. The scale was adapted from the Intervention Rating Profile (IRP) used

by Moore et al. (2006). Using a Likert Scale where 1 represented *complete disagreement* and 6 represented *complete agreement*, the teacher rated each statement. The results were totaled and an average was computed. An average rating per item of 4 or higher demonstrated overall satisfaction with the intervention and study as a whole. In addition to the rating profile a post-intervention interview was conducted with the participating teacher to determine social validity.

CHAPTER 4

Results

This study examined the effects of a self-monitoring intervention on a teacher's rate praise and behavior specific praise. An AB design was used and conducted over 15 sessions. The participant was a male second year teacher who taught both reading and science to students with EBD. The intervention effects were measured using a frequency count of praise and behavior specific praise during 10 minute sessions in reading class. Data collection was spread out over the course of 16 weeks. Figure 1 represents the total amount of praise statements made during baseline and intervention phases of the study per each session. Figure 2 represents the total amount of behavior specific praise statements made during baseline and intervention phases of the study per each session.

Baseline

Baseline data were collected over the course of 6 sessions. A mean frequency count of 5.33 instances of praise was observed with a range of 2-12. This yielded an hourly average rate of praise per student of 3.19 (10 students assigned to class) which fell within the range of 1-4.5 found in previous research (Sutherland et al., 2000). One outlier in the baseline data was identified: 12 instances of praise were observed during the initial observation. Examining the baseline data without this outlier session yields mean of 4 with only one other data point falling outside of 50% of the mean (4 ± 2). The mean frequency count of behavior specific praise during the baseline phase was 0. During the baseline phase the teacher did not exhibit any instance of behavior specific praise.

Frequency of Total Praise

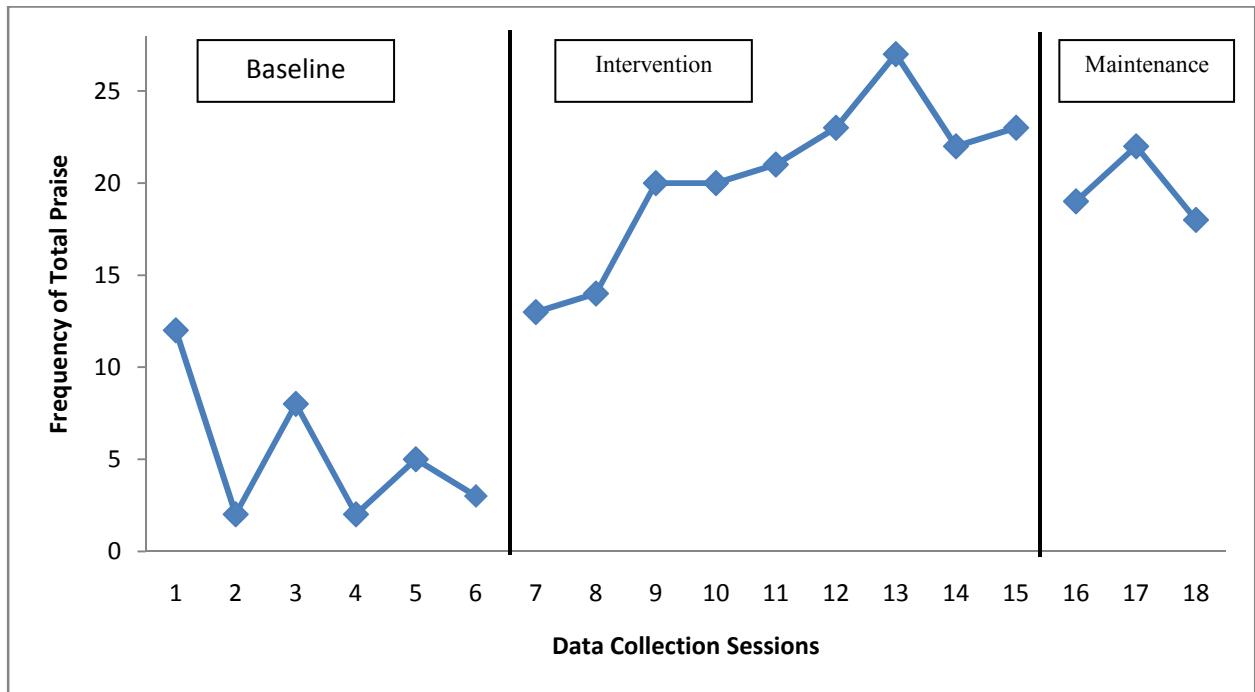


Figure 1: Total instances of behavior praise during baseline and intervention phases of the study.

Frequency of Behavior Specific Praise

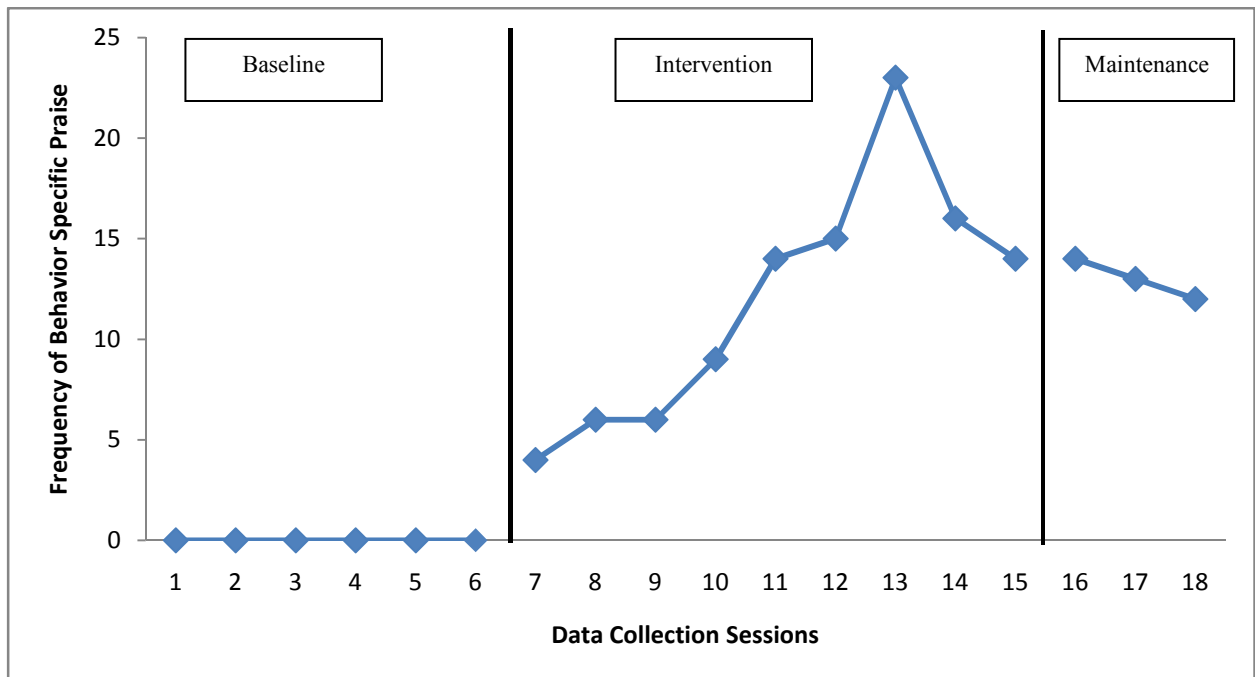


Figure 2: Total instances of behavior specific praise during baseline and intervention phases of the study.

A ratio of simple praise to behavior specific praise could not be calculated because no instances of behavior specific praise were observed during any session of the baseline phase. Visual analysis of the baseline phase suggests that praise was used with a degree of variability, all instances falling at 12 or below, and that no instances of behavior specific praise were used. Decision to move to the intervention phase was based on clear trend in behavior specific praise (0 instances across 6 sessions), the generally low levels of praise used in each session (mean of 5 instances), and the lack of variation in the teacher's praise statements (over use of "good job" without much variety).

Intervention

Intervention data were collected over the course of 9 sessions. Mean frequency count of praise increased to 20.33 with a range of 13-23. This yielded an hourly average rate of praise per student of 12.19 (10 students assigned to class). The difference between baseline and intervention means was 15 for total instances of praise. The mean frequency count of behavior specific praise during the intervention phase was 11.88 with a range of 4-23. There were no overlapping data points between baseline and intervention phases of the study. Overlapping data points from one phase to another can complicate the interpretation. Visual analysis of the intervention phase suggests that usage of praise increased through the initial intervention sessions and then leveled out between 20-27 instances of praise per 10 minute session. Usage of behavior specific praise increased more linearly during the intervention phase. An effect size was calculated using *Cohen's d*. This yielded an effect size of 0.872 which is considered clinically significant. The decision to terminate the intervention phase after 9 sessions was based on difficulty scheduling additional observation periods and that the results were similar to results reported by Kalis et al. (2007).

Maintenance

Maintenance data were taken over three sessions. Only 3 sessions of maintenance data were taken due to the difficulty scheduling sessions during the final weeks of the school year. No interrater reliability data were taken over the 3 maintenance sessions. During these sessions the self-monitoring intervention was removed. A mean score of 19.6 instances of praise and 13 instances of behavior specific praise was observed. Total praise ranged from 18 to 22 and behavior specific praise ranged from 12 to 14. Mean scores of the maintenance phase compared closely to the mean scores of the intervention phase.

Reliability

Interrater reliability data were taken for 40% of sessions (6/15) during the baseline and intervention phase of the study. A second trained observer assisted in taking data. Reliability was calculated by using a point by point analysis, or by totaling the number of agreements, divided by the number of agreements plus disagreements. The mean reliability was found to be 97% across the 6 sessions. The range of reliability data across sessions was 92.5% to 100% (variation of 7.5%). Session reliability ranged between 92.5% and 100% agreement point by point.

Treatment Acceptability

The teacher completed a 12 item rating scale regarding the study. Each statement was rated 1 through 6. A rating of 4 or higher per any individual item indicated some agreement. Responses were summed which yielded a score of 65 out of a possible 72 points. The average item response was 5.4 which indicated a strong agreement with the statements. Items that referred to self monitoring such as 'self-monitoring was an effective way to increase my use of praise' and 'other teachers would benefit from the use of self-monitoring to increase their rate of

praise' received the highest rating from the teacher. The teacher rated the statement 'the use of this intervention was not time consuming and was simple to implement' with a 6. The teacher provided anecdotal statements that were supportive of the intervention and its effects on the class: "The frequency of praise changed the way my students interacted with me... they seemed to enjoy themselves more during the lesson because of the positive atmosphere." The teacher also felt more positive about his interactions with the students, "I felt more positive about what I was teaching," and, "This class is my most enjoyable and positive class of the day." Overall the feedback received from the participating teacher was positive and a high level of treatment acceptability was obtained.

CHAPTER 5

Discussion

The purpose of this study was to evaluate the relationship between a self-monitoring intervention and a teacher's rate of praise and behavior specific praise in the classroom. The results obtained are consistent with results of the similar study completed by Kalis et al. (2007), in that the results support the claim that self-monitoring can be used to increase teacher rate of praise. An added benefit of the intervention was that the teacher became more effective at varying his praise statements and the behaviors he praised. Rather than overuse common praise statements such as "good job," as was noted during the baseline phase, the teacher used a rich variety of praise statements. The teacher stated that prior to the study he primarily focused on controlling problem behavior by addressing it immediately when it occurred, often in the form of reprimands. As a result of this intervention, he said that he was actually able to negate the bad behavior before it occurred by praising desired student behavior.

The training segment of the intervention provided the teacher with the skills necessary to target behaviors worthy of specific behavior praise and to quickly reinforce those behaviors. Prior to the training sessions, the use of behavior specific praise was not observed. During the training session the teacher was interested in learning more about the evidence base behind praise, and also took an active role in identifying examples and non-examples. Consequently the teacher 'bought-in' to the intervention concept. This was most clearly demonstrated by the increase in behavior specific praise from zero occurrences during baseline to an average of 9 occurrences in 10 minutes of instructional time during the intervention phase. The teacher praised such behaviors as reading aloud, taking risks on difficult vocabulary, answering questions, using appropriate language, arriving on time, and staying in assigned area. When the

training segment of the intervention was complete and the teacher was ready to begin self-monitoring, he not only understood the value in providing praise but wanted to use it in its most valuable form.

The length of the intervention phase provided an additional benefit for the teacher: he was able to continue to practice giving praise and receiving feedback from a trained observer. This growth in teacher confidence and skill was demonstrated by the shift in making 5 to 10 behavior specific praise statements per 10 minute session during the first 4 intervention sessions to over 15 behavior specific praise statements per 10 minute session during the remaining 5. The participating teacher reported that he was more aware of desired student behavior and possessed a greater degree of clarity. Additionally, he said he became more comfortable with giving praise and the process became more of a reflex. Allowing the intervention phase to continue over the course of 9 separate sessions gave the teacher repeated opportunities to acquire the skill of giving behavior specific praise and develop greater fluency with that skill.

When designing the self-monitoring intervention there were several key parts that increased the probability of success: (a) A relevant behavior was targeted and participant 'buy in' was secured; (b) the self-monitoring procedures were simple to follow (Cooper, Heron, & Heward, 2007); and (c) the self-monitoring behavior was reinforced by positive attention and matching (Todd et al., 1999; Freeman & Dexter-Mazza, 2004). First, the teacher reported his frustration with student behaviors and stated that reprimanding and behavioral referrals did not seem to have a corrective effect in problem behavior. Within this context, praise was introduced as a proven behavior management strategy and became immediately relevant to the teacher. 'Buy in' was secured during the training session sharing research validation of praise as an effective behavior management strategy. Second, the designed intervention was simple to follow

and easy to implement; the teacher needed only to click a small hand-held counter each time he made a praise statement and record the number at the end of each 10 minute session. Third, the lead researcher reinforced the self-monitoring behavior of the teacher before and after each session. Providing a short goal prior to each session motivated the teacher to make improvements. Closing each session by comparing data and giving feedback gave the teacher a sense of accomplishment and sense that self-monitoring praise was an important activity.

As stated in the introduction, research currently shows that teachers who work with students who have emotional behavioral disorders use praise infrequently (Kalis et al., 2007; Sutherland et al., 2000). Increasing a teacher's rate of praise has been shown to have a positive effect on both academic achievement and behavior performance. Therefore the results of this study can be applied usefully to those involved in teacher preparation programs, teacher coaching/mentoring programs, and classroom teachers. By using a relatively simple, yet structured, approach to behavior change, teachers can increase their competency and fluency with an effective behavior management strategy.

Limitations

There are several limitations which are necessary to take into consideration when interpreting this study. Without taking specific data on student academic or behavior performance it is impossible to determine the effect praise had on the students in the classroom. While the teacher's anecdotal report says that the students were more receptive and better behaved when he used more praise, without objective data this cannot be ascertained. A way to have strengthened this particular study would have been to monitor student rate of on-task behavior compared to teacher rate of praise. By measuring students' on-task behavior it could have been determined whether their behavior improved over the course of the study. Despite this

limitation there is a wide body of research which cites the effectiveness of praise in improving student behavior (Sutherland et al., 2000).

This study took place during a direct instruction reading lesson, the format of the lesson was scripted which created a structured classroom routine. The results of this study cannot be generalized to other class formats (e.g. open discussion, lecture, or small group). By extending the body of research to investigate self-monitoring interventions on praise in different classroom environments the overall usefulness of self-monitoring could be better evaluated.

Only one participant was involved in this study and therefore results cannot be generalized beyond the limited contexts of this study. In addition to this, a treatment integrity checklist was not used to ensure treatment fidelity throughout the study. While this study's results support previous findings in the research (Kalis et al., 2007) that self-monitoring is an effective strategy to increase teacher rate of praise, the overall impact of this study needs to be interpreted with caution.

This study adds to the current body of research regarding self-monitoring as an effective strategy to increase target behavior. This study supports the use of self-monitoring to increase teacher use of praise in the classroom. Future research should focus on the effect self-monitoring has on other important teacher behaviors such as using proximity to manage behavior, providing students with increased opportunities to respond, or using positive behavior support language.

Conclusion

This study has answered the proposed research questions: will a teacher increase his use of praise when given a self-monitoring intervention and will the results be socially valid. The research has shown that a teacher can increase his use of praise and behavior specific praise through the use of a self-monitoring intervention. The alternative high school, where this study

took place, possessed some of the common problems that are affecting education as a whole. The students at this program exhibited high rates of problem behavior, which significantly impacted their education. The emotional support teacher who participated in the study used relatively low levels of praise, just as emotional support teachers as a whole use low rates of praise (Kalis et al., 2007; Wehby, Symons, & Shores, 1995; Van Acker, Grants, & Henry, 1996; Shores et al., 1993). This school often relied on punitive behavior interventions to address student behavior without success, which is similar to schools nationwide using zero-tolerance programs that fail to modify student behavior (Sugai & Horner, 2002). At the study's conclusion, not only had the teacher become more proficient with a positive behavior intervention (praise), but had expressed a high level of satisfaction with the results. He shared that he felt, "more positive," and "less stressed," when dealing with student behavior. Additionally he expressed that, in his opinion, student behavior had improved when he used praise more frequently. This high level of social validity is especially salient given the powerful evidence base showing that higher levels of contingent teacher praise correlate with an increase in correct student responses, task engagement, and completed problems (Kirby & Shields, 1972; Luiselli & Downing, 1980; Sutherland et al., 2002).

In short, the teacher was invested in the intervention, was satisfied with the results, and became more proficient with a research based practice. Given that teachers of students with EBD underutilize effective behavior management strategies, this study demonstrates one successful approach to increase teacher use of praise and behavior specific praise. This study successfully replicated the study completed by Kalis et al. (2007) and can be added to the body of research that supports self-monitoring as an effective intervention to increase desired teacher behaviors.

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Appendix

Title of Project: Improving the Use of Effective Behavior Modification Techniques in the Classroom: The Effect of Self-Monitoring Interventions on the Frequency of Teacher Praise

Principal Investigator: *Alex Hillemeier*
102 Moore Rd.
Wallingford PA, 19086
Ahillemeier@dciu.org

Advisor: *Mary Catherine Scheeler*
Penn State Great Valley
Mcs13@psu.edu

Dear Prospective Candidate,

You are invited to participate in an Education Research Study designed to address effective behavior intervention strategies for teachers. Specifically this study will explore teacher praise of students and how self-monitoring can affect the use of praise in the classroom. This research study is being supervised by Penn State University and is also a requirement of my graduate program. This is an opportunity for you to learn about your own classroom habits, and possibly make changes to your teaching style using self-monitoring. Teacher use of praise is a simple, and research based intervention that has been proven effective for students with behavior problems. Below is additional information about the study.

This study will require approximately six weeks of your time during the school year to complete. During this time, one of your daily classes will be selected where observations will take place (approximately 10-15 observations.) You will be observed on multiple occasions during which your rate of praise (i.e. number of times you praise students for exhibiting desired behaviors during a given timeframe) will be recorded. Your privacy will be respected throughout the study and any data gained from observations will not be used in any way to evaluate you. Additionally your name or other personal information will not be disclosed at any time during the publishing of the study. In addition to classroom observations you will receive training on types of praise, how to self-monitor your rate of praise during instruction, and how to follow a direct instruction script. Through all parts of the research study you will be supported by either the lead researcher or a research assistant. You will not be required to schedule any additional time outside your work day in order to complete this study.

Thank you for taking the time to learn more about this study. If you have any additional questions regarding the research study please contact the lead researcher Alex Hillemeier at ahillemeier@dciu.org or 484-574-2061. If you are interested in participating please contact me.

Thank you for your consideration,

Alex Hillemeier
Lead Researcher
Graduate Student Penn State Great
Valley



**Delaware County Intermediate Unit
The County Alternative High School**

710 South Old Middletown Road

Media, PA 19063

Phone: 610-874-4603

Fax: 610-874-4714

Jeremy Curtis, Supervisor

September 24, 2010
Letter of Agreement/Permissions

To the Penn State IRB,

This letter provides permission for Alex Hillemeier to complete research for his Thesis Study at the County Alternative High School. As the supervisor of this program I am willing to participate in the research study. If you have any questions please contact me at 610-874-4603.

Sincerely,

Jeremy Curtis, Program Supervisor



Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: Improving the Use of Effective Behavior Modification Techniques in the Classroom: The Effect of Self-Monitoring Interventions on the Frequency of Teacher Praise

Principal Investigator: *Alex Hillemeyer*
102 Moore Rd.
Wallingford PA, 19086
Ahillemeyer@dcui.org

Advisor: *Mary Catherine Scheeler*
Penn State Great Valley
Mcs13@psu.edu

Other Investigator(s):

1. **Purpose of the Study:** This study will explore teacher praise of students and how self-monitoring can affect the use of praise in the classroom. Results will yield information on teacher classroom habits and demonstrate how a self-monitoring intervention affects positive feedback to students.
2. **Procedures to be followed:** You will be asked to participate in 2-3 trainings of 30 minutes after school on the topic of behavior praise and self-monitoring. You will be observed during your reading class several times prior to the intervention and training, and approximately 10 times after the intervention is in place.
3. **Duration:** It will take 1.5 hours of your time for training, and up to 15 classroom observations. The study will take place between 4-6 weeks.
4. **Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured at The County Alternative High School on the work laptop computer of the lead investigator. The computer and file will both be locked and password protected, and the computer will be stored in a secure and locked place when not in use. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.
5. **Right to Ask Questions:** Please contact Alex Hillemeyer at (484) 574-2061 with questions or concerns about this study.
6. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this form for your records.

Participant Signature

Date

Person Obtaining Consent

Date

Data Form

Date	Frequency of Simple Behavior Praise	Frequency of Behavior Specific Praise	Notes
Minute 0-2			
Minute 2-4			
Minute 4-6			
Minute 6-8			
Minute 8-10			

Notes:

Simple praise: any positive comment ("good job," "nice work," "well done", "way to go", etc) that does not include a specific behavior directed to a student.

Behavior specific praise: verbal praise of a desired student behavior directed toward a student (That is very good how you were waiting patiently for your turn to read)

Directions: Please complete these statements by circling a number between 1 (strongly disagree) and (6 strongly agree) based on your thoughts regarding the self-monitoring intervention you participated in. At the bottom is a place for you to write any additional comments you may have. Thank you for your time.

1. Self-monitoring was an effective way to increase my use of praise in the classroom	1 2 3 4 5 6
2. I think other teachers would benefit from using self-monitoring to increase their use of praise	1 2 3 4 5 6
3. I feel more comfortable using praise on a regular basis.	1 2 3 4 5 6
4. I would suggest the use of self-monitoring to other teachers as a way to improve their use of effective classroom strategies.	1 2 3 4 5 6
5. I believe there has been an improvement in my students behavior based in some part on increasing my use of praise.	1 2 3 4 5 6
6. I would be willing to use self-monitoring in the class after the completion of this study.	1 2 3 4 5 6
7. The use of this intervention simple and require relatively little time to implement.	1 2 3 4 5 6
8. There were no negative side effects to myself or my students during the course of the intervention.	1 2 3 4 5 6
9. This intervention is consistent with other intervention I have used in the classroom.	1 2 3 4 5 6
10. I have changed my behavior when delivering feedback to students in a positive way	1 2 3 4 5 6
11. I like the procedures used in the intervention strategy	1 2 3 4 5 6
12. Self-monitoring is effective to measure my own behavior and how I manage my classroom.	1 2 3 4 5 6

Additional Comments: