Using Positive Reinforcement to Increase On-Task Behavior of a First Grade Student

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Abstract

A 1st grade student participated in this study. An AB single-subject design was utilized. It was hypothesized that behavior specific teacher praise and positive notes home would increase the student’s on-task behavior, thus making the student more successful across all school subjects. Direct small-group instruction occurred during bi-weekly 50-minute tutoring sessions. Duration data was collected on the student’s on-task behavior for a 35-minute time frame. Baseline results indicated that the student was on task an average of 23 minutes 5 seconds. During the intervention data collection, the results indicated that the student was on task an average of 29 minutes 21 seconds. A discussion of results and suggestions for future research are provided, including issues regarding generalization.

*Keywords: on-task behavior, teacher praise, positive notes home, single-subject design*
Utilizing Positive Reinforcement to Increase On-Task Behavior of a First Grade Student

Often, teachers struggle to manage classroom behaviors due to lack of knowledge and skills. Several interventions have been tried for managing classroom behavior, such as antecedent-based, consequence-based, and self-regulation. Teachers use these strategies to attempt to decrease off-task behaviors. According to Gaastra, Groen, Tucha, and Tucha (2016), classroom interventions can decrease the results of off-task behaviors with children with ADHD. In general classroom settings, there was a larger reduction of off-task and disruptive behaviors than in other settings. The results from this study indicate that the classroom interventions would work best in general education settings. Some other interventions have also been tried to decrease off-task behavior in the classroom.

Self-management strategies are one type of way to increase on-task behaviors. Axelrod, Zhe, Haugen, and Klein (2009) conducted a study to examine the effectiveness of a self-management intervention for students to increase on-task behaviors. The participants of this study included 4 adolescent males and 1 adolescent female who engaged in high rates of off-task behaviors. The students monitored their behaviors with both 3-minute and 10-minute intervals to see whether or not they were engaged in the task. Another professional collected data on the student collecting their own data within the 3-minute interval. An audiotape cued the intervals to the student and professional to record their data. The results indicated that students had fewer incomplete assignments when they were using this self-management intervention. Specifically, this study helped improve academic productivity inside and outside the classroom. This intervention could be beneficial for school personnel and family members of students displaying off-task behaviors.
Another intervention to increase on-task behaviors is positive peer reporting. Morrison and Jones (2006) conducted a study on the effects of positive peer reporting as a class-wide intervention. Positive peer reporting is a strategy that is designed for students who disrupt class by seeking negative attention. The teacher sets aside 15-minutes each day during which students provide praise to a randomly selected student. The results indicate that this time set aside for positive peer reporting has reduced problematic classroom behaviors. This study suggests that students seeking attention in the wrong ways have an opportunity to gain attention in a positive, appropriate manner. It is also suggested that positive peer attention will decrease negative social interactions outside of the 15-minute period set aside for this time. Many strategies involving positive reinforcers are also common interventions.

According to Gregory and Zirpoli (2016), when considering potential reinforcers, the options are endless. Positive reinforcers follow a target behavior to increase that specific behavior. Positive means that something is being added once the behavior occurs. A type of positive reinforcement is generally recommended as a first choice when considering an intervention. These are used to help increase appropriate behaviors. By utilizing a positive reinforcement, the likelihood of a desired behavior will strengthen.

Educators have implemented innumerable strategies to engage students in increasing on-task behaviors. Students who seek attention from professionals and peers may do so in a negative way, thus exhibiting signs of off-task behaviors to gain some kind of attention (Breaking the attention-seeking habit: The power of random positive teacher attention, n.d.) Unfortunately, teachers rely on reprimand instead of reinforcing positive behaviors. This is a relevant issue across all educational settings.
Review of Literature

Teacher praise has been an effective intervention for classroom management for many years. It is an evidence-based practice that does not require much of the teachers’ time or resources (Lane, Menzies, Ennis, & Oakes, 2015). Research in the field of education has been limited by multiple variables. It is often believed that the control group may not be in the best interest of the child rather than those in the experimental group. In a single-subject design, the research focuses on the single participant instead of using control and experimental groups. Since interventions should be individualized, most educators use a single-subject research design to conduct their research. Horner, Carr, Halle, Odom, and Wolery (2005) explores the use of single-subject designs that are used to overcome barriers that may occur in research studies.

Systematic and detailed analysis through the use of single-subject design methods has caught the eye of not only researchers from special education. The purpose of single-subject design research is to document relationships between independent and dependent variables on one particular individual, according to Horner et al. (2005). This design can be done with one participant, but it is generally done by using a small group and only focusing the data collection on one of those participants. Within education, single-subject design research has been used to identify and document interventions relating to important outcomes. Horner et al. (2005) has outlined features of single-subject design to determine whether it is credible, and evidence based. The points discussed from this article provide the readers with information on how to make a single-subject design research study effective before, during, and after implementing an intervention.

Hall, Lund, and Jackson (1968) conducted a study that examined the effects of teacher attention on study and nonstudy behaviors in the classroom environment. A study behavior can
be referred to as behaviors teachers want to see increase, whereas a nonstudy behavior would be considered a behavior that teachers want to see decrease. The participants included a first grader and five third graders. The results from this study indicated that the contingent use of teacher praise can effectively increase desirable classroom behaviors. Follow ups were maintained to see if the results stayed accurate with the original findings. The results of the follow ups indicated that higher study rates were maintained. The effects of teacher attention positively impacted student performance in the classroom.

Praise is generally characterized as favorable verbal or nonverbal recognition directed toward a student following a desirable behavior according to Jenkins, Floress, and Reinke (2015). Teacher praise is a strategy that is often being utilized to increase on task behavior for students who display disruptive behavior. Strategies can be generalized and applied in other settings because the student will manage their own behavior instead of relying on the teacher for redirection. However, labeled praise is more effective than unlabeled praise for reinforcing a desired behavior according to Reinke, Herman, and Stormont (2013). The study from Reinke et al. (2013) explored classroom-level behavior management strategies that aligned with School-Wide Positive Behavioral Interventions and Supports (SW-PBIS). The findings of this study indicated that classrooms with rules stated positively and teachers with high rates of general praise were more effective than classrooms with high rates of reprimands. The classrooms with the high rates of reprimands showed high levels of exhaustion.

Floress, Jenkins, Reinke, and McKown (2018) conducted a study on examining general educators’ use of natural praise within elementary classrooms. Since there is evidence that praise can help prevent problematic behaviors, it is important to investigate the rates at which teachers use praise inside the classroom. It has been proven that teachers who are trained to give praise
have decreased disruptive and off task behaviors in the classroom. Few studies have been done to examine the effects of natural praise in the classroom setting. Disruptive behavior is defined as noncompliance and inappropriate behaviors. The participants in this study were 28 general education teachers, 27 being female and 1 male. These teachers were from districts in Central Illinois. Data for teacher praise and student off-task behaviors were gathered from the researchers. The results from this study indicated that behavior specific praise had less off-task behaviors in the classroom than classrooms with less behavior specific praise. Praise can also be given in other ways.

Behavior specific praise (BSP) is often used to increase academic outcomes or to reduce an unwanted behavior. Royer, Lane, Dunlap, and Ennis (2018) conducted a study that examined an evidence base for teacher-delivered behavior specific praise as an intervention to increase academic outcomes, behavioral, and social success, as well as a decrease in problematic behaviors. From this study, evidence has shown the importance of low-intensity classroom management strategies, such as the BSP for a proactive support. These strategies can then be intensified to meet the needs of each student. With the BSP, the results from this study show that this method can increase academic outcomes and social behaviors. Increased on-task behavior and decreased inappropriate behaviors were found from this study as well.

According to Howell, Caldarella, Korth, and Young (2014), teacher praise notes have the potential to positively influence classroom behavior. The purpose of this study was to evaluate perceptions of teacher, student, and parent perceptions of school-wide praise notes. This intervention was implemented by a Title 1 elementary school teacher. A survey was developed to send to some students, teachers, and parents at the end of the school year. The survey was completed by 203 students, 203 parents, and 23 teachers. The results from the survey indicated
that praise notes positively impacted classroom behavior. Since praise is a form of reinforcement, this gives students some intrinsic motivation. The students from this study believed that they felt more motivated to gain the written praise being offered and felt that it positively influenced behavior in the classroom. The parents also reported that the praise notes were a good way of teacher and parent communication. The notes gave them an insight as to what was going on in the classroom. Howell et al. (2014) stated that the overall perceptions of praise notes helped improve student behavior.

**Problem Statement**

Some students misbehave to gain someone’s attention. Whether the attention is negative or positive, the student is still seeking that attention they are craving. Off-task behavior is defined by not following directions, getting out of seat to look out the window, and noncompliant during activities. The researcher hypothesizes that providing positive attention and positive notes home will diminish the need to gain tutor and peer attention and therefore increase on-task behavior.

**Methods**

**Research Design**

This study was conducted using a single-subject design. One student’s behavior was evaluated before and during the chosen intervention by the tutor for a specific behavior that was noted during anecdotal recordings. The data was collected in an AB pattern. The afterschool tutor collected baseline data on the student’s behavior for five tutoring sessions and intervention data for three tutoring sessions to determine if the behavior changed.
Participant

This study was conducted on one Caucasian, female student in first grade. The student has strengths in reading, writing, and drawing. Her parents enrolled her in a tutoring program after school. Her tutor chose her for the study after taking anecdotal data on the behavior of the students in the tutoring group. During anecdotal recording, she displayed off-task behaviors that the tutor, a pre-service special education teacher candidate, designed an intervention and research study to evaluate the behavior change through the three months in the program. Previous interventions of a seating chart and behavior charts have been implemented inside the classroom.

Setting

This study took place in a rural area elementary school cafeteria in the Midwest. The tables were cafeteria style, with the researcher on one side and the participants on the other side. There were 13 other small groups in this cafeteria, as well as other activities taking place in the gymnasium located to the east. The study took place at a table located next to a hallway with glass windows, where traffic flow was clearly seen. This study took place after school, two days a week on Tuesdays and Thursdays.

Materials

*Figure 1* shows the anecdotal recording sheet that was used to record all student data in order to analyze trends. *Figure 2*, the ABC analysis sheet, was used to analyze antecedents, behaviors, and consequences, specifically focusing on off and on task behaviors. Data was collected using these sheets during the anecdotal recording phase. During this phase, the tutor took detailed notes and analyzed trends to determine a target and replacement behavior, which then leads into the baseline phase.
Figure 3, the duration sheet, was used to record the amount of on-task behavior during the baseline phase. This duration sheet was used for each day of baseline data. The date, activity, and amount of time was charted on the duration sheet for each tutoring session during baseline data collection. This data was used to determine an intervention that would increase a specific behavior.

Figure 3, the duration sheet, was used during the intervention phase as well. The duration sheet was used to record the amount of on task behavior during intervention data. The student was given the expectations of the intervention prior to collecting the data. For the intervention phase, a positive note was sent home with the students if they met all of the rules for the day. The notes were behavior specific, so the student knew exactly why they were receiving the note.

Procedures

During the collection of anecdotal data, a rules folder was discussed with the tutoring group at the beginning of every session. Each student utilized a sticker chart for progress monitoring of following the rules in the folder. As a group, if everyone charted 80% or better for 4 days, then a group reward incentive was given. The general activities of the tutoring sessions consisted of activities involving spelling words, sight words, mathematical problems, compare and contrast, and hand-eye coordination. Anecdotal data was collected during a 35-minute period using a stopwatch.

During the collection of baseline data, the same rules folder was utilized at the beginning of every tutoring session. Each student continued to fill out their charts for progress monitoring for following the rules in the folder. The group reward incentive was still utilized when the students met their goal of 80% or better. After analyzing the notes from the anecdotal recordings,
the tutor was able to collect data based on specific behaviors that occurred during the anecdotal phase. The data on time on-task was collected during a 35-minute period using a stopwatch.

During the intervention phase, the same rules folder was utilized as before. At the beginning of the intervention phase, the tutor gave an explanation to the students about the notes that would be sent home at the end of the session. In order to receive the positive notes home, the student was given an auditory reminder that they needed to stay in their seat, comply with the activities, and follow all directions. The student received a note that was written by the tutor at the end of the tutoring session. Throughout the sessions, the students knew they were working towards the goal of having a positive note from the tutor sent home. The tutor also sporadically added more positive verbal praise throughout the tutoring sessions as well. Data was collected on time on-task over a 35-minute period using a stopwatch.

Variables

The dependent variable in this study is on-task behavior. On-task behavior is defined as following directions, staying in seat during activities with eyes on the activity and tutor, and being compliant during activities. Data was collected on the independent variable using a stopwatch and the chart in Figure 3. The independent variable is the intervention, which is the teacher praise during the tutoring session and positive note sent home after the tutoring session.

Results

During the anecdotal record keeping and the ABC analysis, the student displayed off-task behavior when seeking tutor and peer attention for the majority of the time. The consequence of that behavior was either verbal redirection or missing out on other important directions or activities. This behavior occurred across tasks and time in tutoring sessions.
During baseline data collection, the student was on-task for an average of 22 minutes 5 seconds out of 35 minutes. The data points were as followed: 22 minutes 12 seconds, 17 minutes 42 seconds, 24 minutes 15 seconds, 28 minutes 46 seconds, 20 minutes 15 seconds. The points are shown in the graph in Figure 4.

On the first day of the intervention phase, the student was on-task for 28 minutes 18 seconds, which was an 8 minute 15 second increase from the last day of baseline data collection. During intervention data, the student was on-task for an average of 29 minutes 21 seconds. The intervention data points were as followed: 28 minutes 18 seconds, 31 minutes 34 seconds, 28 minutes 10 seconds. The points are shown in the graph in Figure 4. There is a gap in the dates of the intervention shown in Figure 4 due to the student taking a vacation.

Before the intervention was implemented, the researcher determined that the criterion for success would be an average time of 80% of the 35-minute tutoring session, or 28 minutes. Eventually, the researcher would hope to increase this to 90% of the time and above. Eighty percent was chosen due to the short intervention phase. The student met the expectation on the first day of the intervention and had an average of 84% across all tutoring sessions. Overall, the data from the baseline and intervention phase shown an increase in time on-task.

Discussion

Returning to the original hypothesis, the researcher predicted that providing the student with a positive behavior specific note to take home would decrease her need to gain tutor and peer attention and thus increase on-task behavior. Based on the results from the baseline and intervention data, the researcher concluded that the intervention was effective because it increased the amount of time the student was on-task for the tutoring session. This intervention
was specifically chosen by the researcher to match the function of the behavior exhibited by the student. The hypothesized function of the behavior was to gain attention. The positive behavior specific notes home were appropriate because it provided the student with the positive attention she was seeking. This intervention would not be appropriate for every student exhibiting off-task behaviors. Evaluating the function of a behavior is very important before an intervention can be chosen. In this study, the results show that the researcher correctly hypothesized the function of the behavior and one effective intervention.

Pisacreta, Tincani, Connell, and Axelrod (2011) conducted a study on increasing a teacher’s use of praise to decrease disruption in the classroom. Teachers are recommended to minimize reprimands and increase praise for appropriate behaviors (Wheeler & Richey, 2010). The results from the study indicated that disruptive behaviors decreased when teacher praise increased. However, from this study it is important to remember to evaluate the implementation of the intervention. The participants from this study included three teachers giving positive praise at different rates and phases, all giving different results. Behavior specific, contingent feedback allows the teacher to describe a behavior, which is more effective according to Gable, Hester, Rock and Hughes (2009). This approach will also allow teachers to focus more on the positive behaviors rather than the negative behaviors. According to Pisacreta, Tincani, Connell, and Axelrod (2011), some teachers may require explicit instruction on how to incorporate praise into their classroom if there are high levels of disruption in the classroom.

**Limitations**

In any natural setting, there are many limitations that can affect the results. For this study, one of the factors was the setting. This study took place in a cafeteria with 13 other tutoring groups in the same room. The table for this student was also positioned next to a wall of glass
windows, making passing by traffic a distraction. There were also times when the tutoring groups had to move to the library instead of the cafeteria due to other school events. The length of time is another factor that would be a limitation. The data was collected after school for a 35-minute period twice a week on Tuesdays and Thursdays. The time of the data collection was roughly from 3:10 p.m. to 3:45 p.m. The baseline data was taken during the time when the tutor and student were building a rapport.

The intervention data was taken when the student was most likely more comfortable with the tutor. Student attendance is another major limitation to this study. The student took a 2-week vacation from March 28th to April 10th. During this time, the student missed 4 tutoring sessions. This is a limitation because the intervention was implemented for 2 sessions before the student was absent for that period of time. The student returned to the session on Thursday, April 11th with the intervention remained implemented. The following week of her return was spring break for that school district. This is a limitation because the student had spent a large about of time outside the school setting. These limitations gave insight to changes for future research.

**Recommendations**

Data suggests that the implemented intervention for this particular study was successful for the tutoring program that occurred after school, where this study took place. This could also be successful in other places as well. The information can be taken from this study to benefit classroom teachers and other professionals that are working with this student or will work with this student in the future. The classroom teacher could implement the intervention the same way the tutor, sending a positive behavior specific note home with the student. When the tutor observed the classroom, the student was seated by herself away from the other groups and teacher. The teacher could place the student towards the front of the classroom and near the
INCREASING ON-TASK BEHAVIOR

teacher’s desk. Keeping the student near the teacher would help the teacher point out specific behaviors to praise. This will allow more opportunities for the teacher to see specific behaviors to positively praise.

The student’s parents could benefit from this information as well. The parents could use the behavior specific praise at home or anywhere else in the environment. A positive behavior specific note could be written and hung up in the house for everyone to see. Since the intervention is more about sending the notes home, the parents could come up with an additional reward system within their household, such as a sticker chart for how many notes they receive with a reward after receiving so many. It is also important for the parents to understand the intervention so they can inform future teachers or other professionals that may work with this student in the future.

This information could also be useful for parents and teachers who may have students who need a positive reinforcement to maintain on-task behavior. They can use the intervention like the one in the study where positive behavior specific notes are sent home, or they can develop another system for reinforcing specific behaviors. Other interventions like this one have been used as well. Tangibles, such as stickers, are another way to reinforce specific behaviors. The professional implementing the intervention should carefully consider the needs of the student before choosing the best option.

Overall, any intervention that is to be used for a specific behavior should be designed to coordinate with the function of that behavior. The intervention should be used to increase a replacement behavior. More research should always be continued, such as studying the function of behaviors and various interventions to support learning. Since many teachers and
professionals utilize a type of positive reinforcement, the effectiveness of the implementation should be studied. Researchers should also continue to collect data on their current studies to determine if the intervention is effective and if the intervention can be faded. There are countless opportunities for research due to changes that are constantly happening in the field of education every single day.
References


Appendices
Appendix A

ANECDOTAL OBSERVATION FORM

Student: ______________________________ Date: ______________

Activity/Focus: ____________________________________________________________

Possible target behaviors: ___________________________________________________

Start Time: ______________________ End Time: ______________________

Observations/Comments:


Figure 1: Anecdotal Recording Form
Appendix B

ABC Analysis

Date: _____/_____/_____
Name of Person Observed: ______________________
Observer: ____________________
Behavior(s):
____________________________________________________________________________

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<th>Behavior</th>
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*Figure 2: ABC Analysis Chart*
Appendix C

**Duration Recording Sheet**

(Used to record the length of time a student engaged in a specific, discrete behavior)

Student: ___________________________

Behavior: ____________________________________________________________________

Start Recording When: ________________________________________________________

Stop Recording When: ________________________________________________________

[ ] Baseline [ ] Intervention

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Notes:

Data Sheet created by Nicole Caldwell, www.PositivelyAutism.com

*Figure 3: Duration Recording Form*
**Figure 4: Increasing On-Task Behavior**

The graph illustrates the percent of time spent on-task during baseline and intervention phases. The data points indicate a gradual increase in on-task behavior from February 19th to March 7th, followed by a sustained improvement during the intervention phase starting from March 21st.