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What impacts does a teacher implemented feedback system have on behavioral incidents in preschool?

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What impacts does a teacher implemented feedback system have on behavioral incidents in preschool?

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Capstone Project: An Action Research Project

Northwestern College, Orange City, Iowa

Abstract

The purpose of this action research project was to examine the relationship between a teacher implemented feedback system and its effects on negative behaviors. This action research project took place within an early childhood classroom. Data was collected to evaluate the effectiveness of using an incentive-based feedback system. Over a three-week period, the number of times praise and reprimand were given in addition to the number of times negative behaviors were observed was recorded. The data showed that with the increase of praise and decrease of reprimand, negative behaviors did in fact decrease in frequency. These findings could increase teachers' willingness to implement a feedback system.

Keywords: early childhood, teacher implemented feedback system, praise, negative behaviors

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Positive Reinforcement in Early Childhood Classrooms

In my second year of teaching there are two categories that have caused the most questions for myself: these are behavior and environment. Oftentimes as educators, we have a range of abilities, personalities, and behaviors in our classrooms. Balancing these dynamics and needs can become overwhelming and exhausting. Frequently, the behaviors disrupt the learning of the student and the peers around them. According to a study conducted by Ragnarsdottir and Petursdottir, “students with long-lasting behavior problems often experience academic difficulties” (Petursdottir & Ragnarsdottir, 2019). Their research goes on to also explain the increased risk for dropping out of school all together.

Disrupting behaviors are an increasing problem in schools across the country. Since the COVID-19 pandemic, there has been an increasing need for social-emotional support in schools. The re-entry to schools has caused behaviors to be more intense than ever before. This is the main problem I am hoping to solve with this research. In reducing disruptive behaviors, hopefully the teacher will be allowed to conduct more instructional time. In fact, according to an article from the *Journal of Advances in Medical Education and Professionalism*, “Most studies have shown that the learners; misbehaviors and classroom management are one of the biggest challenges and concerns of teachers.” (Mahvar, Ashghali, & Aryankhesal, A., 2018)

The purpose of this research is to establish the relationship between positive feedback and behaviors. According to an article from the National Association for the Education of Young Children, there are ways that educators can effectively promote engagement for all children (Rausch, A., et al., 2021). The hope is that increased positive praise will decrease the disruptive behaviors teachers and students are experiencing by increasing engagement. In recent years there

has been a strong push to incorporate positive behavior intervention systems (PBIS) in schools and classrooms. In these systems, there are rewards for positive behaviors. This reward can include a multitude of things including tangible or verbal praise. The research question being answered is: What impacts does a teacher implemented feedback system have on behavioral incidents in preschool? According to a study from Douglas and Skipper, not all feedback has positive effects. In fact, in their study, the person type feedback had negative impacts on students (Skipper & Douglas, 2012).

This research will take place in a public-school prekindergarten class. Within the class there are nineteen students and it includes a mix of special education and general education students. General education peers attend for half days, meaning there is a morning and afternoon group. Some students who are entitled for special education services attend all day based upon their needs. In this classroom there are two full time paraprofessionals. Throughout the day, some students are pulled for services like Speech and Occupational Therapy, but other times these services are provided within the classroom.

I believe that with the use of a positive reinforcement system, there will be a decrease in disruptive behaviors. However, this feedback will need to be provided frequently and consistently, especially in the beginning. Students will need that immediate feedback frequently to begin, in order to establish that motivation to exhibit positive behaviors. While conducting research, it will be enlightening to see at which point students start expecting the reward. Hopefully the relationship between positive behavior and reward will be established, but when and for how long with this correlation be in place?

In preparing for research, it was critical to utilize the research that has already been conducted in their field. Using the DeWitt Library at Northwestern Iowa in Orange City, IA, I was able to find multiple sources that were helpful in structuring my research. To filter my research, I narrowed it down to peer reviewed pieces within the last ten years. A few of the keywords used in my searches included reinforcement, preschool behaviors, feedback systems, and praise. The resources provided background, but also showed gaps that needed further research such as the lasting effects of reinforcement systems.

Review of the Literature

Behaviors within a classroom can vary day to day, and even minute to minute. Classroom teachers face challenging behaviors, and it can be difficult to understand the antecedents to such behaviors. According to Mahvar, et al. (1998), two of the most important concerns of teachers are disruptive behaviors and classroom management. This can leave teachers wondering how to lower the frequency and risk of disruptive behaviors. Is there such a way? Can it be done by verbal redirection? Is it effective for all students?

Praise in the Classroom

When trying to obtain desired behavior from children, the use of a positive reinforcement system is often recommended. Reinforcement systems can look like a variety of things, but they all rely on encouraging positive behaviors. One way to do this is through praise. According to Drake and Nelson's research article, praise goes beyond feedback or approval (Drake & Nelson, 2021). They define praise by two components including teacher excitement of student behavior and giving value to the praise (Drake & Nelson, 2021). Multiple of the studies referenced in their literature categorize praise even further. They define praise as being behavior-specific or general

praise (Drake & Nelson, 2021). Behavior-specific praise would include addressing the desired behavior. For example, “Thank you for putting the lid back on your marker” or “You waited quietly to be called on, great job.” General praise is simple phrases like “good job” or “awesome work”. It is important to clarify which praise is being used to know which praise has the most impact on student behavior.

According to a study from Eastern Illinois University, children with behavior problems receive less praise (Floress, et al., 2017). However, this research hadn't been extended into preschool. Their study aimed to gauge the rates of praise across various preschool classrooms ranging from general education to special education (Floress, Berlinghof, Rader, et al., 2017). Once these rates of praise were established, the focus changed to the types of praise and whether they are given to individual students or small groups (Floress, et al., 2017). Their research provided that the average rate of praise across all six classes was 61.5 per hour (Floress, et al., 2017). They also found that general praise was used more frequently than behavior specific praise (Floress, et al., 2017). In addition, they also found that special education classrooms had more frequent praise rates than general education and at-risk classrooms (Floress, et al., 2017). Lastly, their research showed that teachers provide group praise more frequently than individual praise (Floress, et al., 2017). This research shows that general, group praise is used most frequently, which I feel would have less impact than behavior specific individual praise.

Other research has focused on the effects of positive feedback on students, more specifically whether no praise is better than certain types of praise. Yvonne Skipper and Karen Douglas (2012) conducted research with school aged and university aged students. In their studies, participants were asked to imagine themselves in different scenarios where they experienced academic success (Skipper & Douglas, 2012). After this, they read two scenarios in

which they failed. Participants evaluated their performance, affect, and persistence after each scenario. The results of the research showed that when experiencing success, all types of praise had positive effects (Skipper & Douglas, 2012). However, when someone has experienced a failure, the participants who received personal praise had fewer positive responses than the ones who had process praise. These findings indicate that the type of praise used is influential on the effects on behavior.

Another critical factor when implementing praise is the rate at which the praise is given. When discussing rates of praise, researchers use ratios of praise to reprimand. For example, Drake and Nelson (2021) recommend that the praise to reprimand ratio should be 3:1 or 4:1. This means that for every reprimand a teacher gives, there are three to four praises also given. Reprimands can have negative impacts that encourage negative behavior rather than diminish it. When students are reprimanded, they are receiving attention. Even though this attention is negative, it is still positively reinforcing the undesired behavior (Drake & Nelson, 2021). This potential for positively reinforcing negative behaviors is why the praise to reprimand ratio is so important. If a teacher is reprimanding more than praising, they will be enforcing the wrong behaviors.

Oftentimes the implementation of systems looks vastly different in early childhood settings compared to any other setting. Early childhood classrooms have unique needs that aren't typically seen in older grades. Specifically in my early childhood room, my classroom has special education and general education students ranging in age from three to five. The way in which praise or other reinforcement systems are implemented may look very different. Melissa Stormont, Sandra Smith, & Timothy Lewis (2007) set out to examine these systems in Head Start classrooms. The authors encourage the use of a School-Wide Positive Behavior System

(SWPBS). When implementing a SWPBS, it is critical to define, teach, and support behaviors (Stormont, et al., 2007). Another piece recommended is the use of behavior specific praise, as discussed previously. When combining the SWPBS and praise, appropriate behaviors will be promoted (Stormont, et al., 2007). While the SWPBS model may increase positive behavior, there are other models that can also yield this desired result.

Feedback Systems

Where teachers turn for support regarding behaviors they can often be turned to the current trend in education. In recent year, the world of education has trended towards feedback systems. According to Tunstall and Gipps (1996), feedback is, “a prime requirement for progress in learning”. There is an overwhelming amount of feedback systems, so as an educator, it can be difficult to know where or even how to pick one. Will it focus on verbal reinforcement or tangible items? Will there be consequences, or will you withhold the positive reinforcer? While there may not be a one-size-fits all feedback system, familiarizing with a variety of them will be helpful in selecting one. Whether it is praise based or incentive based, research has been conducted to highlight the benefits and faults of each.

Michael Nelson and James Kauffman (2020) support the use of positive reinforcers in feedback systems. They believe that teachers are more likely to address inappropriate behavior than to praise positive behaviors (Nelson & Kaufman, 2020). Additionally, they go on to explain that research has proven that praise needs to outweigh reprimand (Nelson & Kaufman, 2020). However, this is not consistent around academic settings. Whether it is through reinforcers or praise, the overall tone of the school environment is critical. Evidence clearly shows that schools need to be consistent in creating an overwhelmingly positive environment (Nelson & Kaufman,

2020). The environment of praise that schools create can act as another teacher in preventing disruptive behaviors.

A popular form of reinforcement systems is using tangible items or token systems. Anna-Lind Petursdottir and Gudrun Bjorg Ragnarsdottir (2019) conducted a study to analyze the effects of behavior support plans that utilized token systems. Their research was conducted in two public schools in Iceland and focused on three seven- to eight-year-old boys (Petursdottir & Ragnarsdottir, 2019). When creating the behavior support plans, Petursdottir and Ragnarsdottir (2019) evaluated both triggering antecedents and consequence strategies. The consequence strategy they implemented was withholding the reinforcement or in this case a token (Petursdottir & Ragnarsdottir, 2019). Commonly it is encouraged to focus on giving praise rather than taking away a reward. However, the results of their study proved that this method can be effective.

In their study, Petursdottir and Ragnarsdottir (2019) found that the students' undesirable behavior and academic engagement was very irregular to begin. After the implementation of the interventions, consisting of behavior support plans, disruptive behaviors decreased by an average of 85% (Petursdottir & Ragnarsdottir, 2019). Additionally, academic engagement increased by an average of 78% (Petursdottir & Ragnarsdottir, 2019). Following this success, Petursdottir and Ragnarsdottir (2019) sought to see the lasting effects on disruptive behaviors and academic engagement after the token system was faded out. They found that disruptive behaviors remained low falling from 29.3 instances during baseline to 4 instances during a twenty-minute observation (Petursdottir & Ragnarsdottir, 2019). Similarly, academic engagement remained higher averaging 85% compared to 52% from the original baseline data (Petursdottir & Ragnarsdottir, 2019).

Thus far, the research shared has focused on individual reinforcement, but what about group contingencies? Would praising or rewarding as a group have the same effect as individualization of rewards? Researchers from the University of Connecticut sought to answer these questions (Coogan, et al., 2007). In order to answer these questions, it is first important to understand what group contingencies are. There are three types of group contingencies including independent, interdependent, and dependent (Coogan, et al., 2007). Independent group contingencies are when each student independently has the opportunity to receive reinforcement if they meet the criteria set for everyone in the class (Coogan, et al., 2007). Interdependent group contingencies are rewarded to everyone in the class by the good work of one or a few students (Coogan, et al., 2007). Lastly, dependent contingencies rely on a pre-selected group of students either earning a reward or consequence for the entire class (Coogan, et al., 2007).

In the study conducted at the University of Connecticut, students moved pins when prompted for showing undesirable behaviors (Coogan, et al., 2007). Students had five pins and were told that rewards would be based either on group performance or randomly selected students (Coogan, et al., 2007). Data was then collected on three students. All three students initially showed a significant decrease in disruptive behaviors (Coogan, et al., 2007). However, when the intervention was discontinued, all three students rebounded to increased levels of disruptive behavior (Coogan, et al., 2007). When the intervention was reintroduced, their behaviors again decreased (Coogan, et al., 2007). This research shows up that while group contingencies can be beneficial, they need to be continued to show lasting impacts.

Effects of Praise

While research has consistently shown that reinforcement systems and praise have positive outcomes, what exactly are the effects? What will cause teachers to have buy in when implementing these systems? Similar to the group contingencies, there are three types of feedback. There is behavior-specific praise, general praise, and reprimand (Floress, et al., 2022). Not only is praise an easy to implement behavior system, but it is also a preventative behavior strategy (Floress, et al., 2022). Praise is free and doesn't require teachers to prepare anything. This is a tool that they possess with them all day, every day.

One of the types of feedback discussed prior was reprimand. When observing teachers implementing praise, one factor considered is their praise to reprimand ratio. For each reprimand given, how many praise statements are given to balance it out. A desirable ratio is three to four statements of praise for every one reprimand (Caldarell, et al., 2019). However, this is not a great fit for all students. Students who have emotional or behavioral disorders often receive less praise and more reprimand, when in reality they need the opposite (Caldarell, et al., 2019). In fact, research shows their ideal praise to reprimand ratio may be as high as nine praise statements to each reprimand (Caldarell, et al., 2019). Research has shown that when this ratio is increased for students with emotional and behavioral disorders, their noncompliance decreases and their focus increases (Caldarell, et al., 2019).

Motivation is an essential tool to help children of all ages learn, but it is complex. There is not a way to teach motivation, but there is a way to encourage it. This can be done through the use of positive reinforcement (Sumiati, et al., 2019). There are two types of motivation: intrinsic and extrinsic. Intrinsic motivation is found within someone without the stimulation from an outside source (Sumiati, et al., 2019). Extrinsic motivation is active and stimulated from the outside (Sumiati, et al., 2019). In a study conducted in Indonesia, it was found that several

children aged five to six didn't have the motivation for learning intrinsically (Sumiati, et al., 2019). Positive reinforcement is necessary when building this motivation in children (Sumiati, et al., 2019). Once intrinsic motivation is learned within each student, they are able to carry that with them beyond the classroom.

While motivation is imperative to student success, the relationship between student and teacher can also heavily influence student engagement. An important factor in building this relationship is the feedback being delivered by the teacher (Skipper & Douglas, 2015). Feedback or praise can be given by referencing the person or the process (Skipper & Douglas, 2015). According to Skipper and Douglas (2015), personal feedback focuses on stable factors such as a personal attributes or ability level. Whereas process feedback focuses on unstable factors like effort (Skipper & Douglas, 2015). Research conducted by Skipper and Douglas (2015) showed that the type of praise they received didn't influence the child's view on their relationship with the teacher. All children, however, reported a more negative view on their relationship following a failure (Skipper & Douglas, 2015). It was especially detrimental to children who experienced failure after receiving personal feedback (Skipper & Douglas, 2015). This led to Skipper and Douglas (2015) concluding that academic success is critical for students to experience to build the teacher to student relationship.

While there is research to train teachers to use praise efficiently in their classrooms, there is also research to support training students to recruit this praise (Markelz, et al., 2018). It has previously been established that children with emotional and behavioral disorders exhibit higher levels of disruptive behaviors (Caldarell, et al., 2019). Rather than withholding contingencies for their bad behaviors, what if we instead focused on teaching them to recruit praise (Markelz, et al., 2018)? When implementing this training, results showed that inappropriate attention seeking

behaviors dropped (Markelz, et al., 2018). An important piece to training students how to recruit praise is knowing when to do so. Students could also be taught to recruit praise after a task is done or an electronic prompting device can be used (Markelz, et al., 2018). By training students to recruit praise, we can see a decrease in negative attention seeking behaviors and an increased motivation for positive behaviors without the need for contingencies (Markelz, et al., 2018).

Feedback in Early Childhood Settings

Early childhood education is often misunderstood and not considered important when looking at a child's success later. However, a young child's engagement in school is associated with academic performance and a development of problem behaviors later (Prykanowski, et al., 2018). If engagement in early childhood can decrease the likeliness of problem behaviors down the road, it is worth all our attention. Many early childhood classrooms have the unique opportunity of being inclusive. In early childhood education classrooms, the idea is that children with and without disabilities should have an educational experience that is tied to each of their needs and preferences (Shepley & Grisham-Brown, 2019). The environment of early childhood classrooms should be inclusive and tailored to meet the needs of the students within that class.

All this research has provided a background into feedback systems and their impacts within classrooms. However, the focus of this action research will take place within an early childhood classroom. So, how does praise work as a reinforcer with such young kids? Will the impacts be as convincing? There is extensive research into the behaviors of early childhood learners, and even more so the effect of praise on these behaviors. While children are learning how to be in school at a young age, the way in which we respond to their behaviors is critical.

While educators are encouraged to increase desirable behaviors with contingent praise, research has found that there are various factors that can derail this plan (Senn, et al., 2019). In this particular study, praise alone was only effective for two students (Senn, et al., 2019). However, when a tangible item, such as a sticker was introduced, it did serve as a reinforcer for students (Senn, et al., 2019). While praise alone didn't serve as a reinforcer for all children, there was no harm in providing it (Senn, et al., 2019). This means that by providing praise to students, it may not act as a reinforcer, but it won't have negative effects on their behavior. It essentially is a neutral factor for some students. However, the potential positive benefits create an incentive for teachers to provide it.

As previously discussed, there are a multitude of reinforcement systems that have been trialed and researched, One of these is the prevent-teach-reinforce model (Fronapfel, et al., 2018). The prevent-teach-reinforce model was a step-by-step model in providing interventions for behavior with fidelity. While this model has proven to increase social skills and decrease problem behaviors, it does have limitations (Fronapfel, et al., 2018). Especially when using this model in early childhood settings, the menu of interventions didn't always fit the needs of toddler or preschool aged children (Fronapfel, et al., 2018).

As seen with the limitations of the prevent-teach-reinforce model, it can be challenging to know which form of praise will work best for them. Some children may be nonverbal or have other barriers of understanding, which may vary the form of praise that best fits them. Hardy and McLeod (2020) offer eight guidelines for how use positive reinforcement in early childhood. First, you must determine the child's preferences and try a variety of reinforcers (Hardy & McLeod, 2020). Next, you need to consider a child's strengths and weaknesses, while also collaborating with a child's family (Hardy & McLeod, 2020). In addition, they suggest using

reinforcement strategically by embedding it into routines and activities (Hardy & McLeod, 2020). Lastly, consider your relationship with the child and be consistently evaluating the effectiveness of the reinforcers being used (Hardy & McLeod, 2020).

Another model that has been researched is the use of daily behavior report cards. These report cards specify a behavior, rate said behavior daily, and share information with others (Riden, et al., 2021). When using a daily behavior report card, it is critical to define the target behavior first and then create a rating scale (Riden, et al., 2021). Once this is established and the report card is implemented, daily monitoring and feedback is necessary (Riden, et al., 2021). In a study conducted in 2021, daily behavior report cards showed an effectiveness in decreasing the problem behaviors (Riden, et al., 2021). It also appeared that this particular intervention model was consistently implemented by teachers with fidelity (Riden, et al., 2021).

Literature from various authors and studies support the use of praise and feedback systems in the classroom. There are various systems that teachers can choose to implement, which means they can pick the one that best supports the individual needs of their students. These findings support the theory that by implementing a positive feedback system in the classroom, undesirable behaviors will decrease.

Methodology

In order to understand the data presented, it is important to know the background information of how and where data was collected. The data collection process was purposefully planned to ensure that the research questions were thoroughly answered. A priority was given to making decisions regarding data collection was the level of interference to students. The goal was for students to be uninterrupted in their daily learning while also collecting quality data.

Research Question

This action research plan was designed to explore the effects of reinforcement systems in the early childhood setting. In reviewing the literature around this, it was found to have an abundance of information and potential avenues. To focus this scope, the following research question guided the action research project:

- What impacts does a teacher implemented feedback system have on behavioral incidents in preschool?

In order to ensure this research question was answered, data was focused on behavioral incidents as well as the frequency of the chosen feedback. In this research, as described later, the feedback system chosen included a tangible reinforcer. It is theorized that by using a reinforcer, behavioral incidents will decrease; more specifically, negative behavioral incidents.

Research Setting

This action research took place within a public elementary school in the Dubuque Community School District. The elementary school serves preschool through fifth grade students. This school is predominantly English speaking and has a range of socioeconomic statuses. The school doesn't currently have a Title 1 designation but serves many low-income families. According to the 2023 Public School Review, across this school 25% of students are eligible for reduced lunch prices and 3% are eligible for free lunches (*Table Mound Elementary School, 2023*). The state average of these numbers are 35% reduced lunch prices and 6% free lunches (*Table Mound Elementary School, 2023*).

Participants

The feedback system is being observed within an integrated preschool classroom that consists of twenty students between the ages of three and five. Of these twenty students, eight are entitled for special education services that include adaptive behavior supports. There are six

participants who attend school for the full school day based upon their services. However, most of the participants attend for half day programming. This entails two and a half hours at school, five days a week. In this classroom, 70% of students attend half days. The morning group consists of fourteen students and runs from 8:50-11:20. In the afternoon session, twelve students attend from 1:00-3:30.

Variables

Within this action research project there are two variables. The independent variable was the teacher implemented feedback system. As discussed in the literature review, there are various types of teacher implemented feedback systems. The one chosen for this research was a tangible reward system. The dependent variable was the frequency of behavioral incidents. While the focus was on the behavioral incidents, the number of praises and reprimands given was also tracked.

Intervention

The teacher implemented feedback system focused on positive reinforcement. This was done by giving students a “cherry drop” when displaying a positive behavior. A “cherry drop” consists of putting a dot of cherry Chapstick on students’ hands. This reward provides a sensory reinforcer with the smell of cherry as well as the softness of the Chapstick on their hand they are able to rub. Hopefully as a result, students will be motivated to earn the sensory reward by demonstrating similar behavior to that of the positive behavior the Chapstick earned.

Data Collection Plan

While students were participating in this research, there was no interruption in their day. Students went through their normal daily schedules as the teacher was collecting data and implementing the reward system. The tools for data collection included a table and sticky notes.

Each morning, a sticky note was placed on the teacher's lanyard in order to easily mark tallies. On the sticky note there were three sections that included praise, reprimand, and undesirable behaviors.

As the day went on, the teacher would tally accordingly. At the end of the day the tallies would be recorded on a data collection table. This table had a row for Monday through Friday and columns for each of the three categories. This tool for data collection is both reliable and valid. The results are reliable because there is only one person collecting the data. Not only does that eliminate opportunities of miscommunication, but it is also a person who has rapport with the students. This tool will prove its validity by capturing all of the necessary information to thoroughly answer the research question.

Data Analysis Plan

Baseline data collection began in the beginning of March 2023. Five full school days of data were collected. Due to Spring Break, data was then not collected again until the last two weeks of March 2023. After data is collected each week, the means for praise, reprimand, and negative behaviors will be calculated. This will be done by adding up the total for each category and dividing them by five days respectively. For example, the five daily total number of praises will be added up and divided by five to find the mean number of praises given that week.

IRB Approval

An Institutional Review Board exemption was granted by Northwestern College, Orange City, Iowa for this research. Information about the intervention and data collection process was provided to the IRB board. Due to the lack of disruption to the students and the anonymity of the data, and IRB exemption was granted. With this exemption, a parental consent was not needed, and data collection could begin.

Data Collection

The data collection process was guided by the following research question:

- What impacts does a teacher implemented feedback system have on behavioral incidents in preschool?

This action research project used quantitative data collection. The data collected includes the number of times a teacher gave praise and reprimand. In addition, the frequency of undesirable behaviors was recorded. Undesirable behaviors included refusals, elopements, physical aggressions, and verbal aggressions. Prior to the use of “cherry drops,” baseline data was collected for five full school days. Then, the feedback system of using “cherry drops” was implemented. Data was again collected on praise, reprimand, and undesirable behavior.

When collecting data, the system needed to be efficient and informative. On the data collection tool, there was a row for each day of the school week. There were columns for praise, reprimand, and negative behavior. Once the intervention was implemented, praise was defined as a cherry drop to accompany the verbal praise. Prior to the intervention being implemented, praise was simply a verbal statement given. Reprimand was defined as a verbal statement giving redirection or correction sometimes accompanied by a break. Lastly, negative behavior was defined as refusals, physical aggressions, and elopement. These were chosen due to their frequency seen in the given classroom.

When each category or behavior was demonstrated, a tally was added. After each week, a mean was calculated for each of the category’s praise, reprimand, and negative behavior. At the completion of the action research project, the averages of before the intervention, during, and

after will be compared. The theory is that with increased praise and reduced reprimands, negative behaviors will decrease.

Findings

Data Analysis

In order to examine the effectiveness of the intervention, quantitative data was collected on a chart using tallies. Each day, the researcher recorded the number of instances where praise was given. When collecting baseline data, praise was just verbal praise. During weeks two and three, a “cherry drop” of Chapstick accompanied the verbal praise. The number of times reprimand was given and negative behaviors occurred were also recorded. Negative behaviors were defined as refusals and physical or verbal aggression. Table 1 displays the total numbers of each category over a three-week period. Each week, five days of data were taken throughout the eight-hour school day. In this setting there are always students present to collect data on. For example, students do not leave the classroom for specialist classes such as art, gym, or music. The participants were always being observed for the entirety of the school day.

Table 1

Total number of instances where praise, reprimand, and negative behaviors were observed.

	Week 1	Week 2	Week 3
Praise	232*	162	156
Reprimand	69	19	12
Negative Behaviors	46	13	4

**Week one praise was not accompanied by the intervention of a “cherry drop” of Chapstick.*

When analyzing the data, there are trends and patterns that are important to consider when answering the research question. The first trend that was evident is the decreasing number

of each category observed. For example, the first weekly total of instances recorded was 347. In week two this number decreased to 194 and then 172 the third week. While this information doesn't directly answer the research question, I do believe it shows the difficulties for teachers to implement feedback systems. In week one, only verbal praise was given. This is an easy in-the-moment task that a teacher can do with no materials. With the intervention however, the teacher needs to have the Chapstick on hand and be within reach of the child. While this is an easy incentive to give, it is not as quick or convenient as praise alone. This could in turn effect the frequency in which a teacher is capable of giving the incentive.

Another interesting trend evaluates the ratio of reprimand to praise and the effects it has on negative behaviors. As the ratio of reprimand to praise increased, the number of negative behaviors decreased. In week one, the ratio was one reprimand to every 3.3 pieces of praise given. With this 1:3 ratio, there were forty-six negative behaviors observed. In week two, the ratio increased to 1:8. With this increase in frequency of praise, negative behaviors decreased to 13, decreasing 350%. In the final and third week, the ratio continued to improve to 1:13. With this ratio the negative behaviors observed dropped to four. That means from week one to week three, with the increase in praise of by 23%, the negative behaviors decreased by 11.5 times. In fact, the negative behaviors were almost diminished completely. By week three, over the five day data collection period, only four negative behaviors were observed.

When looking at the effectiveness of the intervention, daily averages from each day were considered and outlined in Table 2. In week one the mean number of times praise was given was 46.4 with the mean number of time reprimand was given was 13.8. The mean number of negative behaviors was 9.2. In week two we saw all of the numbers decrease with the daily mean for praise being 32.4 and reprimand totaling 3.8. However, with this decrease, the mean number

of negative behaviors also decreased to 2.6. Finally, in week three the mean number of times praise was given was 31.2 with reprimand following at 2.4. In this final week the mean number of times negative behaviors were observed dropped to 0.8 in comparison to 9.2 in week one.

Table 2

The totals for each week were divided by five days to find the daily mean.

	Week 1	Week 2	Week 3
Praise	46.4	32.4	31.2
Reprimand	13.8	3.8	2.4
Negative Behaviors	9.2	2.6	0.8

The data presented shows that verbal praise leads to decreased negative behaviors. In Table 3, the ranges for each category are outlined. This data shows that each week the ranges decreased slightly, but it was consistent across all three categories. Even though the ranges decreased each week, the ratios did vary. More specifically, the higher the praise to reprimand ratio is, the bigger the decrease in negative behaviors is observed. When the praise to reprimand ratio is increased, negative behaviors also dramatically decreased consistently. The data supports the use of feedback systems but does not support the specific feedback system of using an incentive. It is difficult to say whether verbal praise alone would have also led to a decrease in negative behaviors, or whether the “cherry drop” incentive played a key role in decreasing the incidents.

Table 3

The ranges for each category.

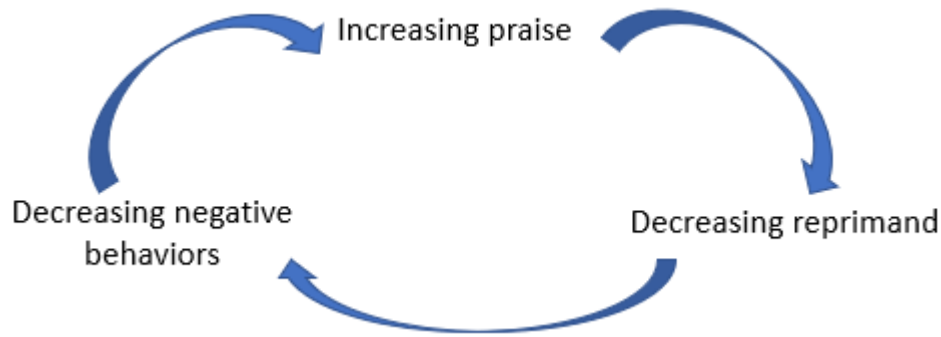
	Week 1	Week 2	Week 3
Praise	36-54	28-42	25-39
Reprimand	7-22	2-5	1-4
Negative Behaviors	5-16	2-4	0-2

As these trends are being evaluated, a cycle comes to surface. When praise is given in the form of verbal or tangible, negative behaviors will decrease. This data doesn't show a specific threshold to the amount of praise needed for negative behaviors to decrease. However, the data does support the idea that the more praise is utilized, the more negative behaviors decrease. On average, according to Table 3, each category ranged week to week. For example, in week one, the range for praise given daily was 36-54. By week three, this range decreased to 25-39. Even with the decreasing numbers of praise given, the negative behaviors still decreased from 5-16 during week one to 0-2 throughout week three. This further shows that there isn't a specific threshold to reach to see decreasing negative behaviors.

Figure 1 serves as a visual representation of this cycle. As praise increases, the amount of reprimand decreases. This proposes a new question: Is there a range of verbal phrases, either praise or reprimands, that teachers give in a day? Perhaps there is a set range of potential phrases, and the only variance is the percentage of praise versus reprimand. This would explain why praise increases as reprimand decreases. Regardless, the increase of praise and the decrease of reprimand yields decreasing negative behaviors as seen in Figure 1.

Figure 1

Cycle of Praise



These findings help begin to answer the research question: What impacts does a teacher implemented feedback system have on behavioral incidents in preschool? The data supports that a teacher implemented feedback system does in fact reduce behavioral incidents. This is seen by the decreasing amounts of observed negative behaviors after the implementation of the intervention. While the research question has been generally answered, there are more questions that this data can not answer. For example, does the praise need to be accompanied by a tangible item to have this effect? Or does an increase in praise alone lead to decreased negative behaviors? These questions and more will be discussed further in the following sections of the action research project.

Discussion

Summary of Major Findings

The action research study of the effects of a teacher implemented feedback system supported an answer to the research question but was not conclusive. In analyzing the data, it is clear to see there is a relationship between the praise to reprimand ratio and negative behaviors. The higher this ratio remains, the decrease in negative behaviors follows. Even though this trend was consistently supported by the weekly data, the reason for the decreasing behavior was not clear. It could have been the increase of praise in general or the introduction of the “cherry drop.” It could have been the decrease in reprimand as a result of focusing on the incentive-based

praise. There was no clear cause, but the effect of decreasing negative behaviors was consistent. Over the three weeks, the number of negative behaviors observed decreased. By week three, the negative behaviors decreased to four instances over five days.

This data supports the importance of increasing praise within the early childhood classroom. While the data does not conclusively support a specific type of feedback system, it does conclusively support the use of incentives and praise within the early childhood classroom. These findings encourage teachers to increase the praise to reprimand ratio within their classrooms. When done with fidelity, the frequency of negative behaviors will decrease. Not only does this benefit individual students, but it also increases the academic teaching times for teachers as they respond to behaviors less frequently. When negative behaviors occur within the classroom, they distract individual students and often whole groups of students from learning. The behavior derails the attention of students but also can take away the teacher from being able to teach. However, when negative behaviors decrease, more time and attention can be paid towards learning for both teachers and students.

The data found to support increasing the praise to reprimand ratio has been supported by research literature previously. Research has shown that the ideal praise to reprimand ratio may be as high as nine to one (Caldarell, et al., 2019). That means for every one statement of reprimand, there are nine pieces of praise given. In this action research, the praise to reprimand ratio reached 13:1. When the ratio was this high, the negative behaviors observed for the week dropped to four instances. Research supports this trend especially in children with emotional and behavioral disorders. When the ratio is increased for these students, their noncompliance decreases (Caldarell, et al., 2019). These instances of noncompliance can be seen in a variety of ways from

refusals to aggressions. Not only do these negative behaviors effect students academically, but it can also impact their relationships with peers and adults.

Limitations of the Study

The data from this action research supports the effectiveness of using praise within the early childhood classroom. However, there are still uncertainties as to which aspect is responsible for the decrease in negative behaviors. For example, is the decrease in negative behaviors caused by an increase in praise alone, or the combination of praise with the incentive of Chapstick? This information would be critical in its implementation for future teachers. The research was also conducted within the early childhood classroom and doesn't indicate how praise would affect older children. For example, the incentive used with younger children of Chapstick may not be a motivator for older students. It would be critical to find a motivating incentive with each differing age group of students.

Further Study

While this study provided insight into the effects of teacher implemented feedback systems, it didn't fully and conclusively answer the research question. Due to the quick timeline of this action research project only three weeks of data collection occurred. This short amount of time doesn't allow for enough data to confidently show the effects of the feedback system. If future research was conducted, a longer period of data collection and intervention implementation would be necessary.

Another area to extend future research into would be the lasting effects. More specifically the lasting impacts of the feedback system after it is faded out. For example, if the teacher fades the intervention of Chapstick and returns to verbal praise, will negative behaviors still decrease?

Future research of the longevity of the impact of the intervention would help clarify whether the intervention or the decrease of reprimand cause the decrease in behaviors. With the current data collection, as discussed in the data analysis section, it is unclear whether the increase in praise or decrease in reprimand or both caused the decrease in negative behaviors. In order to accurately answer the research question, future research in refining those variables is necessary.

Lastly, while this research took place in the early childhood classroom, it would be insightful to expand. By expanding this research to various age groups, the education community could see whether or not it should be encouraged at more levels. While the intervention would need modification to differing age levels, the data on the praise to reprimand ratios would be helpful. Future research in this particular area could show if the ideal praise to reprimand ratio varies based on age. While Laura Senn Perry and her colleagues began to unpack this topic in the preschool setting, further research is needed to expand beyond (Senn, et al., 2019).

Conclusion

The purpose for this action research project was to dive into praise and feedback systems in the early childhood classroom. To begin a research question was established: What impacts does a teacher implemented feedback system have on behavioral incidents in preschool? In order to plan how to collect data to answer this question a dive into literature surrounding feedback systems was thoroughly conducted and referenced/. More specifically in the areas of the effects of praise in the classroom, feedback systems, effects of praise, and feedback in the early childhood setting. With the support of the research into these items, such as the different types of praise described by Margaret Floress and her colleagues, a data collection plan was created and followed through (Floress, et al., 2022).

When composing the research question there was a main problem trying to be solved. This was the increasing rates of negative behaviors within classrooms. This increase has been since nationwide, especially since the Covid-19 pandemic. This issue is not exclusive to the early childhood classroom but is seen as a concern for most teachers. According to an article from the *Journal of Advances in medical Education and Professionalism*, “misbehaviors and classroom management are one of the biggest challenges and concerns of teachers” (Mahvar, Ashghali, & Aryankhesal, A., 2018).

At the conclusion of this action research project, a clear trend came to light. As the rate of praise to reprimand ratio increases, negative behaviors decrease. While this doesn't completely answer the research question, it does provide insight moving forward. The data supports the implementation and use of a positive feedback system within the early childhood classroom. These findings will provide teachers with the encouragement and motivation necessary to implement feedback systems. Even though there are needs for future research, the findings in this action research project serve as a foundation for supporting the implementation of feedback systems in the early childhood classroom.

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