+Running head: EFFECTS OF STUDENT REWARDS AND VERBAL PRAISES

The Effects of Tangible Rewards System and Verbal Praise on Academic Achievement of Second Grade Students at a Selected Elementary School

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Institutional Review Board Decision Tree

Based on your responses, you do not need approval from the IRB.

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However, you should carefully review all procedures and questions to ensure that anonymity is protected especially in the case of institutional surveys where questions such as age, race and gender could be used to identify participants even if they are not asked for their names.

Return to Beginning

Abstract

The purpose of this study was to determine the effects of tangible rewards and verbal praise on motivational strategies on academic performance in a second grade class. The sample consisted of 18 students comprised of 11 male students and 7 female students. The data were collected using two post-assessment tests. The students were taught half unit of science using tangible reward strategy. At the end of the first unit, the students were tested. The second half of the unit was taught using verbal praise strategy. At the end of the second half unit, the students were tested. The results were compared for differences. The results indicated no significant difference between the two strategies. The results suggest that teaching with rewards should be selected carefully based on knowledge of student preferences.

Chapter 1

Introduction

One of the most prevalent challenges that teachers face in the American Elementary classroom is creating innovative strategies to motivate student academic achievement. A common question often asked by them is: "How can I motivate my students to learn?" Motivation becomes an important element in student learning. Without motivation, students lack the purpose of learning, and attendance at school will become an end in itself. It becomes critical for the teacher to understand that in order to increase student achievement in the lower grades, incentives will have to play a major role (Fryer, 2010). These incentives can be both tangible as in giving rewards such as stickers to students. They can also be non-tangible such as giving praise.

Psychologists make the distinction between two major types of motivation – intrinsic and extrinsic (Arends, 2012). Extrinsic motivation occurs when one is rewarded or encouraged by another person or a thing. The stimuli is external. Extrinsically motivated learners complete tasks as a means to an end, not as an end in itself. In the elementary classroom, teachers often give students an incentive to participate in or to complete an activity (Thomson & Wery, 2013). These incentives will differ in nature. They may be tangible items such as candy, stickers, or lunch with the teacher. They may also be non-tangibles such as verbal praise, a smile, a high-five clap or a pat on the back (Thomson & Wery, 2013). Intrinsic motivation on the other hand is being rewarded from within oneself (Thomson & Wery, 2013). Individuals who are intrinsically motivated will not usually require an external stimuli to motivate them to complete a task.

According to Behavioral theorists, individuals are affected by the environmental stimuli to which they happen to be exposed (Feldman, 2012). B. F. Skinner called this operant conditioning. This is a form of learning in which a voluntary response is strengthened or weakened, depending on its association with positive or negative consequences. Therefore, a student is apt to work harder in school if he or she receives good grades, workers are likely to labor harder at their jobs if their efforts are tied to pay increases (Feldman, 2012). So tangible incentives such as stickers, pizza, lunch with teacher and candy are more likely to promote and reinforce the desirable behaviors in students than verbal praises.

Research has established several reasons that may cause a student to be motivated extrinsically. Moldovan (2014) noted that extrinsically motivated students may come to school to receive, directly or indirectly, certain rewards. Such children may have a need for a sense of belonging and recognize that if he or she pleases the teacher or the parent, he or she will be rewarded. Secondly, students are motivated in the classroom, because it is the normative trend. Society expects them to go to school. Many may also fear the consequence of punishment.

Thirdly, there are those who may want to be the first to obtain the reward. That desire to be among the first to receive the reward motivate them to complete tasks (Moldovan, 2014). Lastly, the environment for the ordinary American child is clattered with a lot of distractions. For instance, technological gadgets such as iPod, iPhone, television, and video games now compete with the child's attention for learning. Children are now having difficulties focusing in the classroom. Even though schools have incorporated technology in their learning process, teachers are still faced with challengers on how to motivate struggling students to learn. For this reason, some students need to be motivated extrinsically to encourage them to remain focused.

Problem Statement

There is some controversy about giving tangible rewards to students to motivate student performance. Deci, Koestner and Ryan (2001) have expressed that tangible rewards tend to be controlling. As a result they will tend to decrease intrinsic motivation. In their view, if tangible rewards are given unexpectedly to people after they have finished a task, the rewards are less likely to be experienced as the reason for doing the task and are thus less likely to be detrimental to intrinsic motivation.

The learning theory approach however, affirmed that learning follows the basic laws of reinforcement and conditioning (Feldman, 2012). According to Psychologist B.F. Skinner (1904-1990), individuals learn to act deliberately on the environments in order to bring about a desired result. In the same vein, teachers participate in reinforcing positive behavior every day in the classroom. For instance, when a student articulates a word correctly, the teacher may praise the student. This reaction from the teacher reinforces the student to further perform. When positive behavior in elementary school children is required, an external force is necessary. Tangible rewards become the external force that is necessary to reinforce the positive behavior of good student performance. Therefore, the problem of this study was to investigate the effects of student rewards and verbal praise on second grade student performance.

Purpose Statement

The purpose of this study was to determine the effects of student rewards and verbal praise on second grade student performance.

Significance

The significance of this study was to determine the effectiveness of tangible rewards over verbal praise. Teachers need to value and understand the importance of providing both tangible and non-tangible incentives systematically. Research has established that learning can be stimulated and enhanced through the use of rewards (Cotton, 1988). This study will benefit second grade teachers whose students lack the motivation to perform. The study will also shed further light on the effects of tangible rewards over verbal praise.

Limitations

There were two limitations encountered in this study. Firstly, the sample consisted of one second grade class in a selected elementary school. This class was not randomly selected. Therefore, the results do not represent a wider population. Secondly, the instruments for collecting data were not tested for reliability and validity.

Definition of Terms

Academic achievement. Academic achievement is the outcome of education. It is usually measured by examinations and other forms of assessments.

Elementary students. Students that receive primary or elementary education in a school. This education is compulsory. The students are primarily between the ages of five and eleven.

Extrinsic motivation. This occurs when one is rewarded or encouraged by another person or a thing (Thomson & Wery, 2013)

Intrinsic motivation. This is when one is being rewarded from within oneself. It occurs when one participates in an activity purely out of curiosity, or the need to know more about something (Thomson & Wery, 2013).

Learning process. The act of acquiring new or modifying existing knowledge.

Motivation. The force that produces student interest and involvement in learning.

Verbal Praise. Positive evaluations made by a person of another's products, performances, or attributes where the evaluator presumes the validity of the standards on which the evaluation is based.

Tangible rewards. Rewards that are frequently offered to people as an inducement to engage in a behavior in which they might not otherwise engage (Deci, Koestner, Ryan, 2001).

Overview of Study

This study is comprised of five chapters. Chapter One includes the following: introduction, statement of the problem, purpose statement, significance of the study, limitations, definitions of terms and an overview of the study. Chapter Two covers the related literature review on this topic. Chapter Three describes the methodology and procedures used, including the population, sample, data collection instruments, procedures, and research question and related hypothesis. Chapter Four contains the data analysis, including collection of data, and research questions. Chapter Five presents the summary of the findings, conclusions, recommendations and implications of the study.

Chapter 2

Literature Review

Introduction

Motivation is usually defined as the processes that stimulate our behavior or arouse us to take action (Arends, 2012). It is what makes humans do what they do every day. There are many factors that cause individuals to want to do something. Some may be motivated intrinsically. Such individuals act in a certain way because it brings personal satisfaction or enjoyment (Arends, 2012). Other individuals are motivated extrinsically. These are individuals who work for rewards that are external to the activity (Arends, 2012).

A common challenge facing teachers in the American classroom is how to motivate students to performance academically. One strategy that is prevalent is the use of extrinsic rewards. These are tangible rewards such as money, prizes, trophies and good player awards. There can also be non-tangible like verbal praise (Deci, Koestner & Ryan, 2001).

The debate over the effects of the use of extrinsic rewards in the classroom has been controversial. One school of thought suggests that extrinsic rewards undermine intrinsic motivation (Deci et el, 2001). Another school of thought believes extrinsic rewards have a positive effect on student performance. A few have suggested that both types of motivation are correlational, and necessary for student performance. The debate that this study examines is the effects of extrinsic rewards such as a reward system on academic achievement. The study will first review literature that suggests extrinsic rewards undermine intrinsic motivation. This will be followed by those whose findings suggest that extrinsic rewards have positive effects on student performance. The study will also cite researchers who have alternative explanations. In

conclusion, the study will discuss a few guidelines on the use of extrinsic rewards as recommended by those that favor them.

Extrinsic Motivation

Extrinsic rewards or incentives are innovations used by teachers in the classroom to influence academic performance (Moberly, Waddle & Duff (2005). These have been in the American classroom for a long time (Deci, Koestner & Ryan, 2001). With the current pressure for teachers to ensure that students perform well on standardized testing, teachers have been forced to continue the use of extrinsic rewards despite the controversy that exists surrounding them. Poor student achievement will reflective negatively on teacher performance. As a result, most teachers will use some form of reward system that will provide incentives of maximum student engagement and performance. These incentives will include tangible rewards such as pizza coupons for good performance, stickers, grades, and other such rewards (Davis, Winsler and Middleton, 2006). Non tangibles are often in the form of verbal praise (Davis et el, 2006). The use of these reward systems remains at the discretion of the teacher or educator.

Extrinsic Versus Intrinsic Motivation

Some researchers and theorists have questioned the effectiveness of a reward system for academic performance in the American classroom. In their view, individuals that are motivated extrinsically continuously will eventually undermine their intrinsic motivation (Deci, Nezlek, Sheinman, 1981). For instance, students solely engage into a classroom activity, because it will get them a coupon for pizza or please their teacher (Law, 2003). These students often lack creativity. The reward becomes the means to an end. On the other hand, other researchers have noted that both intrinsic and extrinsic motivation coexist (Lepper, Corpus & Iyengar, 2005) and

play a significant role in promoting student performance. They insist that extrinsic motivation does not negatively affect intrinsic motivation.

The researchers who question the effectiveness of rewards on academic performance favor the cognitive evaluation theory (Deci, et el, 1981). This theory claims that there are controlling factors embedded in extrinsic rewards which undermines intrinsic motivation (Rassuli, 2012). The other group of researchers opposed the cognitive evaluation theory. In their view, because the participants who have engaged in a task have done so voluntarily, extrinsic rewards enhance academic performance without any negative effects (Rassuli, 2012).

Edward L. Deci was one of the first researchers who studied the effects of external rewards on intrinsic motivation in 1971. He made conclusions that extrinsic rewards undermine intrinsic motivation (Little, Lovett & Little, 2004). Deci's works were based on Harlow, Harlow and Meyer (1950) who were the first researchers to distinguish the two types of motivation; intrinsic and extrinsic. Harlow et el (1950) conducted a study on rhesus monkeys to determine whether their action for engaging in an activity was based on intrinsic motivation or external rewards (Little et el. 2004)). In Harlow's research, the monkeys were given a puzzle solving task. When the monkeys solved the puzzle, the researchers concluded that the monkey's actions were based on intrinsic motivation. When the monkeys were rewarded, the conclusion was that it was based on extrinsic motivation (Little et el. 2004).

Deci used three experiments to explain the effects of external rewards on intrinsic motivation. He based his studies on the Harlow research. In these experiments, he wanted to determine whether intrinsic motivation in individuals would decrease as a result of extrinsic rewards. In his first experiment, the participants who were college students, engaged in a task

without any external reward. In this experiment, participants were asked to solve a puzzle. The duration for this activity was one hour over a 3-day period. During the first hour, participants were engaged in the activity without any offer of reward. During the second session, participants were promised a dollar for each puzzle solved. In the third session, participants were told that there was no reward for their task. Intrinsic motivation was measured by the number of seconds the participants spent on the task during free choice periods. These periods were moments the experimenter left the room in the middle of a session. When he did, he informed the participants that they could choose to work on the activity. Results in this experiment indicated that rewards increased participants' time on the task (Little et el. 2004).

In his second experiment, half of the participants were rewarded for performing the activity, and half of the participants received no reward. Deci (1971)'s findings in his second experiment supported his earlier argument that extrinsic rewards undermine intrinsic motivation. He suggested that intrinsic motivation will decrease if an extrinsic reward is obtained in a situation where individuals normally perceived themselves to be the origin of their behavior (Little et el, 2004).

In his third experiment, instead of using external rewards, Deci (1971) used verbal praise. According to his results, participants in the experimental group spent more time on task than participants in the control group. For Deci (1971), the results indicated that social rewards do not decrease an individual's intrinsic motivation to perform an activity, and may even enhance intrinsic interest.

In another earlier study conducted by Deci, Nezlek and Sheinman, (1981), there was reconsideration in the effects of extrinsic rewards. They established that there was a relationship

between the characteristics of the rewarder (in this instant the teacher) and intrinsic motivation of the rewardee (the student). When they examined this relationship, they gathered conclusive evidence that based on the cognitive evaluation theory, there were two aspects of external rewards at play when external rewards were given. There are those that are controlling and those that are informational. According to this theory, the external reward that is controlling is the one that decreases intrinsic motivation because it brings people's behavior under the control of the reward. The external reward that is informational (e.g. verbal praise) will not undermine intrinsic motivation. Instead, it emphasizes positive feedback rather than control. According to this research, the reward in itself cannot be the sole variable at play when it comes to decreasing intrinsic motivation. The factors of the characteristics of the teacher, the student as well as the situation must all be considered in able to establish the effects of rewards on intrinsic motivation (Little et el. 2004).

Deci (1971)'s conclusion on the above mentioned studies evolved yet again to another dimension. Deci, Koestner and Ryan (2001) conducted a meta-analysis of several works. In this meta-analysis, the researchers placed emphasis on the role the cognitive evaluation theory plays on motivation. This theory suggests that intrinsic motivation is governed by self-determination and competence (Little et el. 2004). The cognitive evaluation theory states that self-determination and competence are innate human needs (Little, 2012). In view of this theory, Deci & et el. (1991) suggested that external rewards will compromise the inherent self-determination and competence built in individuals. In this study, rewards were divided into two categories: task-contingent rewards that were given for participation in an activity or solving a problem, and quality-dependent rewards that involved the "quality of one's performance relative to some normative information or standard" (Little et el. 2012).

Deci (2001)'s meta-analysis established that task-contingent rewards affect intrinsic motivation by decreasing self-determination. The study that was conducted to establish this involved 92 tangible reward studies with a free-choice measure, and 70 with a self-report measure. According to the cognitive evaluation theory, on average, tangible rewards significantly undermined both free-choice intrinsic motivation. The study went on to reveal that tangible rewards have a more negative effect on children than on college students and that verbal rewards have a less positive effect on children than on college students (Deci, Koestner & Ryan, 2001).

Deci et el. (2001) also used the cognitive evaluation theory to predict that unexpected rewards would not be detrimental to intrinsic motivation, whereas expected rewards would (Deci, Koestner & Ryan, 2001). Their reasoning was that, if people are not engaged in a task simply because they want to get a reward, they are unlikely to feel their task behavior is being controlled by a reward. They noted however, that quality-dependent rewards served to increase feelings of competence. This was because the reward is viewed as an informational event leading to an increase in feelings of competence, which leads to an increase intrinsic motivation.

Reward System Justified

Researchers, Cameron and Pierce (1994) do not support the position that extrinsic rewards decrease intrinsic motivation. Their study established that reinforcement did not actually harm an individual's intrinsic motivation. Additionally, they pointed out that the cognitive evaluation theory did not fully determine that rewards affect attitude negatively. Instead, they found that rewards affect attitudes positively especially when verbal rewards are used, and when rewards are depended on a precise level of achievement (Little, 2004).They conducted a meta-analysis

that supported their position. Researchers with this school of thought dispute the cognitive evaluation theory.

Some researchers such as Deci, Koestner, and Ryan (2001), Deci, & Ryan (1980) and Lepper et el. (2005) criticized Cameron and Pierce's findings. Regardless, Cameron and Piece insist that their research was conducted in a valid and orderly manner. Cameron & Pierce's message to Educators is that their finding is important to the classroom, because rewards can be used to enhance and maintain students' intrinsic interest in their school work (Cameron & Pierce, 1996). In their view, rewards can be used without interrupting a student's intrinsic interest. Cameron and Pierce's studies gave evidence that intrinsic motivation is not negatively affected by extrinsic rewards.

Another researcher, Michael A. Ingram (2000) brought a different perspective to the debate on whether extrinsic rewards promote academic achievement. He took cognizance of the student's socio-economic environment. Despite the inherent desire of self-determination and competence, some students will have some draw backs, because of the unpleasant environment they find themselves in. As a result, extrinsic rewards at school may be the only positive thing that will motivate them to performance academically (Corpus & Wormington, 2011). Their hypothesis affirms the importance of extrinsic rewards in promoting academic achievement.

Ingram supports the presence of extrinsic rewards in schools, and provides examples of those in use in public schools. His study has revealed that extrinsic rewards have been used to increase academic achievement, dropout rates as well as to increase school attendance (Ingram, 2000). According to Ingram, extrinsic motivators have also been known to increase intrinsic motivation, retention as well as self-worth.

Ingram's study also makes a valid observation. He suggests that we cannot ignore the context when it comes to extrinsic rewards. He draws his audience to note that extrinsic incentives play a vital role in some urban schools where negative factors emerge constantly affecting the learning environment (Ingram, 2000). Students labelled 'at risk' or 'low achieving' are some of such that can greatly benefit from incentives. Roland G. Fryer (2010) echoes Ingram's sentiments when he too established that incentives can be an effective strategy to raise academic achievement particularly in a low socio-economic environment. According to Fryer, even the poorest minority students in the lowest performing schools can be motivated given extrinsic rewards.

Successful programs that have utilized extrinsic rewards are numerous in the American school system. Ingram cites the D-FY-It (Drug Free Youth In Texas) and the Lang's 'I have A Dream' programs in Texas. Both of these programs utilize monetary means to motivate students to stay away from drugs and to complete high school respectively (Ingram, 2000).

In determining the effects of extrinsic rewards of academic performance, it is important to consider the age of the recipients. Olga Moldovan (2014) established that in the learning process, the motivation is primarily extrinsic and then it becomes intrinsic (Moldovan, 2014). This researcher conducted her study using two samples of primary school children regarding the transformation of extrinsic learning motivation into intrinsic learning motivation. One class was of lower primary level, and the other was fourth grade comprising of older students. The researcher used questionnaires for both classes. In the questions, the researcher made attempts to source the cause of extrinsic and intrinsic motivation in children. Her findings established the following: 1) in the younger children, the highest causes of extrinsic motivation was not to upset their mother, followed by teacher, obtain material rewards and lastly approval for playing on the computer, 2) in the older students, it was established that the highest cause of extrinsic

motivation was not to upset the teacher. As children develop and mature, their focus of what motivates them extrinsically begins to shift from their parents to the teacher. Fourth graders want to please their teachers more than they would want to play on the computer. From this research, one cannot under estimate the role of the teacher as rewarder. The teacher has the capacity to effectively influence the academic performance of students by motivating them externally

Alternative Explanations

Corpus and Wormington (2009)'s study on intrinsic and extrinsic motivation brings a different perspective. Their central research question was: Does extrinsic motivation detract from intrinsic motivation or compound its benefits? To answer this question, they formulate two hypotheses. Their first explanation is that students at the elementary level may not see any conflict between learning as an end in itself (intrinsic motivation) and learning as a means of pleasing others (extrinsic motivation) given that relationship with teachers are close (Corpus & Wormington, 2011). The second explanation is that, students with a pattern of high intrinsic but low extrinsic motivation may fare better than others, because self-directed, persist engagement results when students are free from external concerns (Corpus et el. 2011).

Corpus and Wormington (2011) leaned more on the second hypothesis. They suggested that there are combinations of both extrinsic and intrinsic motivations existing in students. Their study verified three distinct combinations of these two attributes of motivation. The method they used to support their hypothesis was cluster analysis. They grouped 490 3rd, 4th and 5th grade students from seven schools into three groups by using their grades for the first and fourth quarters from school records. These students completed a survey. They were later put into three clusters: 1. high quality – this consisted of high levels of both intrinsic and extrinsic motivation,

2. good quality – high levels of intrinsic but low extrinsic motivation, and poor quality which consisted of low levels of intrinsic but high extrinsic motivation (Corpus & Wormington, 2011).

Corpus and Wormington (2011)'s methods were based on Harter's scales on intrinsic versus extrinsic motivation. For example, their intrinsic motivation scale included seventeen items focusing on areas that are challenging. A sample phrase would be: "I like to go on to new work that's at a more difficult level." Students would respond using a five-point scale. Extrinsic motivation included sixteen items. For this items, the researchers were interested on focusing on pleasing authority. For instance, "I answer questions because the teacher will be pleased with me." Their findings suggested that at the elementary level, intrinsic motivation must be paired with low levels of extrinsic motivation to produce strong academic achievement.

In continuing to look at the effects of extrinsic rewards on intrinsic motivation, Lepper, Corpus and Iyengar (2005) also provide a balanced outlook at the debate over the effects of the use of extrinsic rewards. These researchers affirmed Susan Harter (1981)'s findings that there was a relationship between age difference and academic outcomes. More importantly however, that there was a decline in intrinsic versus extrinsic motivation across the elementary and middle school years. They acknowledged the prevalence of extrinsic rewards in the American classroom even as the focus on standardized tests and grades increases. (Lepper, Corpus & Iyengar, 2005). Furthermore, the study conducted also showed that academic performance was strongly linked to some components of extrinsic motivation.

Lepper et el. (2005) based his research on Harter's scale. Harter divided her scales into motivational and informational. These scales sought to establish the presence of extrinsic and intrinsic motivation components in the classroom. Harter attempted to answer the following

question: To what degree is a child's motivation for classroom learning determined by her or his intrinsic interest in learning and mastery, curiosity, and preference for challenge, in contrast to a more extrinsic orientation in which the child is motivated to obtain teacher approval and/or grades and is dependent on the teacher for guidance? (Harter, 1981) Lepper et el. (2005) attempts to answer this question in their research. For them, intrinsic and extrinsic motivation are not necessarily opposed to each other. In fact Lepper et el suggest that these two forms of motivation might collaborate in order to promote learning.

Guidelines for Best Practice

Researchers that favor extrinsic rewards have established several guidelines to safe guard against abuse. Evidence shows that extrinsic rewards can either enhance or reduce interest in an activity, depending on how they are used (Ingram, 2000). In order for them to be utilized effectively, certain characteristics must be present in the incentives. Cameron and Piece insist that overall, rewards and incentives are not harmful. In their view, a teacher whose interest is to promote student learning would not implement a reward system that would infringe on student intrinsic motivation deliberately.

Firstly, Educators and teachers have to target groups and/or implement additional measures in order for rewards to serve a valuable function in the American classroom. Ingram suggests that incentives can be attained by most students.

Secondly, rewards should not be presented for mere participation in a task without regard for completion or quality (Little, 2004). Rewards must be tied to quality performance. Ingram supports this idea and insists that rewards should have consistent standards of implementation (Ingram, 2000).

Another characteristic to consider is consistency when issuing rewards. Rewards should be distributed systematically and not on a single occasion. It is suggested that eventually the rewarder should slowly withdraw the reward when required behavior is accomplished. This is because the reward is the reinforcer that must be eliminated once the aspired behavior is learned.

Extrinsic rewards must also have true reinforcing value. Ensuring the use of best practice of rewarding students is a practice that has to be learned by teachers. Like parents, teachers have to know their students and their situations. All students are different and are motivated differently. When teachers acquire adequate knowledge of their students, they are able to establish the best reward system that will influence academic performance and/or good behavior. In regard to this, teachers must receive reward techniques that aid them in improving their management skills.

Finally, students will respond effectively to extrinsic rewards when the outcome is attainable and valuable. When students understand why the outcome is important, they will respond accordingly. This is especially critical when you take cognizance of the student's pattern of beliefs, feelings about success, effort, ability, and errors (Wery &Thomson, 2013). How valuable is the concept of success to the student? If tasks presented to the student are not central to one's sense of self, then extrinsic rewards becomes ineffective. Both the behavioral social learning theorists agree that learning takes place in response to an external stimulus (Feldman, 2012).

Conclusion

Extrinsic rewards must also have true reinforcing value. Ensuring the use of best practice of rewarding students is a practice that has to be learned by teachers. Like parents, teachers have to know their students and their situations. All students are different and are motivated differently. When teachers acquire adequate knowledge of their students, they are able to establish the best reward system that will influence academic performance and/or good behavior. In regard to this, teachers must receive reward techniques that aid them in improving their management skills.

Chapter 3

Methodology and Procedure

The purpose of this study was to determine the effects of tangible rewards system and verbal praise on academic achievement of second graders.

Motivating students to perform has been very challenging for many teachers in the American classroom. Many have had to be innovative in coming up with strategies that can encourage students who struggle to remain engaged in their learning process. Classroom learning involves both intrinsic and extrinsic motivation orientations (Lepper et el, 2005). Both types of motivation are necessary in order to increase student performance.

One approach in research findings places emphasis on intrinsic motivation and insists that extrinsic motivation undermines intrinsic. Another approach affirms rewards and their findings have conclusive evidence that rewards make a difference in student performance. The third approach states that both are necessary in motivating students and coexist. The findings in this study seek to help teachers know that there is a difference in student performance when a reward system is affected systematically.

Population

The study was conducted at an elementary school in Northeastern Tennessee. The location of the school was urban. It was comprised of 340 students made up of 46% male and 54% female. The ethnicity of these students were 49% White, 32% Black, 10% Hispanic, 7% two or more races and 1% Asian/Pacific Islander. The school was a Title I school consisting of high levels of low-income families. At the time of the study, 81% of students were eligible for

free lunch and 6% for reduced lunch. There were 33 teachers and the teacher: student ratio was 10:1

Sample

The sample for this study was taken from one second grade class out of three existing classes. The sample was made up of 18 students comprised of 11 male students and 7 female students. At the time of this study, their ages ranged from seven to eight years old. Demographically, the sample consisted of 52% white, 24% Hispanic, 12% Black and 12% two or more races. The general composition of parents and guardians of studied students was high level of low income and a few middle income families.

Data Collection Instruments

Data for this research were collected through teacher made tests. The students were taught two units which were similar in difficulty and comprehension. The first unit was taught using tangible reward system as reinforcers that consisted of a treasure box. After the unit was taught, the students were administered a test. The second unit was implemented, and the students were taught using as reinforces verbal praise. This consisted of a pat on the back, high- five slap and/or use of phrases like, "Excellent job! Well done! " At the end of the second unit, a test was administered.

Procedure

Before this study was conducted, permission to perform the study was obtained from a school district representative and from the principal. Permission was also obtained from the parents and guardians of all students before they could participate. Each parent and student was

informed that participation was voluntary. Additionally, they were informed that all participants could withdraw from the study at any point without any consequences.

Once permission was granted from all students, the study was implemented. The students were taught half unit of science using tangible reward strategy. At the end of the first unit, the students were tested. The second half of the unit was taught using verbal praise strategy. At the end of the second half unit, the students were tested. The results were compared for differences.

Research Questions

Research Question # 1: Is there a difference between students' performance when they are taught using tangible and when they are taught using verbal praise?

- Research Hypothesis: There is a difference between students' performance when they are taught using tangible and when they are taught using verbal praise.
- Null Hypothesis: There is no difference in students' performance when they are taught using tangible or verbal praise.

Research Question # 2: Is there a difference between the gender of students and test scores when students are taught using tangible rewards?

- Research Hypothesis: There is a difference between the gender of students and test scores when students are taught using tangible rewards.
- Null Hypothesis: There is no difference between the gender of students and test scores when students are taught using tangible rewards.

Research Question # 3: Is there a difference between the gender of students and test scores when students are taught using verbal praise?

- Research Hypothesis: There is a difference between the gender of students and test scores when students are taught using verbal praise.
- Null Hypothesis: There is no difference between the gender of students and test scores when students are taught using verbal praise.

Chapter 4

Data Analysis

Introduction

The purpose of this study was to examine the effectiveness of motivational strategies such as tangible rewards and verbal praise on academic achievement of second grade students. The effects of tangible rewards were compared to verbal praise. This chapter describes the collection of data and analysis of those data. The research questions and hypothesis are also noted.

Data Collection

The data for this study were collected from 18 students from one second grade class. Students comprised of 10 male students and 8 female students. At the time of this study, their ages ranged from seven to eight years old. Demographically, the sample consisted of 52% white, 24% Hispanic, 12% Black and 12% two or more races. The general composition of parents and guardians of studied students consisted of low income and a few middle income families.

The study employed two post-assessment tests. The students were taught a science unit using both tangible and verbal praises as independent variables. Half of the unit was taught using tangible rewards. At the end of the half unit, a test was administered. The second half of the unit was taught using only verbal praise. At the end of this half unit, the students were administered a second test. Data for the first and second test were compared to determine the differences in performance.

Research Questions and Related Hypotheses

Three research questions were used to guide the analysis of the data. Each question was followed by a research hypothesis. All data were analyzed at the .05 level of significance.

Research Question # 1: Is there a difference between students' performance when they are taught using tangible rewards and when they are taught using verbal praise?

To answer the research question is there a difference between students' performance when they are taught using tangible and when they are taught using verbal praise data for students when taught using tangible and verbal praise were calculated. The mean for tangible rewards was 83.67 with a standard deviation of 11.49. The mean for verbal praise was 80.33 with a standard deviation of 15.54. Research hypothesis 1 was associated with research question: There is a difference between students' performance when they are taught using tangible rewards and when they are taught using verbal praise. To determine whether the mean differences for tangible rewards and verbal praise were significant, t-test for paired means was conducted. The results indicated $t(17) = 1.023$, $p = .321$. These results were not significant and therefore null hypothesis was retained. The results are displayed in Table 1.

Table 1

Paired Samples T-test for Tangible and Verbal Praises Scores

Groups	M	SD	df	t-value	sig. (2-tailed)
Tangible	83.67	11.49	17	1.023	.321
Verbal Praise	80.33	15.54			

Research Question # 2: Is there a difference between the gender of students and test scores when students are taught using tangible rewards?

In response to research question 2, a comparison was made between the mean scores for females and males when given tangible rewards. The mean for males' scores was 82.70 and the mean for females' scores was 84.88. Research question 2 was associated with research hypothesis 2.

Research Hypothesis # 2: There is a difference between the gender of students and their performance on tests when they are taught using tangible rewards.

An Independent Samples T-test was conducted to determine whether a significant difference between the genders existed in their performance on tests when they were taught using tangible rewards. Levene's test for equality of variance was conducted and indicated that equal variances could be assumed for the two groups (F=.004, P=.948 so P>.05). Test for the equality of means indicated that there was not a significant difference between genders (t (16) = .389, p = .72). Therefore the null hypothesis was retained. The results are displayed in Table 2.

Table 2

Independent Samples Test for Male and Females Scores on Tangibles rewards

Groups	M	SD	df	t-value	sig. (2-tailed)
Male	82.70	11.963	16	-.389	.70
Female	84.88	11.557			

Research Question # 3: Is there a difference between the gender of students and test scores when students are taught using verbal praise?

In response to research question 2, a comparison was made between the mean scores for females and males when taught using verbal praise. The mean for males' scores was 83.20 and the mean for females' scores was 76.75. Research question 3 was associated with research hypothesis 3.

Research Hypothesis # 3: There is a difference between the gender of students and their performance on tests when they are taught using verbal praise.

An Independent Samples T-test was conducted to determine whether a significant difference between the genders existed and their performance on tests when they were taught using verbal praise. Levene's test for equality of variance was conducted and indicated that equal variances could be assumed for the two groups (F=2.834, P=.112 so P>.05). The results of the t-test indicated that there was no significant difference between genders (t (16) = .869, p = .398). Therefore, the null hypothesis was retained. The results are displayed in Table 3.

Table 3

Independent Samples Test for Male and Females Scores on Verbal Praise

Groups	M	SD	df	t-value	Sig. (2-tailed)
Male	83.20	11.40	16	.869	.398
Female	76.75	19.83			

Chapter 5

Findings, Recommendations, and Implications

Introduction

This chapter summarizes the findings, conclusions, recommendations for further research and implications of the study. This research study was based on the review of the literature that supported the fact that in order to increase student achievement in the lower grades, incentives will have to play a major role. Evidence shows that extrinsic rewards can either enhance or reduce interest in an activity, depending on how they are used (Ingram, 2000). These incentives can be tangible or nontangible.

The problem of this study was to investigate the effects of tangible rewards system and verbal praise on second grade student performance. The results of the study were based on the data analysis described in chapter 4.

Summary of Findings

Three research questions were used to guide the analysis of the data in chapter 4. In regard to research question 1, is there a difference between student's performances when they are taught using tangible or non-tangible rewards, paired samples T-test was conducted. The mean score for tangible rewards was 83.67, and the mean score for non-tangible rewards was 80.33. The results indicated there was no significant difference between the test scores $t(17) = .321$, $p = 0.321$, therefore the null hypothesis was retained.

Although there was no significant difference found, current literature supported the hypothesis and indicated that there is a difference between student's performances when they are

taught using tangible or non-tangible rewards (Little et el. 2004). Research has also indicated that rewards affect attitudes positively especially when verbal rewards are used, and when rewards are depended on a precise level of achievement (Little, 2004). However, even though the data gathered did not support the hypothesis, results indicated that student performance when taught using tangibles was slightly higher than student performance when taught using verbal praise.

The researcher observed that when the students were taught using tangible rewards they appeared to be eager. A few asked what kind of rewards would be in the packages that the researcher had promised to those who would do well. When they were given the rewards they expressed excitement, an indication that the students were motivated by an external reward. When they were taught using verbal praise however, there was a general tendency of familiarity of the verbal praise strategy. Henderlong and Lepper (2002) argued that praise can often be ineffective if it is overused.

In regard to Research Question 2 and 3, is there a difference between the gender of students and test scores when students are taught using tangible rewards, and is there a difference between the genders of students when students are taught using verbal praise respectively, an Independent Samples T-test was conducted. This was to determine whether a significant difference between the genders existed in their performance on tests when they were taught using tangible rewards, and when they were taught using verbal praise. For research question 2, the mean for males' scores was 82.70 and the mean for females' scores was 84.88. For research question 3 the mean for males' scores was 83.20 and the mean for females' scores was 76.75. When Research Questions 2 and 3 were tested, both results indicated that there was no significant difference between the scores of the genders. Therefore, the null hypothesis was retained in both tests.

The researcher observed that the girls' response towards tangible rewards was higher than that of the boys indicating that the girls showed more interest in tangible rewards than they did in verbal praise. On the other hand, boys were favorable to more verbal praise than they were to tangible rewards.

Conclusion

The research was conducted to determine the effects of using tangible rewards and verbal praise on student performance. Results indicated that tangible rewards and verbal praise did not make a significant difference on students' performance. Literature has established that extrinsic rewards do not harm an individual's intrinsic motivation. Instead, rewards affect attitudes positively especially when verbal rewards are used, and when rewards are dependent on a precise level of achievement (Cameron & Pierce, 1994, Little, 2004). Ensuring the use of best practice of rewarding students is a practice that has to be learned by all teachers.

Recommendations

1. A different design using open ended questionnaire or opinionnaire would reveal attitude and opinions of students.
2. Future research should include more schools in order to get a better idea of the effects of rewards and verbal praise on student performance.
3. For future research, other types of reward system could be utilized for tangibles.

Implications

Although no significant results were realized in this study, literature review indicated that reward system is beneficial for students:

1. Teachers should be more aware of the many reinforcers that can affect student motivation and academic performance.
2. Administrators and teachers should establish good reward and recognition system for students.
3. Parents and teachers should work together in acquiring adequate knowledge to establish the best reward system for each student.

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