

Article/Research/Review/Editorial

Effects of Positive Reinforcement on Students Academic Performance

Alam Zeb Khattak¹, Alay Ahmad², Alam Zeb Khattak^{3*}

1. Department of Applied Psychology , Preston University Peshawar Campus

(Email : alamzeb_1122@yahoo.com)

2. Dean Faculty of Social Sciences, Department of Applied Psychology , Preston University Peshawar Campus (Email : alay.ahmad@gmail.com)

3. Department of Applied Psychology , Preston University Peshawar Campus

(Email : alamzeb_1122@yahoo.com)

Corresponding author:

Mobile # +923145197017

alamzeb_1122@yahoo.com

Published after peer reviewed : 27 June, 2018

Abstract: This research study was conducted to know the effects of positive reinforcement on students academic performance. For this purpose a sample of 50 subjects (20 female & 30 male) was selected having the same socioeconomic background with no cultural differences. All of the subjects were taken from a government school their age ranges from 9 to 11 years having mean age of 9.8. They were all 4th and 5th graders. It was hypothesized that positively reinforced students will score higher on recalling non sense syllables through free recall test. Results of the study confirmed the hypothesis and a significant difference was found between the scores of experimental and control groups with a mean of 0.5 for both experimental and control groups and value of “t” was 2.50 significant at 0.5 level.

Keywords : Positive reinforcement, non sense syllables, academic Performance

Introduction

We are often talking about students reward for obtaining high grade or getting first position. We are regularly using reinforcement in our daily life in different forms. But mostly this term is used with motivation. Students motivation is the responsibility of both parents and teachers. Some of the high standard organizations are also following the reward system in the form of bonus or promotion to their employees. According to earlier researches both positive and negative reinforcement effects some one behavior. Reinforcement is the basic factor of operant conditioning theory proposed by Burrhus Fredrick Skinner in 1953. Skinner was a psychologist from Harvard University but their work play a significant role in both the fields of psychology and education (Weiten, Lloyd, Dunn & Hammer, 2009).

In reinforcement the stimulus increases the probability that a preceding behavior will be repeated. Reinforcement is either negative or positive. Mostly positive reinforcement is the synonymous of reward. Reinforcement is subjective sometimes it works as a reinforcer for one person but not for others. Positive reinforcement effects our every day life and personality while on the other hand negative reinforcement effects the development of avoidance tendencies (Feldman). Both reward and punishment are means of motivation and have significant effects on behavior.

A study conducted by Green and Todd suggests that both positive and negative reinforcement effects students performance but positively reinforced students scored high and surprisingly some high grade performers of the class scored low during experiment (Wallace & Goldstein, 1997). Another study by Wheatley, et al, 2009 suggests that use of positive reinforcement is very effective and high impact technique to improve students behavior but it is important for teachers to establish a safe comfortable, supportive and pleasurable environment in the classroom.

Conroy and their colleagues reported that creation of comfortable and positive classroom environment is the most powerful tool of teachers which increases children's learning and decreases problem behavior from occurring. Positive reinforcement may be effectively used by the teachers to teach students appropriate behavior and social skills which they are lacking. Many teachers are using only praise as reinforcement effectively in their classes (Conroy, et al, 2009).

Schedules of reinforcement includes, continuous reinforcement in which responses are reinforced every time when it occurs. In the fixed ratio schedule the response is reinforced when it occurs after a specific number of time while a variable ratio schedule reinforce a response when it

comes after a variable number of times. A fixed interval schedule reinforce any correct response when it comes after a specified time interval passes following the last response while a variable interval schedule reinforce any correct response that occurs after a variable time interval passes after the last reinforcement (Wallace & Goldstein, 1997).

On the basis of the earlier researches and literature review the following hypotheses were formulated.

H 1. Positively reinforced students will score high to recall non sense syllable on free recall test.

H 2. There is significant difference between the scores of positively reinforced students and control group.

Method

Sample

All 51 students of 4th and 5th grade (30 from 4th & 21 from 5th grade) of government primary school Inzer Payan District Karak were selected for the study. On the day of experiment one student from class 4th was absent. All of the subjects were from the same socioeconomic background with no cultural differences. Their age ranges from 9 to 11 years. They were both male and female. Score of the participants was noted on a specifically prepared form.

Variables

Positive reinforcement was the independent variable of the study which was in form of rupees 50 PKR which was awarded to every participant of experimental group. The information about positive reinforcement (50PKR) was shared only with the participants of experimental group while participants of control group were instructed that there will be no reward no punishment.

Effects on students academic performance was dependent variable of the study which was measured through free recall test while confounding variables include students and teachers absenteeism, electricity failure and environmental or severe weather variation.

Instruments

Demographic data sheet, list of non sense syllables, scores entry form and pencil.

Procedure

Written permission was taken from head teacher of the school prior of the start of the study. Before the actual experiment all of the subjects were randomly divided into two groups despite of their class position and academic record.

1. Experimental group
2. Control group

Separate instruction were given to both the groups. In the first step 20 non sense syllables were displayed 20 times before in a uniform manner with the same time schedule before participants of the experimental group. After these 20 trials every students was asked by number to recall these non sense syllables in proper order. Responses of the students were noted on score entry form.

In the 2nd step the control group was same as experimental group accept reward of 50 PKR. Scores of all of the participants were entered into the data of SPSS and then these results were analyzed t-test. SPSS version 16 was used for overall analyses.

Results and Discussion

This experimental study was conducted to see the effects of positive reinforcement on students' academic performance. Results of the study prove that positive reinforcement effects students' academic performance. No gender related difference was found. By comparing scores of experimental and control group subjects mean for both control and experimental group is 0.5 and calculated value of "t" is 2.50 which is significant on 0.5. The results of both the groups were compared with previous two year academic record of the students. Surprisingly the students who scored high in experimental group were not the toppers of the class. Fortunately only one student was absent, teachers were present all, no electricity failure and no environmental interruptions occurred on the day of study therefore the study completed accurately.

Chitiyo and Wheeler (2009) reported that use of positive reinforcement more effective it depends upon the educators how to make a comfortable classroom environment for students where the students enjoy their study. Results of the study conducted by Wheatley et al (2009) also supports the results of the present study, they reported that positive reinforcement is n effective and high

impact strategy to improve students behavior. Two different studies conducted during 2004 and 2007 reported that both reinforcement and punishment play an effective role, if they are used in a proper way and right situation. According to them multiple reinforcement and punishment are more effective as compare to single reinforcement and punishment (Salvy, Mulic & Butter 2004 and Ducharm, Sanjaun & drain, 2007). According to Conroy et al (2009) teachers may use positive reinforcement to improve classroom behavior and student motivation. Infantino and Little (2005) reported that mutual understanding of teachers and students is necessary which increases that the students will try hard to receive the incentives.

Conclusion and Recommendations

On the basis of this and earlier studies it is recommended that reinforcement must be used in the education sector to improve students' academic behavior. Increase students' motivation and decrease students deviance behavior.

Conflicts of Interest

The author declares no conflict of interest.

References

- Chitiyo, M., & Wheeler, J. J. (2009). Analyzing the treatment efficacy of a technical assistance model for providing behavioral consultation to schools. *Preventing School Failure*, 53, pp 85-88.
- Conroy, M. A., Sutherland, K. S., Snyder, A., Al-Hendawi, M., & Vo, A. (2009). Creating a positive classroom atmosphere: Teachers' use of effective praise and feedback. *Beyond Behavior*, pp 18-26.
- Ducharm, J. M., Sanjaun, E., & Drain, T. (2007). Errorless compliance training: Success focused behavioral treatment of children with Asperger syndrome. In Feldman, S. R. (2011). *Understanding Psychology*. (10th Ed). New York, USA. McGraw Hill, pp 189.
- Feldman, S. R. (2011). *Understanding Psychology*. (10th Ed). New York, USA. McGraw Hill, pp 186-189.

- Infantino, J., & Little, E. (2005). Students' perceptions of classroom behavior problems and the effectiveness of different disciplinary methods. *Educational Psychology*, 25, pp 491-493.
- Salvy, S. J., Mulick, J. A., & Butter, E. (2004). Contingent electric shock (SIBIS) and a conditioned punisher eliminate severe head banging in a pre school child. In Feldman, S. R. (2011). *Understanding Psychology*. (10th Ed). New York, USA. McGraw Hill, pp 189-190.
- Wallace, M. P & Goldstein, H. J. (1997). *An Introduction to Psychology*. (4th Ed). New York, USA. McGraw Hill, pp 174-176.
- Weiten, W., Lloyd, A. M., Dunn, S. D., & Hammer, Y. E. (2009). *Psychology Applied to Modern Life* (9th Ed). Belmont. Wadsworth Cengage Learning, pp 46-49.
- Wheatley, R. K., West, R. P., Charlton, C. T., Sanders, R. B., Smith, T. G., & Taylor, M. J. (2009). Improving behavior through differential reinforcement: A praise note system for elementary school students. *Education and Treatment of Children*, 32, pp 551-559.