Journal of Contemporary Educational Research

Research Article

Discussion on the Effectiveness of Educational Reward

Sanzhen Xu

No.14 Middle School, Kunming 650021, Yunnan Province, China

Abstract: The psychological mechanism of reward is to form operational conditioned reflex through positive reinforcement and negative reinforcement. The positive effect of reward is to strengthen external learning motivation, and reward can sometimes improve creativity. The negative effects are: weakening students' creativity, weakening the internal motivation of learning and hindering the development of autonomy. Teachers should apply educational rewards scientifically, take care of their age, consider the difficulty of tasks, pay attention to stimulating students' internal motivation, and give priority to spiritual rewards, supplemented by material rewards.

Keywords: Education; Spiritual reward; Material reward; Internal motivation; External motivation

Publication date: January, 2021

Publication online: 31 January, 2021

[*]***Corresponding author:*** Sanzhen Xu, 568692229@qq.com

In education, teachers will use various rewards to stimulate students' interest in learning. On the one hand, rewards play a role in promoting education and teaching, on the other hand, they also bring many negative effects. How to use rewards scientifically and effectively is a problem worth thinking about. The following four aspects are discussed: "psychological mechanism of reward", "positive effect of reward", "negative effect of reward" and "how to use reward scientifically".

1 First, the psychological mechanism of reward.

American psychologist Skinner designed an experimental device called "skinner box", which revealed the psychological mechanism of reward.

He put a hungry mouse in the box. When the mouse pressed the lever, the device dropped a grain of food. The mice quickly learned how to get food by pressing the lever, and the pressing speed became faster and faster. The rats formed an operational conditioned reflex: first, they had to do something independently before they could get a "reward". As the "reward" continued, the pressing behavior was constantly strengthened.

In the above process, "strengthening" is the key to the formation and consolidation of operational conditioned reflex. "Strengthening" refers to giving a specific stimulus when the subject is engaged in an activity in order to motivate the subject to engage in the activity. When a certain behavior appears, reinforcers appear immediately, which is of great significance to promote the persistence of behaviors. This kind of reinforcer is usually called "reward". Therefore, the psychological mechanism of reward is to form operational conditioned reflex through strengthening.

Reinforcement is divided into positive reinforcement and negative reinforcement. When a certain behavior appears with favorite stimulation, the event is called positive reinforcement. Positive reinforcement is the most common and typical reward method. In the above experiment, food is the favorite stimulus of mice, and food is the reward of mice. Students are rewarded by their teachers for answering questions. If students like this kind of stimulation, they will strengthen the behavior of answering questions in the process of constantly getting the favorite stimulation.

When a certain behavior is followed by the withdrawal or reduction of some unpleasant stimulus, the event is called negative reinforcement. Skinner laid a power grid at the bottom of the box, and the mice were constantly shocked and scurried about

in the box. When it pressed the lever, the power supply would be disconnected, and the electric shock suffered by the mice would be relieved. If they don't press the lever, they will be shocked again. So the mice learned how to release the electric shock by pressing the lever. Electric shock is an external factor causing pain in mice, and pressing the lever to release the electric shock is negative reinforcement.

Most of the rewards in education belong to positive reinforcement, and teachers encourage students to learn by giving them favorite stimulus; a few of them belong to negative reinforcement. For example, some teachers make some special cards for the students with good performance, which say, "One missed assignment is allowed", "One late assignment is allowed" or "50 push-ups are done less", so as to strengthen the operational conditioned reflex by reducing students' pain.

2 Second, the positive role of rewards.

2.1 Strengthen external learning motivation.

Learning motivation can be divided into intrinsic motivation and external motivation. Intrinsic motivation is the decisive condition of learning while external motivation also plays an important role in learning. Continuous external stimulation will make certain behavior form a fixed pattern, and learning is related to external rewards. The proper use of rewards will make study hard be turned into a conditioned reflex.

It was found that the lower-grade students are still in ignorance. They haven't formed conscious thinking. They have unclear personal goals and weak intrinsic motivation. Therefore, it is unrealistic to rely on their intrinsic motivation to improve learning efficiency. And external stimulation is often needed to help them develop good learning habits. Tha's the reason why teachers in kindergartens and primary schools pay great attention to rewards in the process of students' learning. At this stage, students still don't understand the value of doing something, and their inner rewards are few. Once there are external rewards, they will have great interest and strive for it. Then they will reduce the emptiness of inner rewards and gain the balance of life experience. Therefore, "good students are boasted" is justified. But this is not applicable to all students.

Senior students have gradually formed their own views about the world, life and values. They gradually established their life goals, have their own understanding and judgment of things, have an understanding of the significance of learning and have basically formed their internal motivation for doing things. On this stage, learning mainly depends on internal motivation. If he or she does not have the will to learn, no amount of external stimulation will be of any help.

If we understand those, we will understand why the lower-grade students are very active about rewards, while the upper-grade students are relatively indifferent, and why rewards are more useful to the lower-grade students but not to the upper-grade students.

2.2 Reward can improve creativity in some time.

Why "sometimes" is added? Because there are some situations that reward can't function. The influence of reward on creativity is complicated. Cognitivism state that reward can weaken creativity, while behaviorists hold the opposite view. When behaviorists study the relationship between rewards and the difficulty of tasks, it is found that high rewards are more likely to stimulate participants' spirit of challenge as a result the creativity is improved. However, for the tasks with lower difficulty, the creativity will not change with the reward.

The study also found that rewards make the participants perform better in terms of speed, accuracy, and novelty.

3 Third, the negative impact of rewards.

3.1 To weaken the creativity of students.

Contrary to behaviorists' research conclusions, cognitivists believe that creativity is different from other talents, and needs conscious internal drive and free external environment. They believe that reward will reduce the quality of individual motivation for undertaking tasks, and then reduce creativity. Besides, the situation of improving creativity through external reward is rare. Therefore, the best way to improve learners' creativity is not from external rewards, but to maximize learners' interest in the task. The theory of over-reasonable hypothesis also points out that the appearance of reward will make people unconsciously shift their motivation to engage in creative activities from creativity itself to reward, which will weaken

internal motivation and thus creativity. American Amabile's creativity theory also thinks that rewards will hinder creativity.

3.2 Weaken the internal motivation of learning and hinder the development of autonomy.

Psychologist Desi did an experiment in 1971. He asked some students to solve interesting intellectual problems. At first, all students were not rewarded. Then they were divided into two groups, in which one group of students would be given a certain reward every time they solved an intellectual problem; Another group of students didn't give any rewards. Then, during the rest or free time of the two groups of students, the experimenter observed that although the students in the reward group worked hard to solve problems when they were rewarded, only a few people continued to consciously answer them when they were free; However, there were more students in the non-reward group who were keen on unsolved intellectual problems. Generally speaking, students in reward group were less interested in solving difficult problems, while students without reward stimulus were more interested in solving difficult problems than students with reward stimulus.

Therefore, if you have a pleasant activity, the reward will reduce the interest of participants. That is to say, when the external reward and the internal reward have both, people's desire for work will not increase, but decrease instead. This phenomenon that external rewards offset internal rewards is called "desi effect".

Under the condition that students have no self-conscious internal learning motivation, it is necessary to give appropriate rewards through external stimulation to arouse students' enthusiasm. However, if students themselves have great enthusiasm and strong interest in a certain study, giving rewards will gild the lily and make them self-defeating. This kind of reward will divert students' attention and transfer their learning motivation from inside to outside. If the reward continues, the external motivation will be continuously strengthened, which will lead students to pay attention to the external reward, lead to the loss of some more valuable spiritual pursuits, and then weaken the internal motivation.

Confucius said: "Those who know are not as good as those who are good, and those who are happy are not as good as those who are happy." No material reward can match inner enrichment and spiritual pleasure. In the process of education, we should pay more attention to the content and methods, and don't rely too much on rewards.

4 Fourth, the scientific use of educational rewards.

4.1 The use of reward should depend on age groups.

Because students of different ages have different physical and mental development characteristics, we should pay great attention to this point when using rewards, and the frequency and presentation form of rewards should conform to students' characteristics.

For students in lower grades, the frequency of rewards should not be high, so as not to lead to the generalization of rewards, but it should be moderate, because the inner rewards of students in this age group are generally "empty" and need to be compensated by substantial external rewards. The presentation form should be mainly materialized, because younger children are underdeveloped in abstract thinking, weak in understanding of spiritual things, short in memory, but developed in intuitive feeling. Therefore, the reward should be able to make him feel it directly, and it should be easy to store, so as to recall his memory from time to time. A student's performance is excellent, so he can't just be praised orally. Oral praise won't attract much attention and will soon be forgotten; Give him a small red flower that can be seen and touched, which is convenient for him to keep. After that, as long as he sees it, he will recall glorious deeds and motivate himself to do better and better. However, "materializing" is not "materialization", and the rewards of materialization and money are not conducive to form the economic, concise and simple teaching style, and to cultivate students' correct values, leading to the formation of students' utilitarian thoughts. "Materializing" refers to concretization, shaped and visualization. Materialized things should be condensed with certain spiritual implications, such as awards, honorary certificates and flowing red flags, which are all materialized forms of spirit.

For senior students, the reward frequency can be lower, because students have been able to get inner rewards through watching, listening, thinking, exploring and other ways. What teachers should do is to constantly strengthen his inner rewards,

strengthen his interest in learning, and make the best use of internal motivation. The presentation form of rewards should be mainly abstract, which is also determined by the psychological characteristics of senior students: senior students have already had a certain degree of understanding and perception, rich emotions and psychology, and their own will is the decisive factor in doing something. Children in this period are very sensitive to external evaluation, so teachers should guide and encourage students to develop in a healthy direction, and then encourage students to develop good study habits. In this period, if teachers constantly stimulate students with external rewards, it will lead to the loss of their internal motivation and the deviation of value orientation.

4.2 Consider the difficulty of the task when applying incentives.

According to behaviorists' research, in the face of difficult tasks, high reward is easier to stimulate the creativity of participants than low reward. However, for less difficult tasks, no matter what levels of reward, creativity will not be stimulated. Therefore, in practical education and teaching, we should not set any rewards for easy tasks, but set higher rewards for difficult tasks. At the same time, we should create a competitive atmosphere, put an end to laxity, encourage students to focus and mobilize all forces to solve problems, so as to stimulate creativity. When awarding prizes, we should also create a sense of ceremony and enhance the solemn and grand atmosphere. When awarding prizes in public, it is best to invite people at higher levels to show their importance to this award and highlight its value, so that students can pay attention to the process and results of hard work and have awe and admiration for honors and awards.

4.3 Spiritual rewards are the mainstream, supplemented by material rewards.

It can be said that material rewards give people external stimulation, while spiritual encouragement gives people internal motivation. Internal factor is the source of things' change, and external factor is the condition of things' change. Just like a motorcycle, when the engine is turned off, the speed, after all, is limited no matter how you impose external forces; and if the engine is started, it can move forward at full speed only by simply holding the direction. We should pay attention to arousing students' inner enthusiasm and guide students to create and build actively, instead of increasing external material rewards.

In education, there are many ways to give spiritual rewards, such as praising publicly, awarding certificates, writing encouragement letters, sending good news to parents, posting praises and so on. While using, we should take a multi-pronged approach to avoid "aesthetic fatigue" caused by single stimulus.

Although spiritual rewards are the mainstream, the frequency cannot be high. If the frequency is high, it will be generalized, and it will not have the effect of highlighting excellence and urging backwardness. For example, a backward student takes the initiative to sweep the floor. The headteacher praises him in class today, praises him in class tomorrow, and praises him in class the day after tomorrow. That will only lead to two results: 1. The disgust from other students; 2. The praised student thinks the teacher is hypocritical. "A thing is valued if it is rare", and only a small number of rewards really show their value.

In some important parts of education, such as the final exam summary, small quantities of material rewards can be supplemented. Material rewards should be in small numbers to avoid utilitarianism, and the frequency should not be high.

References

[1] Chen Jiemiao. The negative effects of classroom rewards and their mitigation measures [J]. Basic Education Research , 10, 2016.

[2] Qin Yi. Analysis of the Application of Reward in Children's Music Education [J]. Yellow River of the Song, 01, 2018.

[3] Wang Yue, Wang Guangxin, Wang Chao. Difference analysis of students' emotional experience of educational game rewards [J]. Modern Educational Technology, 08, 2017.

[4] Chen Tingting. On reward and punishment in education [J]. Journal of Chifeng University (Chinese Philosophy and Social Sciences Edition), 01, 2016.

[5] Zhang Dajian. Psychological mechanism of reward and punishment and its effective application in school education [J]. Journal of Cangzhou Teachers College, 03, 2016.

[6] Chen Jiemiao. Negative effects of classroom rewards and their mitigation measures [J]. Basic Education Research, 10, 2016.

[7] Liu Lei. At present, the dilemma of reward in China's education and its response [J]. Educational Science, 04, 2015.

[8] Jin Shan. Stimulate learning motivation and cultivate innovative talents-in a way of rewarding education [J]. Education and Teaching Forum, 08, 2014.
[9] Chen Chuandong. Educational metaphor: What does reward mean [J]. Shanghai Research on Education, 10, 2014.
[10] Liy Yng. Educational implication and practice of reward [J]. Educational Research, 01, 2013.
[11] Chen chuandong. On the "de-rewarding" of student education [J]. Contemporary Educational Science, 01, 2013.
[12] Guo lihai. Misunderstanding of rewards in education [J]. China's Off-campus Education, 11, 2012.
[13] Chen chuandong. On rewards in school education: from "rewards and punishments"[J]. Educational Science Forum, 03, 2011.