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The Relationship Between Effects of Extrinsic Motivation and Intrinsic Motivation in Children's Educational Development

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Abstract: Education stands as a globally paramount subject, a cornerstone of human development and progress. In an increasingly competitive world, parents often grapple with how to instill a genuine love for learning in their children. The notion of extrinsic and intrinsic motivation in children's educational development presents a compelling avenue for exploration. it's essential to delve into the intricate interplay between these two types of motivation, shedding light on their effects and implications. As parents and educators navigate the realm of children's education, a nuanced understanding of motivation is paramount. Extrinsic motivation, with its assortment of verbal and tangible rewards, can be a potent tool to catalyze learning engagement. However, the potential risks of dampening intrinsic motivation must be approached with caution. Striking a balance between extrinsic incentives and the inherent joy of learning is crucial for nurturing well-rounded, intrinsically motivated learners. The intricate interplay between extrinsic and intrinsic motivation underscores the need for a holistic approach—one that encourages a genuine passion for knowledge while harnessing the positive aspects of rewards. In the pursuit of optimal educational development, acknowledging and harmonizing these motivational dynamics is an essential step toward fostering lifelong learners poised for success in an ever-evolving world.

Keywords: motivation, mindfulness, behavior control, educational development

1. Introduction

When students have trouble with their academic work, they always joke that they do not get intrinsic motivation in this academic area, but they need extrinsic motivation like money to help themselves learn better. By definition, motivation is a construct used to explain the initiation, direction, and intensity of an individual's behavior [1]. Indeed, motivation has two big types: extrinsic and intrinsic [2]. Cognitive Evaluation Theory [3] proposes that underlying intrinsic motivation is an innate psychological need for competence and self-determination. According to this theory, the effect of external events on intrinsic motivation, such as the provision of rewards, the delivery of evaluations, the setting of deadlines, and other motivational inputs, is a function of how these events affect a person's abilities and self-perception [4]. Extrinsic motivation is to attribute the goal to external

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influences but not own private motivation while intrinsic motivation is about private eagerness to learn a specific interest or new areas [5].

In 2001, the relationship between the effects of intrinsic motivation and extrinsic motivation in education was analyzed in research that tested whether tangible rewards as extrinsic motivation have a substantial undermining effect on intrinsic motivation with support, either in a positive way or negative [4]. Several studies [1][4][6] have shown that rewards are not always positive motivators, sometimes undermining rather than enhancing self-motivation, curiosity, interest, and perseverance in learning tasks. However, later research indicates that in general, rewards do not reduce intrinsic motivation. Implicit acknowledgment that intrinsic motivation is important for learning and adjustment in educational settings. In order to obtain more accurate results, the experiment in 2001 was strongly supported by cognitive evaluation theory [3].

This paper will illustrate that extrinsic motivation can affect intrinsic motivation in children's educational development for three different extrinsic motivations -- verbal rewards, tangible rewards, and performance-contingent rewards with a specific research method for better analyzing the research results. Also, a question has been raised to analyze to figure out whether extrinsic motivation would have a substantial effect on intrinsic motivation in children's educational development as this paper's thesis issue question, aims to better assist children with higher study motivation.

2. The Effects That Extrinsic Motivation on Intrinsic Motivation

2.1. Verbal Rewards

Verbal rewards have important controlling aspects, leading children to perform specific behaviors to obtain goals in educational development in order to get verbal rewards like positive praise, so verbal rewards may affect children's intrinsic motivation. Praising a child's abilities or strengths and worth in general after good behavior or behavior is a great way to boost self-esteem or self-efficacy or to facilitate learning. Research shows that positive competency feedback can lead to greater intrinsic motivation [6]. Compared to using the term verbal rewards, verbal rewards are mostly called "positive feedback" [4]. When verbal rewards come to people, it is usually treated in that include the ability to perceive competence, and therefore it might enhance intrinsic motivation. However, verbal rewards are separated by their interpersonal contexts and interpreted as either informational or controlling [7].

According to Deci & Ryan, interpersonal context is the social ambiance of settings that might affect children's experience of self-determination. Interpersonal relationship refers to what extent the pressure that people think, feel, or express in a certain way is controlled. Fan and William used data from the 2002 Educational Longitudinal Study to test whether various aspects of parental verbal participation as external motivation can predict the internal motivation of 10th-grade students [8]. The study focused on engagement, self-efficacy toward maths and English, and intrinsic motivation towards math and English. The researchers separated parent-school communication about students' school issues from parent-school communication about benign school-related issues. To differentiate their responses to the researchers' recommendations, schools and parents independently initiated contact on other benign school-related issues [9].

In this study, the four-scale for getting the data measured student academic self-efficacy, intrinsic motivation, engagement, and extrinsic motivation from their parents, and the Educational Longitudinal Study of 2002 to get data resources were used in this research as the Method. In addition, the researchers sought to examine less-studied dimensions of parental engagement, such as parental recommendations capturing face-to-face interactions and parental involvement in extracurricular activities, which they believe contribute to the development of parent-child relationships.

The results show that parents' educational aspirations and verbal rewards for their children had a positive impact on students' learning motivation. Students earned more motivation in learning with

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more informational verbal rewards, while students with more controlling verbal rewards earn less controlling positive feedback. The results from the parents also suggest that students' English learning self-efficacy and intrinsic motivation for English are positive ways of motivation. In contrast, parents who use family rules for watching TV get less instinctual motivation related to students' participation in academic work and intrinsic motivation. The results mainly establish that informational verbal rewards lead to more intrinsic motivation than controlling verbal rewards.

2.2. Tangible Rewards

Compared to verbal rewards, tangible rewards that are usually offered to children are things like money or prizes to make children take a part in educational activities that they do not voluntarily engage in. Numerous studies [10] have shown that tangible rewards can reduce response rates and undermine intrinsic motivation. On the contrary, verbal rewards seem to increase response rates by enhancing intrinsic motivation for education or academic work. Based on the interpretation of existing evidence, many social cognition researchers [11] [12] [13] recommend that tangible rewards should not be used in actual situations, but verbal rewards should be used. It is very easy to use tangible rewards wrongly and influence the development of children's educational development. That is because there are differences between controlling and informational rewards in children's educational development.

According to the cognitive evaluation theory, tangible rewards that are more tending to control cause students to need to do what they would not want to do but are just persuading students to do. That means intrinsic motivation might get decreased because of tangible rewards because tangible rewards are often offered to people as an inducement for them to engage in behaviors, they might not otherwise engage in. However, in order for a tangible reward to be experienced as control, people need to engage in the behavior for the reward. People need to expect this behavior to be beneficial. If people unexpectedly receive a tangible reward after completing a task, the reward is less likely to be experienced as a reason for completing the task, and thus less likely to impair intrinsic motivation [4]. Tangible rewards could undermine intrinsic motivations significantly in children than adults. The significant extrinsic rewards are normally general among adults as an effective motivation strategy to promote children's learning, arts, sports, and other prosocial behaviors [14].

Boggiano et. al's study examined how tangible rewards can change children's decisions between doing homework or watching TV with two rounds of experiments by using the comparison method. In the first round, the researchers manipulated the expected tangible rewards, money, and popular toys. The tangible rewards were manipulated through the games that children get when they choose to do homework. The second trial was with the same two options for children to choose from. In the second round of the experiment next week, only a few children chose to do homework because there was no tangible reward as the prerequisite. From this experiment, we could conclude that tangible rewards can undermine intrinsic motivation and reduce response rates in children's educational development.

2.3. Performance-contingent Rewards

Performance-contingent rewards are actually a kind of tangible reward, but Performance-contingent is very special and interesting. It affects intrinsic motivation in two ways: it has positive and negative effects on children's educational development. Only children who perform well in specific activities can get rewards when they must meet a standard to maximize rewards [4]. That means performance-contingent rewards play roles with stronger control over people's performance. Performance-contingent can maintain or enhance intrinsic motivation. If the recipient of the reward interprets it informatively as an affirmation of ability. It is relatively easy to turn an intrinsically motivated person

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into an extrinsically motivated person. Key elements of this shift are the frequent introduction of external rewards (e.g., prizes, personal recognition) or punishment, and the use of competition and social comparison in the classroom [1].

Anderson, Manoogian, and Reznick had a two-phase field experiment with quite negative results which were conducted on 72 preschool children with weaker socioeconomics to test the effect of over-adjustment, also with comparison methods [15]. The results showed that internal motivation decreases as external rewards increase and external rewards alone are sufficient to justify performance [15], Under these experimental conditions, children will receive money, rewards, or positive language support for their good performance in the target activity. The comparison group-controlled time or history and other factors do not affect children's decisions. Money and rewards are considered sufficient to justify their performance and reduce internal motivation during the free play period. However, this experiment shows a negative effect of external motivation on the intrinsic motivation that children.

3. Methods

Overall, extrinsic motivation plays a big role in intrinsic motivation in children's educational development. The interaction analysis should be used. For the sampling frame, the participants should be students aged from 12 to 15 years from the same school in Pennsylvania with a diverse group with different family backgrounds including incomes, races, or development environments. Systematic sampling is used as the method. The students will be chosen randomly for every fiftieth name from the school list and there will be sixty students selected.

In this study, the students will be asked to select their scale individually on the four-score scale on their study motivation to get the measurement, where the four scales are 'strongly agree' as 4, 'agree' as 3, 'disagree' as 2, and "strongly disagree' as1. Next, the students will experience three different types of motivation: verbal rewards, tangible rewards, and performance-contingent rewards to do presentations about the same project in their communication course. The students will be separated into two groups: one group of people will experience the three different kinds of rewards while the other group will not. After experiencing one type of reward, the students in the two groups will be asked to do the four-score scale again to show their motivation levels. The data will be recorded and assessed by comparing the differences before the rewards and after the rewards happening among these two different groups.

For the verbal rewards, the participants were required to do a debating presentation about "whether students should be allowed to use an electronic device at school". For the separate two groups, one group will receive verbal rewards from the principal of the school: "You did an excellent job in this debate!" while the other group will not get any verbal rewards. Later, the two groups of students are required to be asked to indicate how the statements would apply to the participants: (1) think this debating is so much fun and would like to try more later voluntarily, (2) If there are chances to do debate in school and would like to do, and (3) if the debate is required to do and would like to do. Students' intrinsic motivation was measured by two items that were back-coded to correctly reflect the structure. On the same four-point scale, students were asked to indicate how the following statements applied to them: (1) totally immersed in the demo, and (2) thought the demo was so-so. The scale indicated a satisfactory internal consistency of Cronbach's alpha of 0.87 for students' intrinsic motivation for debating and an acceptable internal consistency of 0.67 for students' intrinsic motivation for speaking.

The students will still be separated into two groups, one group with tangible skills while the other group will not receive any tangible rewards. The students will get a reward of a 1-dollar credit from the school café once they submit one poem to their Literacy teacher within one week. The structure is measured by four items and captures how often students submit poems. On a four-point scale

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("None", "Once or twice", "Three or four times", and "More than four times"), participants reported the following frequencies: (1) when the topic of the poem was updated, (2) Sending poems at the encouragement of their literacy teachers (3) schools send emails asking for poems, and (4) poetry forms have expanded into a variety of different genres. The scale reports agreement with Cronbach's alpha of 0.76. The result of these two different groups will be compared to better indicate the results.

For the performance-tangible rewards, the students are still separated into two groups, one group with the performance-tangible rewards and one group without performance-tangible rewards. They will be asked to do a chemistry exam and the students who got 80% or higher would get the reward of a 200 dollars bookstore coupon and a chance to not submit one of the assignments in their chemistry courses. On a four-point scale ("almost never," "sometimes," "often," and "almost always"), students are asked to indicate how the following statements apply to them: (1) put as much effort into your Chemistry studies as possible, (2) give your best effort while studying Chemistry, and (3) keep studying even when the material in the chemistry course is difficult. "Almost never" stands on 0, "sometimes" means 1, "often" means 2, and "almost always" stands on 3. The scale created by these three items was found to have satisfactory internal consistency, with a Cronbach's alpha of 0.84. The results from the two different groups will be compared.

4. Conclusions

Motivation is very important for children to develop good educational habits and get success in the academy and education areas. Extrinsic motivation has a substantial huge effect on intrinsic motivation in children's educational development. Verbal rewards have important controlling aspects that could lead children to perform specific behaviors to obtain goals in educational development in order to get verbal rewards like positive praise. Tangible rewards can undermine intrinsic motivation and reduce response rates in children's educational development. Finally, performance-contingent rewards have both quite positive and quite negative effects on children's educational development in different situations.

To make children get better educational development, parents should use proper extrinsic motivation to develop children's intrinsic motivation, more informational motivation than controlling motivation. It is more important for students to gain their self-learning awareness with interests or their personal motivations to continue with research and future study.

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