(REVIEW ARTICLE)

The effect of reward and punishment on student learning outcome through student learning activity at SMA Terpadu Wira Bhakti Gorontalo, Indonesia

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Abstract

This research aims to analyze the effect of reward and punishment on student learning outcomes through student learning activity in the economic subject for social science classes at SMA Terpadu Wira Bhakti Gorontalo. It applied a survey-type quantitative method. Primary data were collected by distributing questionnaires to 94 students as respondents and statistically analyzed using SEMPLS. Results indicated reward significantly impacted student learning outcome, punishment significantly impacted student learning outcome, student learning activity significantly impacted student learning outcome, reward significantly impacted student learning outcome mediated by student learning activity, and punishment significantly impacted student learning outcome mediated by student learning activity in the economic subject for social science classes at SMA Terpadu Wira Bhakti Gorontalo. The goodness of fit showed a Q-Square of 0.501 or 50.1%. It explained reward and punishment impacted learning outcomes mediated by student learning activity by 50.1%, whereas the other 49.9% was explicated by other unexamined factors here.

Keywords: Reward; Punishment; Student Learning Activity; Student Learning Outcome

1. Introduction

Education plays a major role in human life. It plays a critical element in the life of an individual or a group to create an intelligent community in its cognitive, affective, and psychomotor aspects. Education greatly contributes to human personality. Education, accordingly, is integral to humans. Augmenting student learning activity, as such, is crucial to allow an effective and conducive classroom learning process.

During their learning classroom activities at school or class, students are expected to do the assignments teachers give, participate in the learning process happily, prefer working independently to asking from friends, nurture curiosity, defense their arguments in a discussion, not indicate boredom with the tasks and learning delivered by teachers, prefer staying in the class to being outside during the learning process, prefer solving problems delivered by teachers to spending time playing, and show persistence in finishing an activity.

The explanation goes contrastively to the field evidence. My observation results of tenth, eleventh, and twelfth graders in social science classes at SMA Terpadu Wira Bhakti Gorontalo in the economic subject suggested low student learning activities during the learning process. Students ignored teachers' explanations concerning tasks given. They lacked attribute preparation for learning activities, e.g., stationary and printed books. Several students chatted with peers when teachers explained materials through PowerPoints. Students stayed outside the class while learning started. Some students slept during the learning process. Several students annoyed their peers or conducted irrelevant activities instead of paying attention to materials delivered by teachers during the learning process.

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When student learning activities degrade, learning outcomes will do too. A successful learning process can be manifested if students acquire maximum scores, bringing about excellent learning outcomes in the economic subject. The field evidence, and yet, suggested otherwise. My observation of tenth, eleventh, and twelfth graders in social science classes indicated students' varied scores in economics. Some students scored low, especially tenth graders, as the completeness standard or the KKM for the subject was 80. The low scores resulting from students' daily tests are shown in Table 1

Table 1 The Mean Scores of the Daily Tests of Social Science Students for the Economic Subject

Class	Number of Students	KKM	Students Achieving KKM	Students Not Achieving KKM
X IPS	24	80	3	21
XI IPS 1	22	82	3	19
XI IPS 2	17	82	2	15
XII IPS 1	16	85	4	12
XII IPS 2	15	85	5	10
Total	94	85	17	77
Percentage			16.65%	83.35%

Source: Processed data, 2023

Table 1.1 indicates out of 94 students, 16.65% achieve completeness related to daily tests. Several internal factors from the students, environmental, and other factors contribute to that. The internal factors encompass a lack of learning activities, habits, and motivation. Students show no intention to learn and lack learning stimuli. They cannot understand material feedback and lack the intention to participate in learning activities, respond to questions, and review learning materials from teachers. They also lack appreciation and punishment and are unprepared to draw conclusions from the materials teachers deliver. We are interested in undertaking research on the effect of reward and punishment on student learning outcomes through student learning activity at SMA Terpadu Wira Bhakti Gorontalo.

1.1. Theoretical study

1.1.1. Learning Outcome

Sudjana (2013:22) defines learning outcome as students' competence acquired after receiving learning experiences. Arikunto (2009:133) argues that the learning outcome is the final result of a learning process. The changes are notable through observable and measurable actions.

Learning outcome, defined by synthesizing experts' arguments, refers to the final stage of a learning process. Teachers measure student understanding levels related to a subject studied and understood by students by reading relevant books, listening to teachers' materials, and carrying out the final test to elicit scores indicating either completeness or failure.

1.1.2. Student Learning Activity

Activity is an essential principle in a teaching-learning interaction (Sardiman, 2016:96). Hamalik (2016:179) conveys a definition of learning activity, which is an activity conducted by students to learn.

It can be synthesized that learning activity refers to a physical or mental activity or action performed by students to gain knowledge and skills through an effective learning activity. Teachers must both deliver knowledge and skills and encourage students to be active in learning.

1.1.3. Reward

Reward, etymologically, is a gift or appreciation (Ahmadi & Uhbiyari, 2007). The gift is pleasing and given after one shows an expected behavior (Arikunto, 2013). A reward is also given to all, and its form is adjusted to their achievements of certain motives (Sadirman, 2016).

We then synthesize that reward refers to reinforcement in the form of appreciation. Giving appreciation in the form of a gift, praise, respect, and appreciative token will significantly impact student learning activities, which are expected to enhance accordingly. Giving rewards, and yet, needs to be conditional, in which students must not be concerned about it only. Rewards should be given in a suitable portion teachers determine before giving them to students.

1.1.4. Punishment

Punishment, etymologically speaking, is sanction or retribution. Punishment, according to Baharuddin & Wahyumi (2015), is presenting an unpleasant, or situation one expects to avoid, to impose a behavior which will change individual behaviors.

It can be synthesized that punishment is an educational tool or retribution imposed on students who have committed bad activities to give a deterrent effect. Teachers have to refer to school stipulations and rules when imposing punishment. Punishment must be in correspondence with the stipulations as it is considered sensitive in the education world.

2. Research methodology

This research was undertaken on tenth, eleventh, and twelfth graders in social science classes at SMA Terpadu Wira Bhakti Gorontalo. The school was chosen as the research site because it had implemented reward and punishment systems, considering its status as a semi-military-based school.

This research deployed a quantitative approach with a survey method. The data analysis technique was the Partial Least Square-based Structural Equation Model (SEM). 94 students acted as respondents.
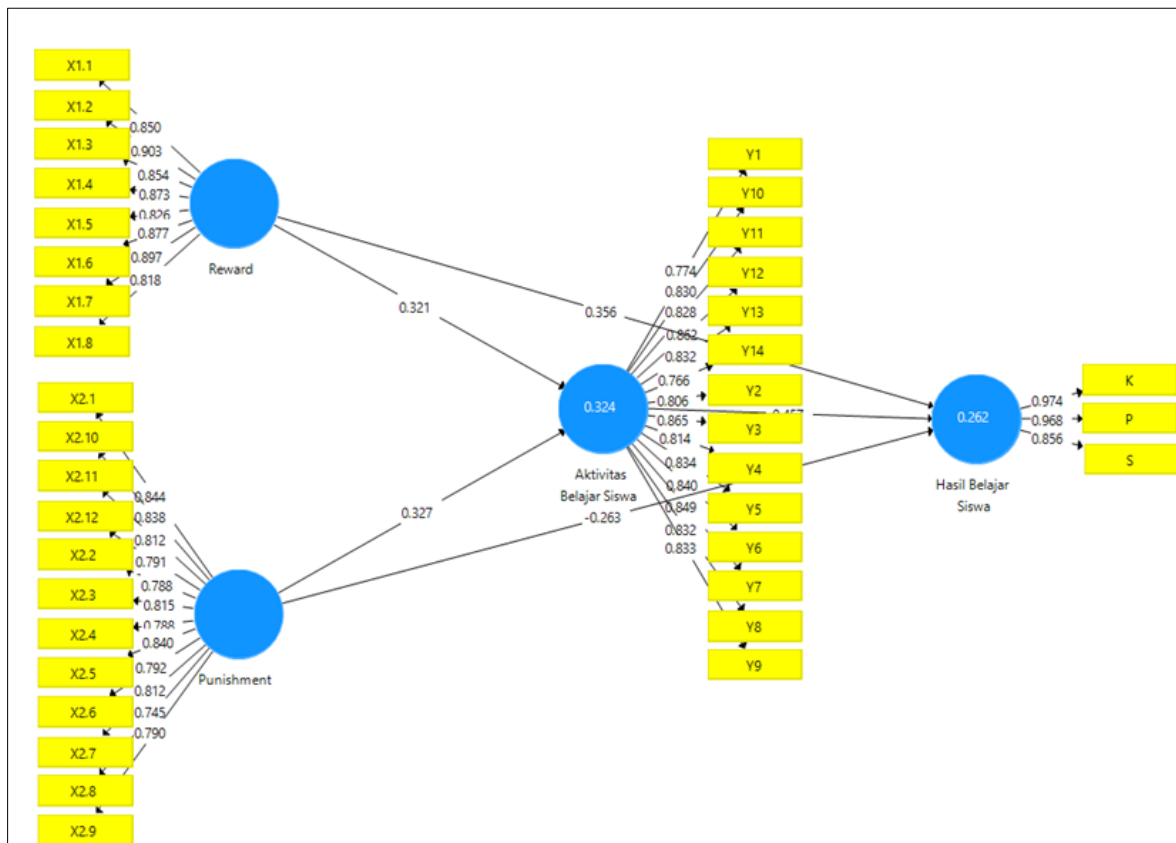
3. Results

Figure 1 Outer Weight

The figure above indicates the outer weight or outer loading resulting by each indicator of the variables reward, punishment, student learning activity, and student learning outcome > 0.5. A good indicator should come with > 0.7.

Table 2 Average Variant Extracted (AVE)

Variable	AVE	√AVE	Description
Reward	0.744	0.862	Valid
Punishment	0.648	0.805	Valid
Student learning activity	0.683	0.826	Valid
Student learning outcome	0.873	0.934	Valid

The table above shows all variables were valid at AVE of the variables reward, punishment, student learning activity, and student learning outcome identified as > 0.5 and √AVE > 0.7.

Table 3 Composite site Reliability

Variable	Composite Reliability	Standard Score	Description
Reward	0.959	0.6	Valid
Punishment	0.957	0.6	Valid
Student learning activity	0.968	0.6	Valid
Student learning outcome	0.954	0.6	Valid

The table above suggests the composite reliability of all research variables > 0.6. It indicated each variable had fulfilled composite reliability, bringing us to the conclusion all variables had a high-reliability level.
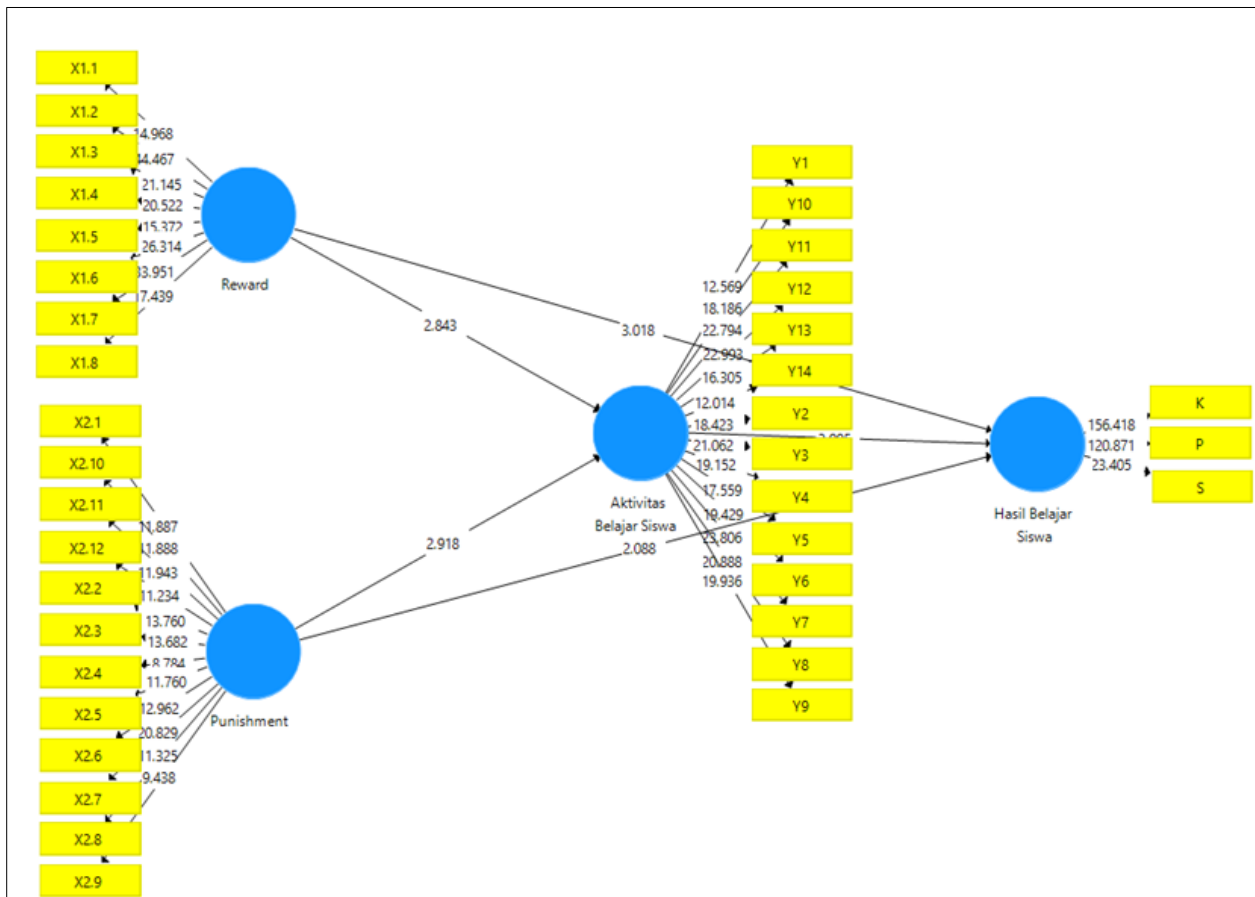

Figure 2 Inner Weight

Table 4 R-Square Value

Variable	R-Square
Student learning activity	0.324
Student learning outcome	0.262

$$\text{Q-Square} = 1 [(1-R21) \times (1-R22)]$$

$$= 1 - [(1 - 0.324) \times (1 - 0.262)]$$

$$= 1 - (0.676) \times (0,738)$$

$$= 1 - 0.499$$

$$= 0.501$$

The quantification above resulted in a Q-Square of 0.501 or 50.1%. It explained that the model was good and the data diversity could be explained by 50.1% by the model. The rest, 49.9%, was described by other factors outside this research model.

Table 5 Direct Relationship Between Variables (Path Coefficient)

Independent Variable	Dependent Variable	Original Sample	Sample Mean	Standard Deviation	T-Statistics	T-Table	P-Value	Description
Reward	Student learning outcome	0.356	0.361	0.118	3.018	1.986	0.003	Significant and affecting
Punishment	Student learning outcome	-0.263	-0.265	0.126	2.088	1.986	0.039	Significant and affecting
Student learning activity	Student learning outcome	-0.457	-0.452	0.114	3.995	1.986	0.000	Significant and affecting

The above table suggests the effect of exogenous and endogenous variables could be identified by examining the t-statistics and t-table. Because the t-statistics was higher than the t-table, i.e., 1.986, the significance level of the effect of exogenous on endogenous variables was significant.

Table 6 Indirect Relationship Between Variables (Specific Indirect Effect)

	Original Sample	Sample Mean	Standard Deviation	T-Statistics	T-Table	P-Value	Description
Reward (X1) → student learning activity (Z) → student learning outcome (Y)	-0.147	-0.137	0.061	2.405	1.986	0.018	Significant and affecting
Punishment (X2) → student learning activity (Z) → student learning outcome (Y)	-0.149	-0.157	0.065	2.298	1.986	0.024	Significant and affecting

The table above indicates the results of the mediation test between variables through PLS bootstrapping were not significant or had no effect.

3.1. Education

3.1.1. The Effect of Reward on Student Learning Outcome (Y)

Rewards given by teachers in the economic subject for social science classes at SMA Terpadu Wira Bhakti Gorontalo escalated student learning outcomes. Results showed that it was significant and had an impact. Teachers gave rewards to gradually stimulate students to learn actively to acquire maximum outcomes. Giving rewards, however, needed to be in keeping with applicable procedures to prevent students from focusing too much on the rewards. Giving rewards without complying with procedures would foster students to expect the rewards continuously, and their feelings would be deeply affected when there was no reward when they had sought to earn it.

3.1.2. The Effect of Punishment (X2) on Student Learning Outcome (Y2)

Punishment had to be given in line with each measurement and portion. Punishment should not outstrip the capacity as it would have an adverse effect instead of a positive one, considering teachers still lacked understanding about punishment. Punishments at SMA Terpadu Wira Bhakti Gorontalo imposed on students were claimed as a mental exercise. Since the school maintained a semi-military education system, punishments in the form of push-ups, sit-ups, and jumping jets were common for students. The punishments would contribute to their physics later.

3.1.3. The Effect of Student Learning Outcome (Y) through Student Learning Activity (Z)

Learning activity referred to a physical or mental activity or action made by students to elicit knowledge and skills for an effective learning activity to gain a maximum learning output. If there was an activity poorly undertaken by students during the learning process, it would influence their learning outcomes.

3.1.4. The Effect of Reward (X1) on Student Learning Outcome (Y) through Student Learning Activity (Z)

Reward giving by teachers significantly inflected student learning activity. Student responses, collected through questionnaire distributions, showed that most students extremely agreed and agreed with reward giving during the learning process or at the end of a semester. Reward giving, as such, would advocate student learning activity and allow students at SMA Terpadu Wira Bhakti Gorontalo to have expected learning outcomes.

3.1.5. The Direct Effect of Punishment (X2) on Student Learning Outcome (Y2) through Student Learning Activity (Z)

The punishment teachers gave was sharp reprimands when students made noises. Respondents, as stated in their questionnaire responses, extremely agreed and agreed with the punishment system. They required physical punishments, e.g., push-ups, sit-ups, and squat walks, to be given by trainers. Physical punishments were common at SMA Terpadu Wira Bhakti Gorontalo applied the semi-military-based system.

4. Conclusion

The following conclusions were drawn based on the results and discussion.

- Rewards significantly and directly affected student learning outcomes in the economic subject at social science classes at SMA Terpadu Wira Bhakti Gorontalo. Rewards given to social science students at SMA Terpadu Wira Bhakti Gorontalo would engender expected learning outcomes. Rewards given hence should be suitable.
- Punishment significantly and directly affected student learning outcomes in the economic subject at social science classes at SMA Terpadu Wira Bhakti Gorontalo. The punishment given by teachers would impact social science student learning outcomes at SMA Terpadu Wira Bhakti Gorontalo. The punishment system should be minimalized and get more attention.
- Student learning outcomes had a significant effect through student learning activity for the economic subject as social science classes at SMA Terpadu Wira Bhakti Gorontalo. Learning activity, in so doing, would impact student learning outcomes. Maximum student learning activities would generate maximum learning outcomes.
- Rewards significantly inflected student learning outcomes through the intervening or mediator variable student learning activity. Results indicated reward influenced student learning outcomes, mediated by social science learning activities, at SMA Terpadu Wira Bhakti Gorontalo. Social science students at SMA Terpadu Wira Bhakti Gorontalo, that being so, could acquire maximum learning outcomes because of rewards given by teachers, predisposing their learning activities and, thereby, being able to achieve maximum learning outcomes.
- Punishment significantly affected student learning outcomes through the intervening or mediator variable student learning activity. Results suggested punishment impacted student learning outcomes, mediated by social science student learning activities, at SMA Terpadu Wira Bhakti Gorontalo. Social science students at SMA Terpadu Wira

Bhakti Gorontalo acquired maximum learning outcomes due to punishment given by teachers, influencing their learning activities and, therefore, generating maximum learning outcomes.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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