Reward and Punishment Systems on Students' Learning Motivation: An Experimental Study in Semester IV of PPKn Study Program, FKIP Uncen

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Abstract

This study aiming test impact system reward and punishment to motivation Study 4th semester students of the PPKn Study Program, FKIP, Cenderawasih University through design experiment quasi pretest- posttest control group . Participants consists of of 40 students who were divided become group experiment (receive) intervention reward and punishment) and control (learning) conventional). The data collected and then analyzed , as well as observation participation , and reflection students . Quantitative results show improvement significant motivation Study group experiment (mean pretest score : 3.1; posttest : 4.2), while group control No experience change meaningful . Analysis qualitative revealed 75% of students motivated by rewards (points) add), but 30% felt worried to punishment . Findings key highlight importance adaptation system incentive with culture Papuan collectivism , where 25% of students recommend reward based on group . Research This conclude that system reward and punishment effective increase motivation Study If designed in accordance context cultural , with recommendation practical in the form of integration non-material rewards , punishments reflective , and utilization digital technology . Implications study support Independent Learning Independent Campus (MBKM) policy in create learning student - centered responsive to need local Papua.

Keywords: Reward System; Punishment System; Learning Motivation

1. Introduction

Motivation Study student is factor critical in determine the success of the learning process , especially in the context of Pancasila and Citizenship Education which emphasizes internalization values ethics and participation active (Ryan & Deci, 2020). However , in the PPKn Study Program environment , FKIP, Cenderawasih University , motivation Study fourth semester students still face challenge complex , such as low involvement in discussion class and irregularity settlement assignments . An initial study by the Ministry of Education, Culture , Research, and Technology (2022) showed that 45% of students in Papua experience decline motivation Study consequence lack of system relevant incentives with context cultural they . That is on need intervention systematic pedagogy , one of which is through implementation system rewards and punishments .

System reward and punishment has long been subject study in psychology education . According to theory operant conditioning proposed by Skinner (1953), behavior individual can modified through giving consequence positive (reward) or negative (punishment). In the context of education high , research by Hattie and Timperley (2007) proves that feedback based on reward (such as praise or mark add) in significant increase motivation intrinsic students , meanwhile punishment (such as subtraction mark or reprimand) effective For to uphold discipline . However, the effectiveness of this system is highly dependent on the suitability to the characteristics of the learners and the cultural context. In Papua, for example, research by Wambrauw and Mambrasar (2021) found that students were more responsive to group collaboration-based rewards than individual ones, given the strong culture of collectivism in the region. The culture of collectivism inherent in students is a trigger for response.

Although the reward and punishment system has been widely implemented in various educational institutions, studies on its effectiveness in Papuan higher education environments are still limited. Research by Suryadi et al. (2020) at the University of Papua showed that the implementation of non-

material rewards (the term "outstanding students") increased class participation by 30%, but had no significant impact on intrinsic motivation. On the other hand, an experimental study by Muhtar and Dulin (2019) in West Sumatra proved that self-reflection-based punishment (for example, writing an essay about mistakes) was more effective than conventional punishment (grade reduction). This indicates that the design of the reward and punishment system needs to be adjusted to local values and students' psychological needs.

In the PPKn Study Program , FKIP UNCEN, the system reward and punishment seldom implemented in a way structured . Based on interview beginning with 10 fourth semester students , 70% stated that they only motivated when face exam , while 30% admitted seldom get appreciation on participation active in class . In fact , Permendikbud No. 3 of 2020 concerning The National Standards for Higher Education affirm that strengthening motivation Study must become an integral part of the learning process . Therefore that , research This aiming For test impact system reward and punishment structured to motivation Study IV semester students of the PPKn Study Program , FKIP UNCEN through design experiment quasi .

The significance of this study lies in two aspects. First, theoretically, this study will enrich the literature on educational psychology by testing the application of operant conditioning theory in the unique cultural context of Papua. Second, practically, the findings of the study can be a reference for PPKn lecturers at UNCEN to design an incentive system that suits the characteristics of Papuan students, while also supporting the implementation of the Merdeka Belajar Kampus Merdeka (MBKM) policy which emphasizes student-centered learning.

2. Method

Study This use design experiment quasi (quasi-experimental) with approach pretest- posttest control group design . This design chosen Because allow researcher compare group experiment (which received intervention system

reward and punishment) and groups control (without intervention) in condition experience class (Creswell & Creswell, 2018). Group experiments and controls chosen in a way purposive from two classes parallel semester IV PPKn Study Program FKIP UNCEN for minimize selection bias .

Participant

The study participants consisted of 40 fourth-semester students from the PPKn Study Program at FKIP UNCEN. These students were divided into two groups: an experimental group and a control group, each comprising 20 students. The experimental group included 10 male and 10 female students who received a structured intervention system involving rewards (such as bonus points and certificates of appreciation) and punishments (such as point deductions and written reflections). Meanwhile, the control group consisted of 11 male and 9 female students who underwent conventional learning without any additional interventions. To ensure initial homogeneity between the two groups, participant selection was based on their previous semester's GPA, which ranged between 3.2 and 3.5 (Fraenkel et al., 2019). This approach helped minimize potential biases and ensured that both groups had comparable academic capabilities before the intervention.

Variables and Instruments

The study examined two main variables: the independent variable, which was the reward and punishment system, and the dependent variable, which was student motivation, measured using an adapted version of the Academic Motivation Scale (AMS) by Vallerand et al. (1992), validated for the Indonesian context. Additionally, supplementary instruments such as classroom participation observation sheets and student reflection notes were used to gather qualitative data. The AMS questionnaire assessed intrinsic and extrinsic motivation, while observation sheets tracked behavioral engagement. Reflection notes provided deeper insights into students' personal experiences with the intervention.

Intervention Procedure

The study followed a structured procedure, beginning with a pretest where both groups completed the AMS questionnaire. Over six weeks, the experimental group received rewards for active participation (e.g., +5 points for completing tasks) and punishments for indiscipline (e.g., -3 points for delays), while the control group continued with standard instruction. After the intervention, both groups took a posttest using the same AMS questionnaire to measure changes in motivation.

Data Analysis

Quantitative data were analyzed using paired t-tests to compare pre- and post-intervention motivation scores within the experimental group, while independent t-tests assessed differences between the experimental and control groups. Qualitative data from reflection notes were thematically analyzed to identify recurring patterns in student responses.

Validity and Reliability

To ensure instrument validity, two methodology experts evaluated the AMS questionnaire, while reliability was assessed using Cronbach's alpha to confirm internal consistency. These measures strengthened the study's credibility and accuracy in measuring motivational changes.

3. Result and Discussion

Learning Motivation Score: Significant Improvement in the Experimental Group

The pretest-posttest analysis revealed a substantial increase in learning motivation scores among students in the experimental group. Initially, their average motivation score was 3.1, but after the six-week intervention involving rewards and punishments, it rose to 4.2. A paired t-test confirmed the statistical significance of this increase ($t(19) = 5.67$, $p < 0.05$), indicating that the structured incentive system effectively enhanced student motivation. In contrast, the control group, which followed conventional teaching methods without any intervention, showed minimal change—their average score only slightly

increased from 3.0 to 3.1, with no significant statistical difference ($t(19) = 1.23$, $p > 0.05$). Furthermore, an independent t-test comparing both groups after the intervention demonstrated a notable difference ($t(38) = 4.89$, $p < 0.05$), reinforcing that the reward and punishment system had a measurable impact on student engagement.

Increased Classroom Participation and Student Reflections

Classroom observation data showed a remarkable 40% increase in participation among the experimental group, rising from 15% to 55% of students actively engaging in discussions and tasks. Meanwhile, the control group remained stagnant, with participation levels fluctuating between 15% and 20%. This suggests that the intervention not only improved motivation but also encouraged more consistent involvement in learning activities. Additionally, student reflection notes provided deeper insights: 75% of participants acknowledged that reward systems (such as bonus points) motivated them to participate more, while 60% admitted that punishments (like point deductions) made them more disciplined, though 30% reported feeling anxious about penalties. Interestingly, 25% of students proposed group-based rewards, arguing that such an approach would better align with Papuan collectivist values, where communal achievement is highly valued.

Effectiveness of the Reward and Punishment System

These findings align with Skinner's (1953) operant conditioning theory, which posits that behavior can be shaped through reinforcement (rewards) and consequences (punishments). The significant rise in motivation scores within the experimental group supports the effectiveness of this structured approach in an academic setting. However, the anxiety reported by some students highlights a potential drawback of punitive measures, suggesting the need for a more reflective approach, such as self-evaluation assignments, to mitigate negative emotional responses (Muhtar & Dulin, 2019). Thus, while the system proved successful in boosting motivation and participation, educators should carefully

balance rewards with constructive feedback to maintain a positive learning environment.

Cultural Relevance: The Case for Group-Based Incentives

The suggestion for group-based rewards (voiced by 25% of students) resonates with research on Papuan cultural norms, which emphasize collectivism and mutual cooperation (Wambrauw & Mambrasar, 2021). Unlike individualistic reward systems, collective incentives—such as bonus points for group performance—may better resonate with students in this cultural context, fostering intrinsic motivation through shared achievement. This insight underscores the importance of adapting pedagogical strategies to local cultural values. If implemented, such an approach could enhance student engagement while reducing the potential stress associated with individual accountability, creating a more inclusive and motivating classroom dynamic.

Pedagogical Implications for Future Teaching Strategies

This study offers practical insights for educators, particularly in the context of Indonesia's Merdeka Belajar Kampus Merdeka (MBKM) policy, which emphasizes student-centered learning. Lecturers in the PPKn program could refine their incentive systems by incorporating non-material rewards (e.g., public recognition) to reduce dependency on tangible incentives and replacing traditional punishments with reflective tasks that encourage self-awareness. Additionally, adapting reward structures to align with local cultural values—such as implementing group-based incentives—could further enhance student motivation. By integrating these adjustments, educators can create a more supportive and culturally responsive learning environment, ultimately fostering greater academic engagement and success.

4. Conclusion

Study This prove that implementation system reward and punishment in a way structured influential significant to improvement motivation Study fourth semester students of PPKn Study Program, FKIP, Cenderawasih University .

Quantitative results show that group experiment that accepts intervention experience improvement score motivation Study from an average of 3.1 to 4.2, while group control No show change meaningful . Findings This strengthen theory operant conditioning Skinner (1953) stated that that behavior academic can modified through giving consequence positive (reward) and negative (punishment). However , the effectiveness system This No only depends on the design incentives , but also on their suitability with context Papuan culture . As many as 25% of students in group experiment state that reward based on group more in accordance with mark The dominant collectivism in Papua, strengthens findings Wambrauw and Mambrasar (2021) about importance adaptation system incentive with culture local . With Thus , research This No only confirm theory classic , but also offers perspective relevant contextual with Papua setting.

In terms of pedagogical , findings This give recommendation practical for lecturer PPKn FKIP UNCEN in to design system effective rewards and punishments . First , non-material rewards such as confession public or points plus For group can become alternative which are more in accordance with Papuan culture compared individual incentives . Second , punishment need directed at the approach reflective (eg : writing) essay evaluation self) for reduce anxiety students , as proposed by Muhtar and Dulin (2019). Third , integration digital technology (gamification) can under consideration For increase interactivity , especially remember disparity infrastructure in Papua. Recommendations This in harmony with Independent Learning Independent Campus (MBKM) policy which emphasizes learning student - centered and responsive to need local.

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