

The Effectiveness of Token Economy to Improve the Dicipline of TPQ Students

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Abstract

Background: The discipline of TPQ students is relatively low, as evidenced by their behavior of disturbing their friends who are studying and their lack of focus, which often becomes a challenge in the learning process at TPQ. This hinders the effectiveness of learning. **Objective:** Evaluating the effectiveness of the economic token program as a means of improving student discipline in learning. **Method:** This study used a quasi-experimental design. The sample selected using purposive sampling and divided into two groups: control (n=10) and experimental (n=10). The intervention was carried out for 1 week, beginning with a pre-test and ending with a post-test. Data analysis was performed using JASP software with a non-parametric Mann-Whitney U test. **Results:** The findings showed a statistically significant difference in improvement scores between the experimental and control groups ($W = 100,000$, $p < 0.001$). The final results determined that the gain value of the experimental group was higher than that of the control group. **Conclusion:** Student discipline can be improved through token economy intervention and can be used as a classroom management strategy.

Keywords: Diciplinary; quasi-experiment; student; token economy; TPQ.

Abstrak

Latar Belakang: Disiplin siswa TPQ relatif rendah, sebagaimana terlihat dari perilaku mereka yang mengganggu teman-teman yang sedang belajar dan kurangnya fokus, yang sering menjadi tantangan dalam proses pembelajaran di TPQ. Hal ini menghambat efektivitas pembelajaran. **Tujuan:** Mengevaluasi efektivitas program token ekonomi sebagai sarana untuk meningkatkan disiplin siswa dalam pembelajaran. **Metode:** Penelitian ini menggunakan desain quasi-eksperimental. Sampel dipilih menggunakan sampling purposif dan dibagi menjadi dua kelompok: kontrol (n=10) dan eksperimen (n=10). Intervensi dilakukan selama 1 minggu, dimulai dengan pre-test dan diakhiri dengan post-test. Analisis data dilakukan menggunakan perangkat lunak JASP dengan uji Mann-Whitney U non-parametrik. **Hasil:** Temuan menunjukkan perbedaan yang signifikan secara statistik dalam skor peningkatan antara kelompok eksperimen dan kontrol ($W = 100.000$, $p < 0,001$). Hasil akhir menunjukkan bahwa nilai peningkatan kelompok eksperimen lebih tinggi daripada kelompok kontrol. **Kesimpulan:** Disiplin siswa dapat ditingkatkan melalui intervensi ekonomi token dan dapat digunakan sebagai strategi manajemen kelas.

Kata Kunci: Kedisiplinan; quasi-eksperimen; santri; token ekonomi; TPQ.

Introduction

Character education, particularly in the area of discipline, is an important component in shaping a generation that is not only intellectually intelligent, but also emotionally and spiritually mature (Lubis, 2019). In the context of the Al-Qur'an Education Center (TPQ), the value of discipline plays a fundamental role as the foundation in the process of internalizing Islamic principles, such as ethics, etiquette, and devotion to worship. Without discipline, the Al-Qur'an education process, which teaches perseverance, orderliness, and continuity, will be difficult to achieve. (Muhaimin, 2022). Unfortunately, the actual conditions on the ground often show the opposite. Teachers frequently face challenges in managing students' behavior, such as noisy students during lessons, lack of attention when the teacher is explaining, and disrupting peers. These phenomena often hinder the achievement of learning objectives, both cognitively and affectively (Nadar, 2019; Yusuf, 2023).

This discipline becomes increasingly complex in TPQ, which typically have a systematic teaching approach and limited human resources. Therefore, it is necessary to develop contextual, measurable character development strategies that are appropriate for children's development so that discipline is not only based on mechanical skills but also stems from the children's own self-awareness (Komalasari & Saripudin, 2020). To address this issue, structured and systematic interventions are needed. One approach proven effective in various educational contexts is behavior modification through a token economy system (Nasution, 2021). A token economy is a system where individuals receive tokens (e.g., stars, stickers, or coins) immediately after demonstrating desired behavior (Rianti, 2017). These tokens can then be exchanged for rewards or privileges (backup reinforcers) that have been agreed upon beforehand. This approach is based on B.F. Skinner's principle of operant conditioning, where positive behavior is reinforced to increase its frequency (Slavin, 2021).

Previous research has shown that the token economy approach is highly effective in improving children's discipline, academic achievement, and social interaction quality, especially in formal educational settings. A study by Assyifa and Rocmah (2024) found that the implementation of the token economy in elementary schools was able to significantly improve students' disciplinary behavior within a relatively short period of time. This intervention encourages students to be more focused, comply with classroom rules, and demonstrate a sense of responsibility toward learning tasks. Similar results were also found in the research by Febriyani et al. (2020), which studied students with special needs in inclusive education. They showed an increase in positive behavior and a reduction in disruptive behavior after the token economy program was consistently implemented. However, the implementation of the token economy in non-formal educational settings such as the Al-Qur'an Education Center (TPQ) in Indonesia has been rarely studied. Through this study, the use of economic tokens can be used as an intervention model that is easy to apply by TPQ teachers. The use of economic tokens also builds external motivation for students in the process of learning the Quran. Despite this, TPQs have unique characteristics that differ from formal schools, both in terms of curriculum, teaching approaches, and social relationships between teachers and students. This dynamic highlights an important research gap that needs to be addressed to adapt and tailor the token economy approach to the cultural and spiritual context of non-formal Islamic educational institutions (Yuliana & Fitria, 2021; Rohmah & Hidayat, 2022).

In addition, the token economy approach has advantages in terms of flexibility and adaptability to various cultural contexts and local values. This is an added value in its application in the Al-Qur'an Education Park (TPQ) environment, which highly upholds Islamic spiritual values. Tokens do not always have to be material in the form of stickers or physical gifts, but can be modified into spiritual and social rewards, such as praise from teachers, the opportunity to lead prayers, or becoming a role model for the class. This approach allows for the integration of modern behavior reinforcement systems with character education based on Islamic values (Rohmah & Hidayat, 2022). According to Komalasari and Saripudin (2020), character education that is relevant to local culture and values will be more effective in shaping long-term behavior. In the context of TPQ, the token system can be adapted to not only reinforce technical discipline but also encourage the internalization of noble moral and spiritual values. Therefore, this approach has the potential not only to address short-term behavioral issues but also to shape children's personalities more comprehensively.

This study is expected to serve as a foundational step for designing effective, contextual, and sustainable Islamic classroom management strategies in non-formal educational institutions such as TPQ.

Method

This study compares two groups using a quantitative approach with an experimental research design. This study uses a quasi-experimental research design by selecting participants according to specified criteria. The specified criteria are TPQ students aged 8-11 years. The selection of a quasi-experimental design is considered appropriate because it allows for a valid analysis of the differences between pre-test and post-test results by controlling for external variables that may influence the research results (Hastjarjo, 2019). The experiment was conducted on a control group, which did not receive any treatment, and an experimental group, which received treatment or intervention (Yusuf, 2017). Both groups took pre- and post-tests to determine the differences between them. However, before conducting the pre- and post-tests, the researcher asked the teacher for help in filling out the instrument sheet.

Sample or Population

This study was conducted at TPQ Darut Tarbiyah Assadah, Malang. The participants of this study were a group of Ula 1 class students aged 8-11 years. There was a total of 20 students in the Ula 1 class. The researcher divided them into two groups: 10 students were assigned to the control group and 10 others to the experimental group. The breakdown was 8 boys and 12 girls.

Procedure

The research process was conducted in several stages. First, a pretest using the discipline measurement tool was administered to both groups to measure their initial level of discipline. On the other hand, the token economy intervention was implemented in the control group experiment for one week. In this stage, the experimental group received tokens (star stickers) every time they completed the tasks assigned to them (e.g., completing tasks on time and completing tasks faster). Various rewards (backup reinforcers), such as stationery, Islamic storybooks, or extra playtime, could be used to redeem tokens at the end of each session as reinforcers or (backup reinforcers). During this stage, the control group participated in learning activities as usual without any special intervention. Third, after one week, a post-test was administered to both groups using the same scale to determine the final discipline threshold.

Data Measurement

This study employs a discipline measurement tool developed by previous research (Cholili et al., 2025). This discipline measurement tool has 18 items, with 16 favorable items and 2 unfavorable items. In completing the measurement tool, the researcher used a Guttman checklist scale with “yes” and “no” statements. For “yes” answers, a value of 1 was assigned, and for “no” answers, a value of 0 was assigned. The distribution of values for the students in the pre-post questionnaire is illustrated in the following table:

Table 1. Tabel Pre-Post Test

<i>Group</i>	<i>Pre Test</i>	<i>Intervention</i>	<i>Post Test</i>
GE	X1	Y	X2
GC	X3	-	X4

This discipline measurement tool is divided into three aspects that indicate discipline variables, which can be described as follows:

Table 2. Diciplinary Blue Print

Aspect	Questions Item	Favorable	Unfavorable
Student Behavior in Class	1,2,3,4,5,6,7,8,9,10	Item 1,2,3,4,6,7,8,9,10	Item 5
Student Attendance	11,12	Item 11,12	-
Enforcing classroom rules	13,14,15,16,17,18	Item 13,14,15,16,18	Item 17

Data Analysis

The data analysis process in this study used the JASP application with the Mann Whitney test obtained from the gain value. This test was used to compare the pre-test and post-test values that showed the discipline between the control group and the experimental group.

Tabel 3. Mann-Whitney U Test

Independent Samples T-Test			
	W	df	p
PRE	0.000	< .001	
POST	42.500	0.580	
GAIN	100.000	< .001	

Note. Mann-Whitney U test.

Based on the gain score in Table 3, there was a significant difference between the control group and the experimental group ($W = 100,000$, $p < 0.001$). The difference was seen in the level of discipline before and after the intervention. This supports the hypothesis that economic tokens are effective in improving the discipline of TPQ students.

In determining a difference in values, which is then analyzed using JASP software, it is necessary to assess the gain score. The gain score is assessed by subtracting the pre-test score from the post-test score, as shown in the following table.

Tabel 4. Gain Score Pre-Post Test

Experiment Group				Control Group			
Subjek	PRES	POST	GAIN	Subjek	PRE	POST	GAIN
N	9	14	5	K	12	12	0
R	6	13	7	S	12	13	1
A	8	13	5	B	13	14	1
K	7	12	5	I	12	13	1
V	8	11	3	K	12	12	0
N	7	12	5	S	15	15	0
R	8	13	5	N	11	11	0
M	8	14	6	A	13	13	0
I	7	12	5	A	13	13	0
S	7	13	6	B	14	14	0

Table 4 shows that participants in the experimental group experienced an increase with a score range of 3-7. This illustrates a positive change in the experimental group, while in the control group there was no significant change, with a gain score of 0 and only 3 people scoring 1.

Result

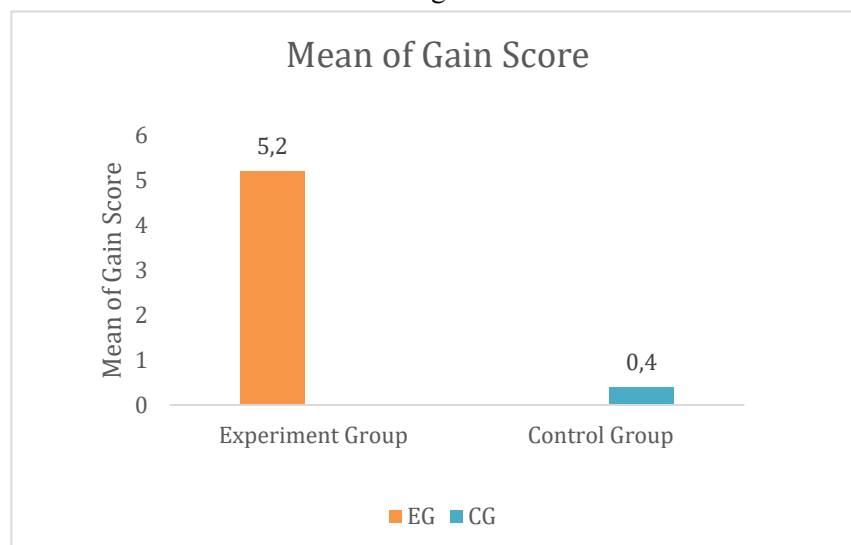
The analysis conducted using the JASP application found that there was a significant difference between the pre-test and post-test based on the gain score. A significant increase in discipline scores among the students was observed after they were given economic tokens as part of the intervention. Based on the results of the Mann-Whitney U test, there was a difference between the experimental and control groups in the pre-test, which were not in equal conditions, but rather the experimental group's scores were lower than those of the control group ($U = 0.000$, $p < 0.001$). Meanwhile, in the post-test stage, no significant difference was found ($U = 42.500$, $p = 0.580$). However, to obtain a significant change between the pre-test and post-test, it can be seen in the gain score. Analysis of the difference in post-test and pre-test scores between the two groups revealed a statistically significant difference ($U = 100.000$, $p < 0.001$), with a significant increase in the experimental group compared to the control group. The difference in gain scores between the two groups had an average of 5.2 for the experimental group and 0.4 for the control group. This average was obtained by dividing the total gain values by the number of participants in each group. The total gain values were 52, with 10 participants in each group.

$$\text{Mean: } \frac{\sum \text{gain}}{n}$$

Explanation:

1. $\sum \text{gain}$ = Total gain value
2. n = Number of participants in each group

Tabel 5. Average Gain Score



Discussion

The main focus of this study is the application of a significant and effective token economy method to improve student discipline in the TPQ environment. Based on the results of statistical analysis, the experimental group experienced a higher score than the control group for the discipline variable by performing a gain score analysis ($U = 100,000$, $p < 0.001$). This study supports the hypothesis that the token economy intervention, which was implemented and provided reward points, was effective in reinforcing positive behavior in the TPQ environment.

The results of this study are consistent with the developed hypothesis and support the behavioral psychology theoretical framework, particularly reinforcement theory (Skinner in Miltenberger, 2016). Reinforcement can shape adaptive behavior by providing rewards and consequences for behavior. Positive reinforcement is given in the form of star stickers when the targeted behavior is performed. Seven-star stickers

are collected, and upon collecting four stars, positive reinforcement in the form of a reward is given. Collecting seven stickers results in seven rewards, which are given in the form of stationery. This means that the provision of rewards as a form of positive reinforcement serves as a stimulus received by the students and elicits a response in the form of disciplined behavior in learning (Antoni, 2024).

The results of this study are also consistent with previous findings in the same context. (Konseling et al., 2025) also reported the success of economic tokens in classroom management at TPQ. The findings of this study contribute by showing that the same method is equally effective when applied in the context of non-formal religious education such as TPQ, where the goal is not only knowledge transfer but also character development. Research aligned with Rianti (2017) shows that economic tokens can improve discipline in kindergarten. Other studies also support this research, according to (Assyifa & Rocmah, 2024), who state that there are differences after economic token intervention at ages 5-6. The support from several studies proves that providing economic token interventions to children can improve their discipline in learning. The implementation of economic tokens does not contradict Islamic educational values; rather, it can serve as a means to cultivate good habits (istiqomah) in a way that is appealing to children. It can be said that there is an internal drive or motivation to behave in a disciplined manner after receiving reinforcement in the form of economic tokens (Senen, 2024).

The success of this intervention can be explained by several mechanisms. First, the token economy offers long-term, rewarding consequences that can be used to train discipline. Once a student achieves the desired outcome, they receive tokens. The time lag between reinforcement and behavior (the principle of immediate reinforcement) is critical in establishing a strong belief that disciplined behavior is rewarding.

In addition, tokens serve as a common conditional reinforcer; in other words, tokens have value because they can be tested against various backup reinforcers. The diversity of reward options keeps the system appealing to individuals with different preferences, encouraging students to continue practicing discipline (Sas et al., 2022). This system changes students' perception of rules from something coercive to an exciting challenge to earn rewards.

Conclusion

Based on data analysis and discussion, it can be concluded that the token economy approach is highly effective in improving the discipline of TPQ students. There is a clear difference between the group that received the intervention and the group that did not receive the intervention in terms of improved discipline. These findings have strong practical implications for TPQ administrators and teachers. The token economy can serve as a structured, positive, and enjoyable pedagogical tool for shaping and maintaining disciplined behavior. It is recommended that practitioners design a token economy system tailored to the characteristics of the students and the conditions of each TPQ and implement it consistently to achieve optimal results. Additionally, efforts to improve discipline through the token economy can be observed in participant characteristics such as gender differences between females and males.

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