The Role of Token Economy in Reducing Procrastination Among Active Organizational Students

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Abstract

Background: Academic procrastination is a common maladaptive behavior among university students, especially those active in organizations who must balance academic and extracurricular responsibilities. **Objective:** This study aimed to examine the effectiveness of the token economy technique in reducing academic procrastination among organizational students at UIN Maulana Malik Ibrahim Malang. **Method:** Employing a one-group pretest-posttest experimental design, 16 purposively selected students participated in a three-week intervention involving structured rewards such as E-Wallet balances and mentoring services. The Academic Procrastination Scale–Short Form (APS-S) was used for data collection, while the analysis of the research results used gain score and paired sample t-test with JASP software. **Results:** The results showed a significant reduction in procrastination scores from pretest (M=81.88) to posttest (M=67.81), with p < 0.001. **Conclusion:** These findings suggest that token economy, when supported by time management strategies like the Eisenhower Matrix and social reinforcement, can effectively motivate students to complete academic tasks on time. This approach not only modifies behavior but also enhances self-regulation and responsibility in organizational contexts.

Keywords: Academic procrastination; behavior modification; organizational students; reward system; token economy

Abstrak

Latar Belakang: Penundaan akademik (academic procrastination) adalah perilaku maladaptif yang umum terjadi di kalangan mahasiswa, terutama yang aktif dalam organisasi dan harus menyeimbangkan tanggung jawab akademik dan ekstrakurikuler. **Tujuan:** Penelitian ini bertujuan untuk menguji keefektifan teknik token economy dalam mengurangi penundaan akademik pada mahasiswa yang aktif berorganisasi di UIN Maulana Malik Ibrahim Malang. **Metode:** Menggunakan desain eksperimen one-group pretest-posttest, 16 mahasiswa yang dipilih secara purposif mengikuti intervensi selama tiga minggu dengan struktur hadiah seperti saldo E-Wallet dan layanan mentoring. Alat pengumpulan data menggunakan Academic Procrastination Scale–Short Form (APS-S), sedangkan analisis hasil penelitian menggunakan *gain score* dan paired sample t-test dengan perangkat lunak JASP. **Hasil:** Hasil penelitian menunjukkan penurunan signifikan pada skor penundaan dari pretest (M=81,88) ke posttest (M=67,81), dengan p < 0,001. **Kesimpulan:** Temuan ini menunjukkan bahwa token economy, ketika didukung oleh strategi manajemen waktu seperti Eisenhower Matrix dan penguatan sosial, dapat secara efektif memotivasi mahasiswa untuk menyelesaikan tugas akademik tepat waktu. Pendekatan ini tidak hanya memodifikasi perilaku tetapi juga meningkatkan pengaturan diri (self-regulation) dan rasa tanggung jawab dalam konteks berorganisasi.

Kata Kunci: Mahasiswa organisatoris; modifikasi perilaku; prokrastinasi akademik; sistem *reward;* token ekonomi

Introduction

Human behavior is an action or activity carried out by an individual, which can be observed directly or indirectly. This behavior manifests in the form of knowledge, attitudes, and actions (Zai, 2023). In the behaviorist approach, behavior is considered a response or reaction to a stimulus (Mustafa, 2011). Every behavior has measurable dimensions, such as duration and intensity, and its impact on the environment (Satriyawan, 2020). Behavior is causal, meaning that it appears as a response to the environment, but at the same time, it also influences the surrounding environment. Kuncoro explains that behavior is formed from various human activities, which are divided into two types: adaptive and maladaptive behavior (Kuncoro, 2017).

One form of maladaptive behavior is procrastination. In an academic context, this behavior is known as academic procrastination, which is the habit of postponing tasks that can reduce the time taken to complete them effectively (Mulfi et al., 2023). This habit can be detrimental to individuals because it reflects a lack of time discipline (Madidar & Muhid, 2022). Etymologically, the term procrastination comes from the Latin *procrastinatio*, with the prefix *pro* meaning 'forward' and *crastinus* meaning 'tomorrow', so procrastination means "postponing until the next day" (Ghufron & Risnawita, 2010)

Academic procrastination has become a common problem among students because of their heavy workloads (Purnomo et al., 2024). Fentaw et al. (2022) showed that approximately 80% of students engage in this behavior to varying degrees. A similar finding was reported by Muyana (2017), who revealed that of the 229 Guidance and Counseling Study Program students in Yogyakarta, 81% experienced high procrastination. There are several reasons for this behavior, including the pressure to achieve high academic standards while managing other responsibilities, such as work and extracurricular activities (Zhu, 2023). In addition, internal factors such as laziness, low motivation, excessive Internet use, poor time management skills, and difficulty in completing tasks are also causes of procrastination (He, 2017; Hidayat & Hasim, 2023).

Students who are active in organizations are also not immune to this problem. They have dual responsibilities in both academic and non-academic fields (Dinata & Nurcahyo, 2024). As students undergoing academic education, they certainly have academic assignments that are used to fulfill their academic competencies (Azizah et al., 2024). In addition, they have organizational assignment requirements to support their shared vision and mission. Therefore, they must manage their time effectively to complete their study obligations while also participating in organizational activities. However, the lack of discipline in time management makes it difficult for many students to adhere to their predetermined schedules.

Due to the pressure of various tasks and time constraints, students tend to complete tasks that are close to the deadline first, which ultimately leads to procrastination. Ramanda et al. (2022) show that students who join organizations feel lazy to do academic assignments because they prioritize other activities, including organizations. The more active a student is in an organization, the more likely they are to engage in academic procrastination (Jannah & Muis, 2014).

Based on the results of interviews with several students who joined Organisation X, most of them postponed their college assignments because they felt lazy. According to them, organizational activities are more fun than completing college assignments. When they want to do college assignments, they are confused about where to start and end up choosing to postpone the work because the deadline is still far off. They start working when they feel pressured because *the deadline* approaches.

This recognition is in accordance with the statement of Syam and Dahlan (2021), who said that individuals who engage in academic procrastination actually realize the importance of completing assignments on time, but they often postpone them because they feel the deadline is still a long way off. This can occur due to peer influence. When individuals associate with peers who have good time management skills, they tend to imitate these habits (Syidad & Julaihah, 2025). This mistaken mindset ultimately gives rise to maladaptive behaviors, such as procrastination. This behavior has a detrimental impact, both physically and psychologically (Ma et al., 2024; Pérez-Jorge et al., 2024). Students who procrastinate are prone to health problems, stress, and anxiety (Khairun et al., 2023). A study conducted by Bhardwaj and Dubey (2024) in India also showed that procrastination was negatively correlated with academic achievement, where the higher the level of procrastination, the lower the students' academic grades. This occurs because assignments are completed in a hurry or submitted late (Conde et al., 2024). Although academic procrastination is one of the reasons for failure or less than optimal academic performance of students in higher education (Nur Wangid, 2014), most students are still less aware and tend to ignore the risks of academic procrastination (Muyana, 2017). If left untreated, these behaviors can worsen over time (Conde et al., 2024).

The social problems faced by students need to be addressed. One way to achieve this is through behavioral modification. Behavior modification refers to techniques used to reduce or increase certain types

of behavior or reactions (Vijayalakshmi, 2019). According to Asri and Suharni (2021) in their book *Modifikasi Perilaku: Teori dan Penerapannya*," some behavior modification techniques are reinforcement, punishment, token economy, assertive training, self-control, modeling, systematic desensitization, and social skills. Behavior modification techniques that can reduce academic procrastination include self-control (Abnindanti & Pratiwi, 2020), self-management (Nurwahidah et al., 2024), punishment (Aulia, 2022), rewards (Firnanda et al., 2025), and economic tokens (Nugroho et al., 2025).

Based on these facts, the researcher decided to focus on token economy techniques to reduce academic procrastination among students. Tokens can be given in several forms, such as stickers, stamps, coins, points, or other objects that are easy to give after the expected behavior appears (Sholichah & Hapsari, 2025). Economic tokens are awarded when students successfully complete academic tasks productively, using the Eisenhower Matrix method. This reward is in accordance with George C. The Homans exchange theory states that every action or behavior that receives a reward, reward, or reward means that the action will most likely be repeated again at another time (Homans, 1958).

This technique has been used several times by other researchers; the main challenge in applying it to students is selecting rewards that suit their needs. A meta-analysis concluded that the token economy method had little effect on academic procrastination behavior (Indreswari & 'Aliyah, 2023). However, Indreswari and 'Aliyah (2023) emphasized that selecting the right token and setting the frequency of exchange are crucial for the success of this technique in forming new positive habits.

Thus, academic procrastination has emerged as a compelling topic of research, as evidenced by the growing number of studies examining this behavior. For instance, Sidiq et al. (2020) combined behavior contracts with a token economy approach in behavioral counseling to reduce procrastination among junior high school students in Semarang, Indonesia. Similarly, Wahyuni et al. (2022) implemented the token economy technique to address academic delays among students in Jambi during the COVID-19 pandemic and shift to online learning. At the higher education level, similar research has also been conducted by Nugroho et al. (2025) and Firnanda et al. (2025), which show that the implementation of a token economy not only reduces academic procrastination but also fosters students' intrinsic motivation.

Building on these previous findings, the present study adopts a different approach by focusing specifically on university students actively involved in organizations. Unlike earlier studies that applied the token economy technique to students in general, this study considers the additional responsibilities borne by organizationally active students, which adds to the complexity of their academic and non-academic demands. Therefore, this study aims to identify how the token economy technique can be effectively implemented to reduce academic procrastination among student organizations. By highlighting this specific context, this study is expected to offer a more comprehensive understanding of the effectiveness of the token economy in shaping adaptive academic behavior among students facing dual burdens.

Method

This study employed an experimental research model, which is a type of research designed to examine the effects of a specific treatment deliberately applied by the researcher to the participants. According to Ibrahim et al. (2018), experimental research is characterized by the deliberate manipulation of variables to observe the resulting changes in behavior or outcomes of the study. In this study, the specific experimental model used was a one-group pretest-posttest design.

In this design, researchers begin by administering a pretest to participants to assess their initial condition or baseline before any intervention is provided. After the treatment was applied, a posttest was conducted to measure the outcomes and determine any significant changes. By comparing the pre- and post-test results, the researchers aimed to identify the impact of the treatment on the participants.

This design was selected because of practical limitations, including restricted access to resources, time constraints, and the unavailability of a comparison or control group. As a result, the study was conducted using only one group of participants without a control group for comparison, as stated by Jannah (2016). Despite its limitations, this design is considered appropriate for evaluating the effectiveness of the intervention in the given context.

$P_1 \; R \; P_2$

Figure 1. Research design

Information:

P₁ : pretest of academic procrastination

R : token economy

P₂ : posttest

Sample

The study involved 16 organizationally active students from UIN Maulana Malik Ibrahim Malang (15 females, 1 male), selected through purposive sampling based on specific criteria and research limitations (Notoatmodjo, 2010). Participants were chosen from one active student organization at the university, inclusion criteria were: (1) active membership in Organization X, and (2) exhibiting academic procrastination, indicated by a pre-test score >40 on the Indonesian version of the *Academic Procrastination Scale-Short* (APS-S).

Procedure

Token economics is a behavior modification system that utilizes positive reinforcement. In this study, the *rewards* used were in the form of e-wallet and assignment mentoring services. Rewards are given after the targeted behavior has occurred. The reward-giving procedure to reduce student procrastination was carried out in several stages. The stages or steps for implementing economic tokens according to Martin and Pear (2019) are as follows: (1) determining target behavior, (2) taking baseline data, (3) selecting the type of token/reward to be given, (4) selecting backup/supporting reinforcement, (5) identifying available assistance, (6) handling potential problems, and (7) preparing guidelines.

This procedure was performed for three weeks. The stages of implementation in this research: 1). Determining target behavior: All students in Organization X UIN Malang who have targeted themselves to reduce procrastination attitudes will be given treatment in the form of economic token intervention. 2). Baseline data collection: Initial data collection from participants was conducted through the process of monitoring assignments and group interviews about the participants' daily lives as organizational students before the provision of the token economy intervention. 3). Selecting the type of reward: The reward used is in the form of assignment points, which will be given after participants have successfully completed their academic activities. Participants who successfully collect the most points will be given prizes that are useful to them. 4). Selecting supporting reinforcement: Economic tokens will be more effective if they are collaborated with other reinforcements, in this case, positive reinforcement in the form of verbal appreciation for completing academic tasks. 5). Identifying available assistance: Collaborating with internal parties of the X UIN Malang organization in the process of implementing the economic token. 6). Addressing potential problems: In this case, the research team conducts an examination from the first step, looking at potential problems that will occur, as well as what needs to be fixed during the implementation period. 7). Preparing the guide: Introducing participants to task and time management strategies (Eisenhower Matrix and Pomodoro) and explaining the rules for implementing token economy treatment.

Table 1. Schedule of procedure

Week	Activities
Week 1 - Preparation & Baseline	• Conducted pretest using APS-S. • Group discussion (FGD) to explore student procrastination behavior. • Introduced Eisenhower Matrix and Pomodoro techniques. • Set up individual token tracking systems (Google Sheets per student). • Students began planning tasks for the following week.
Week 2 – Token Implementation Phase I	• Daily monitoring of task completion. • Students earned points based on task completion (self-reported + verified). • Mentors gave verbal appreciation as reinforcement. • End-of-week reward distribution: Top 3 students received E-Wallet prizes.

Week 3 – Token Implementation Phase II + Mentoring	• Continued use of token tracking and task planning. • Mentors/coaches provided academic mentoring for top performer. • Peers/classmates encouraged to support productivity. • Conducted posttest using APS-S to assess changes. • Collected feedback on intervention experience.

Data Measurement

Data collection in this study was conducted using the Academic Procrastination Scale–Short Form (APS-S), an instrument that has been adapted into Indonesian and tested for validity and reliability, yielding a Cronbach's alpha of 0.86 (Rasyid et al., 2023). This scale is specifically designed to measure the level of academic procrastination among individuals, particularly in relation to behaviors such as delaying assignments or postponing study sessions for examinations. The scale consists of five items, each presented as a statement that reflects common procrastination tendencies in academic settings. Respondents were asked to indicate their level of agreement with each statement using a Likert scale consisting of five response options: 1 = Strongly Disagree, 2 = Disagree, 3 = Quite Agree, 4 = Agree, and 5 = Strongly Agree. The total score obtained from this instrument represents the degree of academic procrastination, with higher scores indicating a greater tendency to procrastinate. The APS-S used in this study underwent linguistic and cultural adaptation to ensure its relevance, understandability, and validity for Indonesian participants. This adaptation process helps maintain the accuracy and reliability of the instrument in capturing the intended psychological construct within the context of the local culture and educational environment of the target population.

Data Analysis

After the research data assessment process was completed, the total score for each participant was determined. The scores were then converted into a gain score table to determine the final scores. From this final gain score, a descriptive overview can be provided of the extent to which the token economy contributes to reducing procrastination among the students. To enrich the overview, the researchers conducted a data analysis using a paired sample t-test. The data analysis process was carried out using the Jeffrey's Amazing Statistic Program (JASP) software version 0.19.3.

Result

The implementation of the research, which adopted the token economy approach based on the concept of Martin and Pear (2019), took place over a period of three weeks, with the following results:

Participant Demographics

Table 2. Demographic of Participants

Characteristic		N	%
Gender	Male	1	6.25
	Female	15	93.75
Age	19	4	25
	20	9	56.25
	21	3	18.75

Table 2 displays the participants' demographic distribution. The sample consisted predominantly of female students (n = 15; 93.75%), with only one male student (6.25%). Regarding age, the largest proportion of participants were 20 years old (n = 9, 56.25%), followed by those aged 19 (n = 4, 25.00%) and 21 (n = 3, 18.75%). These figures indicate a relatively homogeneous sample in terms of age and gender, with the majority being female students in their early twenties.

Statistical Result

Before implementing the token economy intervention, it is crucial to collect comprehensive behavioral data from the participants. This step is crucial for clearly understanding the initial behavioral tendencies of each student, particularly those related to delays. The data collected before the intervention served as baseline

information, allowing for meaningful comparisons to evaluate the effectiveness of the token economy strategy. Establishing this baseline is also important to ensure that the observed behavioral changes can be attributed to the intervention rather than external factors. Baseline data on students' procrastination behavior were collected before the implementation of the token economy intervention (pretest), and after the intervention, final data collection (posttest) was conducted to determine the extent to which the token economy intervention reduced procrastination. The data are presented in Table 3.

Table 3. Academic Procrastination Score

No.	Name (Initial)	PreTest	PostTest	Gain Score
1.	AAS	75	65	-10
2.	ISM	90	75	-15
3.	DKN	70	60	-10
4.	DAP	100	85	-15
5.	DFA	75	70	-5
6.	GAC	80	75	-5
7.	IAM	75	60	-15
8.	INP	85	70	-15
9.	KH	85	65	-20
10.	NBH	100	85	-15
11.	PNM	70	60	-10
12.	PAR	75	55	-20
13.	RNK	70	45	-25
14.	WNR	75	60	-15
15.	WJN	90	75	-15
16.	YF	95	80	-15
	Mean	81,875	67,8125	-14,06

Based on the results of the gain score calculation, the economic token intervention contributed to reducing academic procrastination behavior in students of organization X at UIN Malang. This is reflected in the decrease in the average score between the pretest (81.88) and the posttest (67.81). These differences indicate positive changes in reducing procrastination after treatment.

To confirm the findings, a statistical analysis using a paired sample t-test was conducted with the following results:

Table 4. Result of statistical test

Pretest-Posttest	Test	p
	Paired Sample t-test	< ,001

Based on the results of the analysis of the difference test using JASP, as shown in Table 4, the sig. pretest and posttest values were less than 0.001 (<0.05) in the paired sample t-test. In this study, the scores were used in the paired-sample t-test. This can be interpreted as a difference in the procrastination behavior of students at Organisation X UIN Malang before and after being given economic token treatment. This can be seen from the decrease in the average pretest score of 81.88 to 67.81 in the posttest, which is reinforced by the

results of the statistical analysis using *a paired sample* t-test with a significance value of $p < 0.001$.

Token-Based Performance Outcomes

Students received points for completing academic tasks listed in their Eisenhower Matrix, which were tracked through individual files accessible via their own devices. The top three point earners in the first intervention week received e-wallet rewards: Rp. 50,000 for first place, Rp. 35,000 for the second, and Rp. 20,000 for third. Additionally, the student with the highest cumulative score over the two-week intervention period was awarded one month of academic mentoring by coaches and mentors from Organization X.

Table 5. Token Score gained after 2 weeks

No.	Name (Initial)	Token Score
1.	AAS	8
2.	ISM	8
3.	DKN	7
4.	DAP	9
5.	DFA	6
6.	GAC	7
7.	IAM	13
8.	INP	8
9.	KH	8
10.	NBH	6
11.	PNM	7
12.	PAR	11
13.	RNK	14
14.	WNR	10
15.	WJN	8
16.	YF	8

Choosing Supporting Reinforcement

It will be more effective if it is combined with other rewards to strengthen the target behavior. To support the main economic token, positive reinforcement is provided in the form of verbal appreciation for efforts to complete academic tasks. This aims to motivate participants in the academic process and improve their performance.

Identifying Available Help

During the monitoring period in the first week, the researcher also held discussions with several coaches and mentors from Organisation X regarding the program carried out to reduce student academic procrastination. The main goal is that coaches and mentors can also help motivate students to not forget their academic tasks and to manage their tasks and time well. In addition to the organizational environment, the academic classroom environment is important. Classmates are the primary environment of a classroom. The goal is to stimulate students to reduce their procrastination and complete academic tasks well and in a timely manner. Through the help of people around them who interact with the participants, such as organizational coaches, mentors, and classmates, students can be encouraged and motivated to complete academic assignments on time.

Addressing Potential Problems

When planning a token economy intervention, it is important to anticipate potential problems that may

arise. Several issues emerged during implementation and were addressed. The first issue was confusion regarding the selection of appropriate tokens for students. This was resolved through discussions with the leaders of organization X, resulting in the decision to provide two types of tokens: E-Wallet balance and mentoring services, both of which were considered attractive and useful for students. The second issue was a shortage of assistants and personnel. This was handled by involving other coaches and mentors from Organisation X to assist in implementing the intervention and help motivate student participation. The third issue was the possibility of students manipulating their points. Because points were stored in individual files, limited access (in terms of time and accounts) was applied to prevent unauthorized modifications. The fourth issue is the risk of reinforcement failure. While appreciation was given for completing assignments, some students were uncomfortable with it. To overcome this, verbal appreciation was also given by other mentors to instill a sense of pride in students' academic discipline.

Discussion

The results of this study indicate that economic token intervention significantly influences the reduction of academic procrastination behavior among organizational students. This finding supports the principle of reinforcement in behaviorism theory, which states that behavior that is given positive reinforcement will tend to be repeated (Martin & Pear, 2019). In this study, the form of reinforcement in the form of E-Wallet balances and mentoring services function as rewards that motivate students to complete academic tasks on time. The intervention was designed through a structured token economy system, which not only emphasizes reward giving but is also complemented by time management strategies such as the Eisenhower Matrix and the Pomodoro technique. The effectiveness of this approach is in line with the findings of Indreswari and 'Aliyah (2023), who emphasized the importance of selecting relevant rewards and a scheduled exchange system in supporting the success of the token economy. When positive behavior is followed by pleasant consequences, the behavior tends to be repeated until it becomes habitual (Arifin & Humaedah, 2021; Lu & Hamu, 2022).

The organizational context of students is an important aspect that strengthens the need for this intervention. Students who are active in organizations have a double burden that requires them to balance academic and nonacademic roles. This burden often causes difficulties in managing time and prioritizing tasks, ultimately leading to procrastination. Token economy interventions have proven to be an adaptive solution to this challenge, providing additional structure and motivation to keep students focused on academic obligations amidst the busyness of organizations. Rewards given through tokens not only serve as external motivation but also form more focused time-management habits. This helps students develop discipline and responsibility skills simultaneously in two different domains. Thus, economic tokens function not only as a behavioral modification tool but also as a supporting strategy in developing students' organizational self-capacity.

The effectiveness of economic tokens in this study is also supported by various findings from previous studies. Wahyuni et al. (2022) found that the implementation of economic tokens was able to reduce academic procrastination by 40% in students. Similar results were also found by Mujiyati (2015) in a quasi-experimental study of students, as well as by Khuzaimah (2017), who showed that economic tokens were effective in reducing procrastination behavior. The success of this intervention is generally related to the clarity of the reinforcement system, frequency of reward delivery, and suitability of the type of token to the needs of the participants. These findings confirm that the token economy can be used as an applicable approach to reduce maladaptive behavior, especially academic procrastination, which is common among students. In this context, rewards become a means to increase students' sense of responsibility and active involvement in completing academic tasks on time.

Furthermore, the success of the token economy technique is influenced by students' internal and external factors. McCloskey (2011) identified six dimensions that influence academic procrastination: self-confidence, attention deficit disorder, social factors, time management skills, laziness, and personal initiative. Ghifari et al. (2024) confirmed that a combination of external rewards and social support is effective in increasing learning discipline and reducing procrastination. In this case, economic tokens not only act as a form of positive material reinforcement but also as a stimulus that has an impact on the psychological and social aspects of students. This view is in line with the opinions of Mirnawati (2020) and Sarafino (2012), who stated that behavior modification is a systematic effort that can be directed at increasing or decreasing certain behaviors based on individual needs. In this case, the intervention was directed at reducing procrastination behavior with a structured and adaptive approach.

In addition, several studies have shown that a token economy can be developed through an integrative approach. Yunanto (2020) combined economic tokens with group counseling services as a medium to strengthen interventions, and the results showed a significant decrease in procrastination behavior among

students. A similar approach was taken by Marsilia and Mahmudi (2015), who integrated a token economy with group counseling and succeeded in forming more stable behavioral changes. This integration opens up space for the development of intervention methods that are more holistic and appropriate to the characteristics of students in various educational environments. Overall, the results of this study support the token economy approach as an effective and applicable behavior modification technique, especially for students with ASD who face challenges in time management. With rewards designed functionally and systematically, economic tokens can help students form more adaptive and productive learning habits and improve the balance between academic and organization.

In addition to serving as a tool to strengthen study discipline, the token economy also has significant psychosocial dimensions. According to Ghifari et al. (2024), the use of tokens in educational settings not only increases students' motivation to learn but also creates a more enjoyable and structured environment for learning. This is especially important for students who face dual pressures of academic and organizational demands. With a well-planned reward system, students can experience ongoing small achievements that indirectly strengthen their intrinsic motivation. This means that interventions such as a token economy are not only extrinsic and short-term in nature, but can also become an initial stimulus for the formation of more internally adaptive study patterns in the long run.

Although the results of this study demonstrate the effectiveness of the token economy intervention in reducing academic procrastination behavior, several limitations need to be considered. One of the limitations is the scope of participants, which was limited to student organization members at two institutions; therefore, the results may not be generalizable to the entire student population. In addition, the measurement of results still relies on observation and self-reporting, which may contain a subjective bias. This study also did not explore other individual factors in depth, such as levels of self-efficacy, self-regulation, and social support, which, according to Azizah et al. (2024) and Syidad & Julaihah (2025), play an important role in the tendency toward academic procrastination. These findings imply that educational institutions should adopt adaptive behavioral intervention approaches, such as the token economy, but still accompanied by a comprehensive assessment of individuals' psychological characteristics and social context for the intervention to be more effective and sustainable.

Conclusion

Before the implementation of the token economy intervention in Organization X, UIN Malang, the level of academic procrastination among students was quite high, as indicated by the pre-test results. However, after the intervention, procrastination behavior significantly decreased based on the post-test scores. This confirms that the token economy system can be a practical and effective strategy for reducing the tendency to delay academic tasks, especially among students who bear a double burden from organizational activities. The structured reward system has been proven to encourage students to complete assignments more diligently and punctually.

This study had several limitations. The relatively short duration of the intervention and the fact that the study was conducted at only one institution mean that the results cannot yet be widely generalized. Additionally, this study did not fully explore psychological variables such as self-efficacy, time regulation, and social support, which may also influence the effectiveness of the intervention.

These findings indicate that the token economy approach not only modifies negative behaviors but also strengthens time management and self-discipline among students. The practical implication of these results is the need for higher education institutions to consider using token economy interventions as part of their academic guidance or educational counseling strategies, particularly for students who are active in organizational activities.

For future research, it is recommended to broaden the range of participants from various institutional backgrounds and study programs, as well as to extend the duration of the intervention to observe the long-term impact of the token economy on academic procrastination behavior. Future research can also combine the token economy with other approaches, such as group counseling or self-management techniques, to ensure that the intervention yields more comprehensive and sustainable results.

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