INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT

OPEN ACCESS JOURNAL

Vol 14, Issue 01, (2025) E-ISSN: 2226-6348

The Effectiveness of Implementing a Token Economy System in Reducing Disruptive Behavior among Preschool Students

Sia Siew Chuing[1]*, Faridah Mydin Kutty[2]

Faculty of Education, The National University of Malaysia (UKM), Bangi, Malaysia

Email: P130331@siswa.ukm.edu.my, faridah_mydin@ukm.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARPED/v14-i1/24769 DOI:10.6007/IJARPED/v14-i1/24769

Published Online: 07 March 2025

Abstract

Disruptive behavior is a type of behavior that involves any action that disrupts and can affect the smoothness of the ongoing learning process in the classroom. The aims of quasi-experimental to identify the effectiveness of the token economy system implemented to reduce disruptive behavior among preschool students. The study involved five teachers and ten preschool students, divided into two groups: the experimental group and the control group. The experimental group received the token economy system intervention, while the control group did not. Ten preschool students were selected using purposive sampling. The token economy system was implemented for 20 school days. Data collected through classroom observations and structured interview with the teachers. The data obtained were analyzed inferentially and thematically. Inferential analysis (ANOVA and t-tests) revealed that though there was a reduction in the disruptive behavior of the experimental group, the difference between the experimental and control group was not statistically significant ($p > 0.05$). Thematic analysis of the teacher interviews revealed positive changes in the teacher's post ad results including more motivated students and better compliance with rules as well as reduced disruptions in the classroom. The teachers also faced challenges with token distribution consistency and retaining the student's long term in the system. This study is expected to help preschool teachers better understand the token economy system and manage disruptive behavior among preschool students more effectively.

Keywords: Token Economy System, Disruptive Behavior, Preschool Students, Behavior Management, Positive Reinforcement

Introduction

The formation of student behavior at the preschool level is one of the important elements that needs to be paid attention to because it plays a critical role in the development of children's behavior. Good behavior can help students to interact with peers and teachers in a positive way, follow instructions, and pay attention during learning activities (Skinner, 1953). On the other hand, disruptive behavior of preschool students can have a negative impact on the learning process and social and emotional development of children (Jalil &

Rani, 2023). For example, disruptive behavior is such as not listening to instructions, being aggressive towards peers and not paying attention in class.

In Malaysia, traditional approaches such as verbal warnings, mild punishments or inconsistent positive rewards are still the main methods used by preschool teachers to deal with disruptive behavior (Rahman et al., 2021). Although these approaches are often used, the results of a study by Kasiveloo et al. (2022) show that traditional approaches are not sufficient to effectively change behavior because they rely on temporary compliance rather than fostering long-term behavioral improvement. In addition, these traditional approaches are difficult for teachers to implement in a way that is effective because teachers lack training, have high student–teacher ratios, and a lack of well defined intervention frameworks. Teachers have to deal with big classroom sizes in many cases, which makes it hard to keep tabs on individual's behaviours and to respond in disciplinary actions equitably and uniformly (Lau et al., 2020). Therefore,preschool teachers need more effective management strategies to control and manage disruptive behavior in preschool students. Thus, there is a need for preschool teachers to use more efficient strategies to control and manage preschool students' disruptive behavior. Initially, such strategies are particularly necessary in Malaysia as studies have pointed out the alarming occurrence of disruptive behavior in early childhood education settings (Williford & Vitiello, 2020). Among the factors that contribute to the change in preschoolers' behavior are changing family dynamics, reduced parental supervision, and exposure to digital media, which brought the need for changes in the method of classroom discipline (Khairuddin et al., 2023). The absence of structured and evidence based interventions like the token economy system could challenge teachers in their ability to create conducive learning environment especially for young children which may in turn have an effect on their academic performance as well as social development.

The token economy system offers a more effective alternative to overcome student behavior problems. Based on the Operant Conditioning Theory by BF Skinner, the token economy system uses the concept of positive reinforcement to modify student behavior. Teachers give tokens as rewards for positive behavior, and students can exchange the tokens they collect for larger prizes or rewards. Studies have found that this system is very effective in increasing desired behaviors such as responsibility and discipline among preschoolers (Heiniger et al., 2022; Hayes et al., 2023).

The uniqueness and advantages of the token economy system lie in its structured and flexible approach. The rewards provided not only increase student motivation but also help them build self-discipline. This system is easily adaptable to local needs and contexts, and can be used in a variety of learning environments. The token economy system also promotes more enjoyable learning. In this environment, students strive to collect tokens in order to obtain the desired rewards, which in turn effectively reduces disrupyive behavior (Smith et al., 2022) This system is ideally suited to preschool behavior because it works because preschoolers are naturally motivated by tangible reinforcers and the immediacy of reinforcement. Since preschoolers have poor impulse control and cannot understand delayed consequences, the token economy is a good way to teach preschoolers to shape their behavior with consistent and structured reinforcement (Hayes et al., 2023).

Despite the widespread implementation of the token economy system among countries like the United States, the United Kingdom, and Australia to improve student behavior (Hayes et

al., 2023; Smith et al., 2022), there is a scarcity of research on the application of the token economy system in Malaysian preschools. Most of the current Malaysian studies on classroom behavior management tend to be on overall discipline strategies but not for specifically designed interventions such as the token economy (Kasiveloo et al., 2022). The gap here requires empirical research on its cultural and educational suitability in Malaysia. Furthermore, the system has been found to reduce the teachers' burden by encouraging structured and the self-regulated behavior of the students (Kim et al., 2021; Hayes et al., 2023), yet most of the previous studies (Rijal & Dahlan, 2020) are little focused on the preschoolers. Since both groups have very different cognitive and behavioural characteristics, the next step is to find out whether the token economy system can be adapted for use in Malaysian preschool settings. In this regard, the research questions are as follows:

1. Is the implementation of a token economy system effective in reducing disruptive behavior among preschool students?
2. What are the significant changes in disruptive behavior of preschool students before and after the implementation of the token economy system?
3. What are teachers' perceptions about the implementation of a token economy system to manage disruptive behavior among preschool students?

Literature Review

Disruptive Behavior

Disruptive behavior among preschoolers refers to actions that interfere with the learning process and social interaction in the classroom. According to research, shouting, excessive movement, and noncompliance are often associated with underdeveloped self regulation skills and social emotional difficulties (Yoder & Williford, 2019). Also, children with disruptive behaviors may have difficulty with impulse control and will have difficulty with following instructions and following structured activities (Vitiello & Williford, 2020).

In addition, teacher perceptions and classroom management strategies are important in the prevalence of disruptive behaviors. According to studies, teachers who do not use structured behavior management strategies, e.g., positive reinforcement are more likely to reinforce the disruptive tendencies, although their responses are inconsistent (Williford & Vitiello, 2020). Additionally, the classroom environment itself can contribute to behavioral issues, as for example: in high noise and large classes with low levels of teacher support, individualized interventions are much less useful (Partee et al, 2020).

Besides its contributions to the individual child’s learning, disruptive behavior also impacts peers’ concentration and motivation, and disrupts the classroom’s work culture, consequently leading to a chaotic and less productive classroom flow (Donaldson et al., 2019). It is also noted that long lasting consequences are related to persistent disruptive behavior found in children in early childhood, which is related to lower academic achievement and conflict in peer relationships in school (Bulotsky Shearer et al., 2020). Based on the results, a structured intervention like the token economy system might be necessary for teaching preschoolers self regulation and prosocial behaviors as well as creating an effective learning environment for teachers.

Token Economic System

Token economy is a technique that comes from Skinner's Operant Conditioning Theory (Ulyah. S. Et al.,2020). According to this theory, a person's behavior can be modified through the use of positive reinforcement. This reinforcement can reduce problematic behavior and maintain commendable behavior by giving tokens as positive reinforcement. This can increase the probability of desired behavior in order to maintain commendable behavior. Therefore, the token economy system applies the concept of positive reinforcement presented by Skinner's Operant Conditioning Theory to modify student behavior in order to increase student motivation in following the teaching and learning process that is being implemented (Heiniger et al., 2022).

The token economy system has managed to modify student behavior successfully within the preschool, as well as a number of other educational settings, such as preschools, by rewarding the desired behavior (Rijal & Dahlan, 2020). Structured reinforcement such as tokens is useful in the preschool context as children may not yet have fully developed self regulation and social skills (Heiniger et al., 2022). Rewards help reinforce positive behaviors such as following class rules, paying attention to teaching, and completing assignments. For example, students who usually disrupt class can be encouraged to behave better with immediate rewards in the form of tokens every time they exhibit desired behavior. The use of this system is not only effective in increasing prosocial behavior, but also reduces students' tendency to be disruptive and has a positive impact on the overall learning atmosphere in the classroom. With this, the use of the token economy system can help teachers set desired behavioral targets such as paying attention and completing assignments (Rijal & Dahlan, 2020). Indirectly, the token economy system encourages preschool students to obey teacher instructions and focus on the learning process in preschool more consistently.

Methodology

Study Design

A quasi experimental pretest-posttest design was used in this study to evaluate the effectiveness of implementing token economy system in reducing disruptive behavior being displayed by preschoolers. In order to evaluate the changes in both the experimental and control groups, behavioral assessments were performed before (pretest) and after (posttest) the intervention. The reason for choosing this design is that it effectively captures the effect of token economy system on users' behaviors, while controlling for individual differences in baseline behavior. This design allows researchers to measure the effects of the intervention without requiring random assignment of students between experimental and control groups (Miller, Smith, & Pugatch, 2020). The experimental group will receive the token economy system intervention, while the control group will not receive the intervention. At the initial stage (pre-test), the disruptive behavior of students in both groups will be measured. After the intervention is implemented on the experimental group, the disruptive behavior will be measured again with the control group (post-test). With this approach, researchers can identify whether there is a significant change in the behavior of the experimental group compared to the control group.

Sampling

Purposive sampling technique was used in this study. This technique allows the researcher to focus on the most relevant population, namely students who exhibit disruptive behavior and teachers who are experienced in managing student behavior. According to Shadish, Cook, and Campbell (2015), for studies involving a specific population, a small sample size is sufficient to obtain valid and accurate findings. In the context of this study, 10 students were selected based on disruptive behavior that had been identified and documented by five teachers involved,namely Senior Assistant 1 (PK1), Senior Assistant HEM (PKHEM), counselor teacher, remedial teacher, and preschool teacher Each of these individuals served a specific function in evaluating and authenticating the behavioral issues among preschoolers. The disruptive behavior was observed by the preschool teacher each day within the classroom, along with the remedial teacher identifying any learning difficulties that may influence disruptive behavior. Emotional and social factors were determined by the counselor teacher, while disciplinary concerns were appraised by the PKHEM more from a perspective of school management. Lastly, the PK1, as senior administrator, supervised and insured consistency in the identification of students for intervention. This small sample size allows the researcher to conduct a anaylse changes in student behavior after the intervention, thereby reducing internal variation.

Study Period

This study will be implemented within a month, which is 20 school days. The appropriate time period for the post-test to be conducted is one month after the pre-test. Within the allocated implementation period, this study will be implemented in three stages, namely the preparation stage, the data collection stage and the data analysis stage. The three phases of the study included pre intervention (baseline observation), intervention (implementation of the token economy system) and post intervention (behavioral assessment and analysis). For the purpose of establishing a baseline for disruptive behavior, pre-intervention observations were conducted, followed by the introduction of the token economy system and observation of behavior during the intervention phase. Data analysis was done in the post intervention phase to check effect of the intervention. This was a pretest-posttest quasi experimental design where results are presented only after the analysis of the data so instead of providing results at each level there is a structured evaluation.

This study will be conducted in a school in Betong District, Sarawak which is located in a rural area. Schools in rural areas have more limited resources and facilities compared to schools in urban areas (Ahmad, et, al., 2019). Therefore, a study in a rural school allows researchers to assess how interventions such as the Token Economy System can be adapted in a context that is more limited in terms of educational resources. Schools in rural areas often face challenges in behavior management due to a lack of specific training for teachers to deal with disruptive behavior (Zulkifli, 2020). Therefore, the selection of schools in Betong District is appropriate because it provides an opportunity to evaluate the effectiveness of this intervention in a more challenging situation in terms of resources and context.

Research Instruments

This study used a checklist for observing disruptive behavior and structured interviews in collecting data related to the effectiveness of implementing a token economy system on disruptive behavior of preschool students.

Intervention: Token Economy System

This study implements the token economy system as a structured positive reinforcement strategy to modify and enhance appropriate behaviors among preschool students. It was in this system that students were given tokens as rewards for immediate desired behaviours, like following directions, finishing tasks and demonstrating social positivity. These tokens would be later exchanged for predetermined rewards, such as stickers, more playtime, or little privileges, which will in a roundabout way reward the motivation and consistency of behavior. Token economies have been shown to be very effective in preschool settings because they offer immediate and tangible reinforcement that aligns with young children's cognitive development, as they learn (Hayes et al., 2023). The intervention was implemented over 20 school days, and teachers were instructed to give out the tokens consistently and in a transparent manner in order to transform and sustain positive behaviors as an effective classroom management tool.

Behavior Observation Checklist

The main instrument used to measure students' disruptive behavior in this study was the disruptive behavior observation checklist. The table in Appendix 1 shows the checklist adopted from the Conners' Teacher Rating Scale (CTRS), which is an assessment tool that has been validated to measure disruptive behavior, such as attention problems, impulsive behavior, and self-esteem problems in preschool children (Conners, 1997). The assessment was carried out by teachers using the number of disruptive behaviors displayed by preschool students in the implementation of teaching and learning sessions. Each behavior was rated from "very often" to "never.

This checklist will be used in two phases of the study, namely pre-intervention (pre-test) and post-intervention (post-test) (Shaari, 2022). Five teachers involved in the observation before the implementation of the intervention and after the withdrawal of the intervention will complete this checklist in each phase of the study. The intervention group will be assessed using this checklist before the Token Economy System is implemented and after the intervention ends.

The behavior observation checklist is particularly adapted for use in preschool settings because it enables systematic, in real time, recording of disruptive behaviors in a natural classroom setting. Early childhood behaviors are contextual and vary on a day to day by circumstance, thus direct observation is more reliable than retrospective reporting (Smith et al., 2022). The checklist offers a structured and standard protocol in which to evaluate behavior at multiple time points for the sake of comparability of pre and post intervention data. Its ease of use makes it a good tool for preschool behavior assessment because it helps teachers record behavior patterns without interrupting the learning process.

Structured Interview

Structured interviews were used to identify teachers' views, experiences and perceptions of the implementation of the token economy system in reducing disruptive behavior of preschool students. This method was chosen because it allowed the researcher to obtain more in-depth information about teachers' views, experiences and perceptions (Creswell, 2013). Structured interviews also allowed teachers to share suggestions for improving the implementation of this system in the future. Therefore, the interview questions were structured based on the objectives and research questions that focused on teachers' perceptions of the effects of the token economy system on disruptive behavior of preschool students (Heiniger et al., 2022).

Validity and Trust

The level of validity is an important element in ensuring the effectiveness of measurement and evaluation procedures. In this study, the items in the observation checklist were adopted from the Conners' Teacher Rating Scale (CTRS), developed by Dr. C. Keith Conners. It is an instrument widely used in the fields of psychology and education to assess behavioral problems of preschool students. This assessment tool has been validated to measure disruptive behavior (Conners, 1997). For structured interviews, the questions posed were based on the objectives of the study. The interviews were pilot tested to ensure that the language and meaning of the questions could be understood by the teacher respondents.

Furthermore, data reliability is related to the level of stability and consistency of results obtained from the research instruments (Kyngas et al., 2019). In other words, the instruments selected by the researcher play an important role in obtaining information that has high reliability. In this study, the researcher involved five teachers in the observation process to record changes in the behavior of the study participants throughout their time following this research. Observation scores were analyzed to ensure uniformity in the data. In addition, structured interviews were conducted with the study participants after the observation was carried out to ensure data stability. This can also increase the reliability of the data collected where it was done in a triangular manner.

Data Analysis Methods

This analytical method is implemented with the aim of ensuring that the data collected can be analyzed in a more systematic manner so that the study findings can be interpreted appropriately and used as evidence for decision-making. Therefore, this study implements data analytical procedures by involving inferential and thematic analysis in order to understand the behavior shown by the study participants more thoroughly.

Inferential Analysis

In this study, inference analysis was conducted using Analysis of Covariance (ANCOVA) as the main method of data analysis. The data were obtained through an observation checklist containing an assessment of disruptive behavior of preschool students at pre-test and post-test between the intervention group and the control group. A comparison of the changes in disruptive behavior between these two groups will be done.

ANCOVA was chosen as it takes into account baseline differences in disruptive behavior so that post-test comparisons between the experimental and control groups are accurate determiners of the effect of the token economy intervention. ANCOVA makes it possible to

reduce error variance and increase the statistical power when controlling for pretest scores (Hayes et al., 2023). Furthermore, an independent t-test was used to determine mean differences of the groups at pre-test and post-test stages (an initial assessment of the group disparities) (Kim et al., 2021). The t-test helps us detect significant changes while ANCOVA makes the analysis stronger by adjusting for initial variability, i.e. it makes the findings more reliable and valid. Before conducting ANCOVA, data screening is used to verify that all information is submitted accurately and thoroughly. Data screening is important before starting data analysis because it helps in tracking down inaccurate data and identifying errors in the data set that may have occurred during the data collection process. Errors may arise due to human error when data is entered into the system. Therefore, missing data and data normality need to be taken into account to ensure that the results of the analysis are valid and not affected by statistical problems.

After conducting ANCOVA, the results obtained will show whether there is a significant difference in the disruptive behavior of preschool students between the experimental group and the control group after controlling for covariates. If there is a significant difference, it indicates that the implementation of the token economy system has a positive effect in reducing disruptive behavior. Based on the results of ANCOVA, conclusions will be drawn regarding the effectiveness of the token economy system. If there is a significant difference, the token economy system is said to be effective in reducing the disruptive behavior of preschool students. On the other hand, if there is no significant difference, it may indicate that other factors need to be paid attention to in the intervention to reduce disruptive behavior.

Thematic Analysis

The thematic analysis process in this study begins with the transcription process of data obtained from the structured interview sessions. The researcher will read the transcripts in their entirety to familiarize themselves with the data and identify initial codes that refer to the main themes related to the research questions. This process is known as initial understanding where researchers begin to categorize data into codes such as "positive effects of token economy", "student motivation", or "challenges of token economy implementation" (Braun & Clarke, 2019).

Next, the researcher will proceed with the coding process, which is the grouping of data based on emerging themes. The identified codes will be grouped into larger themes that are relevant to the study objectives. These themes will be analyzed to ensure that they align with the research questions and provide useful information about the effectiveness of the token economy system in reducing disruptive behavior. For example, themes such as "increased student motivation through token rewards" and "decreased disruptive behavior after intervention" may be identified as major themes.

Study Findings

The data in this section focuses on the effectiveness of implementing a token economy system in reducing disruptive behavior among preschoolers. This analysis involves a comparison between the intervention and control groups, based on data obtained through mean tests, ANCOVA, and t-tests before and after the implementation of the intervention. This study aims to evaluate the effectiveness of the token economy system as a behavior

management method, as well as explore teachers' perceptions of its use in the classroom. With a comprehensive approach, the findings of this study provide an in-depth picture of the impact of the token economy system in the context of preschool education.

Inferential Data Analysis

The Effectiveness of Implementing the Token Economy System in Reducing Disruptive Behavior Problems Among Preschool Students

Table 1 shows the results of the ANCOVA test analysis to describe the effectiveness of the Implementation of the Token Economy System in reducing disruptive behavior problems among preschool students.

Table 1
ANCOVA analysis

	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected model	0.149a	2	0.075	1.365	0.316	0.281
Intercept	0.988	1	0.988	18.089	0.004	0.721
Pre-test	0.144	1	0.144	2.629	0.149	0.273
Group	0.046	1	0.046	0.837	0.391	0.107
Error	0.382	7	0.055			
Total	43.405	10				
Corrected Total	0.531	9				

R square =0.281 (Adjusted R Square=0.075)

The analysis of the study results showed that the token economy system had a moderate effect on reducing disruptive behavior among preschool students. Based on Table 1, the results of the ANCOVA analysis showed a value of F = 0.316 with a significant value of p = 0.391, which was not significant at the $p < 0.05$ level. This suggested that the implementation of the token economy system did not provide a statistically significant difference between the control group and the intervention group after the intervention was implemented. However, the Partial Eta Squared value = 0.107 reflected the moderate contribution of this system to the change in students' disruptive behavior, while the R squared value = 0.281 showed that this model only explained a small part of the variance in disruptive behavior.

The effect size did not have a large effect, however, the explanatory power was relatively small which implies that the Token Economy System is beneficial but should not be considered as a stand alone intervention. Studies in the past have indicated that combining token economies with other behavioral management strategies, such as social reinforcement, instruction in self regulation and individualized behavior support plans are most effective (Smith et al., 2022). To this end, the effective duration of the intervention may have been reduced due to its short period of implementation (only 20 school days) and the disparity in reinforcement delivery from one teacher to another. Further research is also warranted to test if a longer intervention period or teacher training on reinforcement consistency or combination with additional behavioral interventions can improve the intervention’s impact on preschoolers’ disruptive behavior.

Changes in Disruptive Behavior among Preschool Students before and after the Implementation of the Token Economy System

Next, paired t-test were also used for changes in disruptive behavior among preschool students before and after the implementation of the token economy system between the control and intervention groups, as shown in Table 2 and Table 3.

Table 2
T-test analysis (pre-test)

Group	Mean	Standard deviation	Mean Difference	t	df	Sig. (2-end)
Intervention (n=5)	3.34	0.866	-1.16	-2.802	8	0.023
Control (n=5)	2.17	0.335				

N=10

Table 3
T-test analysis (post-test)

Group	Mean	Standard deviation	Mean Difference	t	df	Sig. (2-end)
Intervention (n=5)	2.09	0.135	-0.047	-0.290	8	0.779
Control (n=5)	2.04	0.336				

N=10

In Table 2, the results of the pre-test t-test showed that there was a significant difference between the control and intervention groups before the intervention, with the mean value of the intervention group (3.34) being higher than the control group (2.17) at a significant level of p = 0.023. This difference indicated that students in the intervention group had higher levels of disruptive behavior before the implementation of the token economy system. However, the results of the paired t-test for the post-test (Table 3) showed no significant difference between the intervention group (Mean = 2.09) and the control group (Mean = 2.04) after the implementation of the token economy system, with a significant value of p = 0.779. This finding suggests that although there was a slight decrease in disruptive behavior for the intervention group, the difference was not large enough to be considered significant.

This finding implies that the intervention group's slightly decreased disruptive behavior resulted from no statistical significance due to possible reasons including short intervention period, erratic individual student responsiveness, and factors outside the classroom. The presentation suggests that behavioral interventions such as the token economy system need to be reinforced for even a longer and sustained period to result in considerable changes (Hayes et al., 2023). In addition, different fidelity of teacher implementation and student motivation may have led to mixed effects, resulting in a smaller impact of the intervention overall. In addition, the control group also had some reduction in disruptive behavior, which may be contributed to other factors than the token economy system, such as general classroom management practices or natural behavioral adaptation (Kim et al., 2021).

Interview Analysis

Teachers' Perceptions of the Implementation of a Token Economy System to Manage Disruptive Behavior among Preschool Students

Interviews with five teachers revealed that the token economy system was effective in increasing preschool students' motivation, discipline, and engagement in the teaching and learning process. Teachers agreed that the system helped reduce disruptive behavior, encourage positive behavior, and create a more harmonious classroom environment. Rewards such as stickers, praise, and small toys were appropriate for preschool students as they increased their enjoyment and motivation to behave well. However, challenges were also identified, including the difficulty of ensuring that students consistently understood and followed the system, as well as the need for teachers to provide repeated reminders about the system and ensure fair distribution of tokens. Teachers reported clear positive behavioral changes, such as increased discipline and compliance, but the degree of change varied by individual. Although the system had a positive impact, teachers recommended consistent implementation and modification of rewards to ensure continued effectiveness.

Teacher interview analysis revealed that token economy works best when teachers structure reinforcement systems and make them adaptable according to student needs. Most teachers documented positive student engagement yet they acknowledged the necessity of tailored reinforcement approaches which should match different learning speeds of students. One teacher stated, "Some children responded quickly to token rewards, while others needed additional support and tailored reinforcements." The system will probably achieve better results if teachers use different reinforcement approaches that combine peer recognition with verbal encouragement. Additionally, teachers noted that consistent implementation and clear communication of reward expectations were crucial, with one stating, "Without consistency, students lose interest, and the system becomes less effective over time."

Overall, although token economy systems show potential in reducing disruptive behavior, their effectiveness is inconsistent and depends on factors such as the level of student understanding of the system, as well as consistent implementation by teachers.

Discussion

Research results show that the token economy program needs improved implementation methods and clearer system understanding from the students. Knocking student comprehension uniformity posed a major challenge since it limited their ability to maintain consistent engagement with the token economy framework. The inconsistent understanding of directions by preschoolers makes sense because their cognitive abilities and executive function skills remain in development (Hayes et al. 2023). Students who did not understand delayed reinforcement needed repeated teacher interventions to keep themselves engaged in the classroom activities. Preschoolers who heavily focus on immediate rewards likely needed a different exchange method than the delayed exchanges of the token system since their developmental stage may have been mismatched (Kim et al., 2021).

The examination data indicated a meaningful pre-test difference based on t-test ($p=0.023$) yet did not display a comparable difference in post-test ($p=0.779$). Statistics failed to show noticeable behavioral changes following the implementation of the token economy intervention. The research community establishes that token economy systems achieve

optimal success when applied with secondary behavior management strategies that encompass social-emotional learning activities and both teacher modeling and home-based parent reinforcement (Smith et al., 2022). Emotional regulation training should be included with self-control development education to increase the lasting effect of the intervention according to Magfiroh and Jamaluddin (2024).

Multiple teachers assessed the token economy system showed it increased student discipline and motivation while boosting classroom engagement in accordance with Kim et al. (2021) reinforcement research. One teacher stated, "The system helped create a more focused and enjoyable classroom environment by providing structure and incentives for students to follow rules." Young learners who favored tangible reinforcement through stickers and small toys showed the strongest positive outcome from these rewards. The students proved difficult to keep focused so teachers made many attempts at reminding them about the system indicating that strict system execution is key for success.

Research findings demonstrate that effectiveness of behavior modification depends on what type of reward teachers provide to students. Child development experts documented short-term effects of physical awards when students got stickers or toys yet their outcomes differed in extended periods. The description of token reinforcers in research by Smith et al. (2022) indicates effectiveness depends on reward worth and reinforcement timing. The research design lacked direct tests of different reward versions so it could explain the overall outcomes of the intervention not reaching statistical significance. Additional research should study the divergent effects that verbal praises as intrinsic rewards show compared to toys as extrinsic rewards when retaining behavior patterns over time.

The project faced difficulties in maintain ideal token distribution practices alongside sustained maintenance of newly adopted behavioral patterns. The teachers observed students who reverted to disruptive behavior during the 20-school-day period when using the token economy system which indicates this approach may not lead to long-term behavior transformation. Magfiroh and Jamaluddin (2024) validate that interventions work best when rewards enable participant choice and family members actively participate in reward processes to achieve better results. The involvement of parents in continuing the token economy at home would ensure consistent behavior reinforcement across environments to create long-term benefits.

Overall, the findings of this study indicate that the Token Economy System has the potential to reduce disruptive behavior among preschoolers. However, its effectiveness requires consistent implementation, appropriate selection of rewards, and additional support to ensure student understanding of the system. The findings also indicate that the system is more effective when combined with other approaches that support students' social and emotional learning. Additional training for teachers, guidance for students, and parental involvement are important steps to ensure effectiveness and lasting behavior change.

Conclusion

This study aims to identify the effectiveness of the Implementation of the Economic Token System in reducing disruptive behavior problems among preschool students. This study found that the implementation of the economic token system in managing disruptive behavior

among preschool students has varying effects. Preschool students who are not yet mature enough to understand the concept of rewards require a more immediate and continuous method to ensure that they can understand the relationship between behavior and rewards. In addition, the diversity in students' needs and complex behaviors also shows that the economic token system cannot meet all the behavioral needs of students, especially those with more complex behavioral problems. Although this study found that the economic token system did not have a significant impact in reducing disruptive behavior overall, it still showed positive changes in the behavior of certain students, especially those who are easily distracted by their environment. The implementation of the economic token system functions as a tool to reward positive behavior, which then increases students' motivation to continue to behave well. Through this method, a more interesting and effective learning environment can be created.

Theoretical and Contextual Significance

This research advances the knowledge of token economy systems as applied in the management of disruptive behavior in Malaysian preschools, where systematic behavioral management is still largely non-existent. Based on Skinner's Operant Conditioning Theory, the study attempts to shed light on the unique challenges and effectiveness of token reinforcement within large class settings where the teacher training is inadequate and there is over dependence on traditional forms of discipline (Kasiveloo et al., 2022). This study, unlike others conducted in the Western world, which has applied token economies within the realms of behavioral management as advanced (Hayes et al., 2023) note, focuses on specific ones such as inconsistent discipline methods, differential student attention and responsiveness, and brief time available for intervention which stifled behavioral changes over time. While the results point to positive changes of moderate proportion in troublesome behavioral tendencies, the statistical results indicate that token reinforcing by itself is unlikely to work to bring about sustained behavioral changes, hence the necessity of more prolonged application, teacher training, and the use of other methods such as emotional regulation training (Irsahamida et al., 2022). This study offers suggestions on adapting the token economy for use in Malaysian preschool settings to make it culturally appropriate and practicable for teachers dealing with children with different problems.

References

Abdullah, A. G. & Aziz, A. R. A. (2009). *Menguruskan Tingkah Laku Pelajar*. PTS Professional Publishing Sdn.Bhd.

Abdullah, R., Menon, N. & Ahmad, S. (2007). *Panduan Kurikulum Prasekolah*. PTS Professional Publishing Sdn.Bhd.

Abidan, A. M. (2022). Penerapan Teori Belajar Behaviorisme dalam Pembelajaran. *Jurnal Iain Bone*. p-ISSN: 1979-2751, e-ISSN: 2685-5712, 15(1): 1-8.

Abu, S. (2007). *Menjadi Guru Tadika*. PTS Professional Publishing Sdn.Bhd.

Akbar, W. (2023). Penerapan Teknik Extinction dan Punishment untuk Mengurangi Perilaku Agresif Anak Usia 4-6 Tahun. *Jurnal Pendidikan Tambusai.* p-ISSN: 2614-6754, e-ISSN: 2614-3097. 7(3): 21647-21662.

Aksoy, P. (2020). The challenging behaviors faced by the preschool teachers in their classrooms, and the strategies and discipline approaches used against these behaviors: The sample of United States. *Participatory Educational Research*. https://doi.org/10.17275/per.20.36.7.3

Aleng, P. (2014). *Transformasi Pendidikan Pembangunan Modal Insan*. PTS Professional Publishing Sdn.Bhd.

Amalo, I. G. & Widiastuti, A. A. (2021). Pengaruh Penggunaan Token Ekonomi dalam Menurunkan Perilaku Disruptif Anak Usia 4-5 Tahun. Jurnal Obsesi: *Jurnal Pendidikan Anak Usia Dini*. e-ISSN: 2549-8959, p-ISSN: 2356-1327. 5(1):500-507.

Amin, S. F. M., Sharif, S., Madjapuni, M. N. & Mariappan, M (2020). Implementasi Teori Pelaziman Operan Skinner dalam Pembangunan Modul Robot M-Solat*. International Journal of Education, Pschology and Counseling (IJEPC)*. e-ISSN:0128-164X. 5(35):38-48. DOI: 10.35631/IJEPC.535005.

Andrade, C. (2020, December 17). The Inconvenient Truth About Convenience and Purposive Samples. *Indian Journal of Psychological Medicine*, 43(1), 86–88. https://doi.org/10.1177/0253717620977000

Atika, A., Hastiani, M. P., & Hendrik, M. P. (2023). *Modifikasi Perilaku Teknik Dan Penerapan Menjadi Pribadi Ideal Di Era Post Modern*. Mega Press Nusantara.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2):77-101. https://doi.org/10.1191/1478088706qp063oa

Braun, V. & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11(4):589-597.* https://doi.org/10.1080/2159676X.2019.1628806

Chen, Z. (2023). The influence of school's reward systems on students' development. *Journal of Education, Humanities and Social Sciences*, *8*, 1822-1827.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). SAGE Publications.

Dali, M. H. (2009). *Pengurusan Bilik Darjah untuk Guru*. Penerbitan Universiti Utara Malaysia.

DeJager, B., Houlihan, D., Filter, K. J., Mackie, P. F. E., & Klein, L. (2020). Comparing the effectiveness and ease of implementation of token economy, response cost, and a combination condition in rural elementary school classrooms. *Journal of Rural Mental Health*, 44(1), 39–50. https://doi.org/10.1037/rmh0000123

Ding, Y. C. (2018). Keberkesanan Kaedah Token Ekonomi Untuk Meningkatkan Pencapaian, Motivasi Dan Penglibatan Murid dalam Pembelajaran Bahasa Melayu Di Sekolah.

Don, Y., Daud, Y., Ghazali, M. I. & Yusoff, Z. J. M. (2015). *Kompetensi emosi dan kualiti guru pendidikan prasekolah di Malaysia*. Pernerbit Universiti Utara Malaysia.

Donaldson, J. M. & Fisher, A. B. (2017). Effects of the Good Behavior Game on Individual Student Behavior. *American Phuchological Association*. 17(3):207-216. http://dx.doi.org/10.1037/bar0000016

Farihah, I. U. & Alfahani, A. P. E. (2021). Pengaruh Modifikasi Perilaku Penghapusan pada Perilaku Membanting Pintu & Melempar Barang Saat Marah Pada Anak Usia 5-6 Tahun. *Jurnal Lentera Anak*. 2(2): 43- 60.

Fritza, T. (2019). B.F Skinner's Theory of Performance Excellence: A Radical Behavioral Perspective [Doctoral Paper and Masters Projects, University od Denver].

Griffiths, A. & Jones, K. (2012). *101 Senarai Penting Menguruskan Tingkah Laku di Sekolah Rendah*. The Continuum International Publishing Group.

Hasan, S. & Noh, A. S. C. (2005). *Panduan Merancang Aktiviti Prasekolah*. PTS Professional Publishing Sdn.Bhd.

Hayes, L., Dufrene, B., Taylor, C., Olmi, D., Troughton, L., Dart, E., & Weaver, C. (2023). The Effect of Token Economies on Student Behavior in the Preschool Classroom: A Meta-Analysis. *Perspectives on Early Childhood Psychology and Education*. https://doi.org/10.58948/2834-8257.1034.

Heiniger, S., Tucker, K., Hott, B. & Randolph, K. (2022). Classroom reinforcement systems: Using token economies to foster independence. *Beyond Behavior, 31*(3):151-162. https://doi.org/10.1177/10742956221108359

Hussin, S., Marzuki, S. C., Razak, A. Z. A., Som, H. M. & Ranee, A. (2005). *Pentadbiran dalam Pembangunan Pendidikan*. PTS Professional Publishing Sdn.Bhd.

Irsahamida, S., Lutfiyani, E., & Jamaluddin, M. (2022). Effectiveness of behavior modification through token economy techniques to increase responsibility in early childhood. *TAZKIYA: Journal of Psychology*. https://doi.org/10.15408/tazkiya.v10i1.20773

Ismail, N. H. (2022). Meningkatkan motivasi belajar menggunakan token ekonomi dalam kalangan murid berkeperluan pendidikan khas. Amalan Terbaik Dalam Pendidikan Khas dan Inklusif (Negeri Melaka). 1

Ismail, R. A. M. & Othman, M. I. (2020). *Cabaran Pengurusan Disiplin Sekolah Masa Kini*. Persatuan Penerbit Buku Malaysia.

Jalil, D. A. & Rani, I. F. A. (2023). Kefahaman dan Amalan Guru dalam Pengurusan Tingkah Laku Disruptif Kanak-kanak Taska di Kuala Lumpur. *Jurnal Pendidikan Awal Kanak-kanak Kebangsaan*. ISSN:2289-3032, e-ISSN:2550-178X. 12(1):99-110.

Jimenez, J. L., Valenzuela, A. V., Anguera, M. T. & Suarez, A. D. (2016). Disruptive behavior among elementary students in physical education. Springer Plus. 5(1154):1-10. DOI:10.1186/s4006401627646

Kasiveloo, M., Tan, K., Said, N., Philip, B. & Rashid, S. (2022). The use of the token economy in ESL classrooms during the COVID-19 pandemic. *Theory and Practice in Language Studies, 12(12):25717-2527.* https://doi.org/10.17507/tpls.1212.03

Katmana, Z., Yasin, M. & Tahar, M. M. (2016). Penggunaan Peneguhan Positif: Pujian dan Token Ekonomi untuk Modifikasi Tingkahlaku Murid Pendidikan Khas 'Slow Learner'. Prosiding Seminar Modifikasi Tingkah Laku Pendidikan Khas (Bermasalah Pembelajaran) Peringkat Negeri Johor. 1.

Khasinah, S. (2017). Managing Disruptive Behavior of Students in Language Classroom. *Journal of Language, Education, and Humanities.* 4(2):79-89. http://dx.doi.org/10.22373/ej.v4i2.1661

Kikiany, G. (2017). Token Ekonomi Untuk Mengurangi Perilaku Menentang Pada Anak Oppositional Deeant Disorder: Studi Kasus. *Procedia: Studi Kasus Dan Intervensi Psikologi, 5*(2).

Kyngas, H. (2019). Qualitative Research and Content Analysis*. The Application of Content Analysis in Nursing Science Research*, 3–11. https://doi.org/10.1007/978-3-030-30199-6_1

Lee, L. W., Bonadei, S., Yong, L. & Chua, M. (2016). *Program Pengurusan Tingkah Laku Kanak-kanak Berkeperluan Khas.* Penerbitan Universiti Sains Malaysia. ISBN: 978-967-007-4, e-ISBN: 978-967-461-007-7.

Leeder, T. M. (2022). Behaviorism, Skinner and Operant Conditioning: Considerations for Sport Coaching Practice. *A Journal for Physical and Sport Educatiors*. 35:27-32. https://doi.org/10.1080/08924562.2022.2052776.

Leflot, G., Lier, P., Onghena, P. & Colpin, H. (2010). The Role of Teacher Behavior Management in the Development of Distruptive Behaviors: An intervention Study with the Good Behavior Game. *Journal of Abnormal Child Psychology*. 38(6):869-82. DOI:10.1007/s10802-010-9411-4.

Magfiroh, N. H., & Jamaluddin, M. (2024). Efektivitas Token Ekonomi dalam Menurunkan Agresifitas pada Remaja. *MOMENTUM: Jurnal Sosial dan Keagamaan*, *13*(2), 99-111.

Mahamod, Z., Said, A., Johari, D., Yunus, N. M., & Husin, N. M. (2023). The Implementation of Reward Techniques and their Effectiveness to Attract Students in Learning Malay Language during Learning and Teaching at Home. *Melayu: Jurnal Antarabangsa Dunia Melayu*, *16*(2), 315-336.

Mahmor, M. & Bakar, K. A. (2021). Kesan Intervensi terhadap Tingkah Laku Disruptif dalam kalangan kanak-kanak Prasekolah. *Jurnal Dunia Pendidikan*. e-ISSN: 2682-826X, 3(1): 442-453.

Marpaung, H. S. F.(2021). *Pendidikan Prasekolah*. Perdana Publishing.

Miller, C., Smith, S. & Pugatch, M. (2020). Experimental and quasi-experimental designs in implementation research. Psychiatry Research, 283. https://doi.org/10.1016/j.psychres.2019.06.027.

Mottan, K. (2019). Kesan KG (Kineasthetic, Gamification) terhadap Tingkah Laku Disruptif dalam Kalangan Kanak-kanak (ADD/ ADHD) Sekolah Rendah Masalah Pembelajaran. *Mualim Journal of Social Science and Humanities*. e-ISSN: 2590-3691, 3(4): 398-405). DOI: https://doi.org/10.33306/mjssh/30.

Nor, M. M. (2005). Profil Prasekolah: Senario Malaysia dan Ke Arah Pendidikan Awal Kanak-kanak. Hussin, S., Marzuki, S. C., Razak, A. Z. A., Som, H. M. & Ranee, A. *Pentadbiran dalam Pembangunan Pendidikan*. PTS Professional Publishing Sdn.Bhd.

Noviyanti, M. W., & Wahyuningsih, M. R. (2024). Penerapan Token Ekonomi untuk Meningkatkan Kedisiplinan dan Kemandirian Anak Usia 4-5 Tahun. *Jurnal Inovasi, Evaluasi dan Pengembangan Pembelajaran (JIEPP)*, *4*(1), 141-148.

Olivares, R. R., Pino, M. J. & Herruzo, J. (2010). Reduction of Disruptive Behaviors using an Intervention Based on the Good Behavior Game and They Say-Do-Report Correspondence. *Journal Psychology in the School.* 47(10). 47(10):1046-1058. DOI:10.1002/pits.20523.

Ramadhani, J. S., & Aulia, P. (2020). Keunggulan Token Economy untuk Meningkatkan Perilaku Antri pada Anak Usia Dini. *Jurnal Pendidikan Tambusai*, *4*(2), 1111-1119.

Rijal, F. & Dahlan, T. (2020). The design of behavior modification program with token economy in elementary school. *Proceedings of the International Conference on*

Educational Psychology and Pedagogy (ICEPP 2019), 106-109. https://doi.org/10.2991/assehr.k.200130.091

Rosdiana, A. M. (2022). Teknik Token Ekonomi: Teori dan Aplikasi. *Jurnal Bimbingan dan Kaunseling Islam.* e-ISSN: 2776-8902, p-ISSN:2775-8664, 2(2):42-52.

Shaari, A. S. (2022). *Kaedah Penyelidikan Pendidikan Kuantitatif*. UUM Press.

Sehat, S. M. (2015). Kesan token ekonomi, peneguhan dan peraturan terhadap perubahan tingkah laku disruptif dalam kalangan kanak-kanak (IR).

Skinner, B. F. (1953). *Science and Human Behavior*. The Macmillan Company.

Smith, J., Guimond, F., St-Amand, J., Olivier, E. & Chouinard, R. (2022). "Keep calm and earn more points": What research says about token economy systems. *Theory Into Practice*, 61(4):384-394. https://doi.org/10.1080/00405841.2022.2107808

Tar, D. J. A. & Mahmud, M. I. (2021). Minat, Tingkah Laku Disruptif dan Gaya Pembelajaran Murid Bermasalah Pembelajaran di Sekolah Rendah. *Jurnal Dunia Pendidikan*. e-ISSN:2682-826X, 3(4):49-64.

Triwahyuni, E., Lolongan, R., Riswan, R. & Suli, S. (2019). Peranan Konsep Teori Behavioristik B. F. Skinner terhadap Motivasi dalam Menghadiri Persekutuan Ibadah. 1-10. DOI: https://doi.org/10.31219/osf.io/kunsh

Veloo, K. M. (2021). Mengenal Pasti Tingkah Laku Kanak-kanak Melalui Catatan Anekdot: Kajian tindakan Di Prasekolah. *Jurnal Penyelidikan Dedikasi*. ISSN:2710-6810, 19(1):91-118.

Wardani, A. D., Gunawan, I., Kusumaningrum, D. E., Benty, D. D. N., Sumarsono, R. B., Nurabadi, A., & Handayani, L. (2020, November). Student learning motivation: a conceptual paper. In *2nd Early Childhood and Primary Childhood Education (ECPE 2020)* (pp. 275-278). Atlantis Press.

Zurali, N. (2022). *Mengubah Tingkah Laku Disruptif Murid Berkeperluan Pendidikan Khas melalui Pelaksanaan Video Modeling*. Amalan Terbaik dalam Pendidikan Khas dan Inklusif. ISBN: 978-967-15154-4-0, 150-161.