The Effectiveness of Behavioral Counseling With Token Economy and Behavior Contract Techniques to Reduce Academic Procrastination

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Article Info

Abstract

Academic procrastination makes students' learning outcomes low. As a result, they may not make it to the next level or even be expelled. Accordingly, this study was intended to examine the effectiveness of behavioral counseling with token economy and behavior contract techniques to reduce the academic procrastination of the students of SMP IT Insan Cendekia Semarang. The study was experimental and used repeated measure design. The subjects were 16 students chosen using purposive sampling. Further, the data of this study were collected through students' academic procrastination scale. After the analysis, there found that the experimental group with behavior contract technique gained higher reduction than the token economy group. Thus, counselors are suggested to apply token economy, and behavior contract in guidance and counseling services.

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INTRODUCTION

Students are expected to finish all tasks and responsibilities they carry to obtain satisfactory knowledge and scores. However, not all of them finish these tasks because of procrastination. In psychological terms, procrastination behavior in academic tasks is called as academic procrastination. Solomon and Rothblum (1984) define procrastination as a tendency to delay to both starts and finish the whole tasks and prefer to do useless activities. As a result, the tasks are obstructed, never done in time, and make students often late to attend the class.

Procrastination is done by anyone in adolescent phases, such as junior high school (SMP) students. Both male and female students have no difference in the level of procrastination. It was revealed by Solomon & Rothblum (1984); Onwuegbuzie (2004); Akinsola et al (2007); Konovalova (2007); -=8o7Aitken's study (2009) found that almost 25% adolescences consider procrastination as a common or serious problem. In addition, Desandi (2007) in his study explains that 47% of students of the respondents (78 students) practice academic procrastination. Nitami (2015) mentions that the level of students' procrastination at SMP N 25 Padang is in the high level with the percentage of 52%. Also, Zakiyah, et al (2010) in their study argue that the level of academic procrastination by SMPN 3 Jombang students were varied, namely 13.4% in fair category, and 1.03% in high category. Munawaroh (2017) in her study concludes that the levels of academic procrastination at SMP Muhammadiyah 9 Yogyakarta are 17.2% in high category, 77.1% in fair category, and 5.7% in low category. Meanwhile, Anisa (2018) found 32.84% SMA N Makassar students practice academic procrastination.

Procrastination gives concrete and emotional consequences, such as losing opportunities, and time, lack of achievement, guilt, stress, frustration, lack of responsibility (Sia, 2006; Laforge, 2005; Ramadan, 2016).

Academic procrastination has the following characteristics: delay to do writing tasks, delay to do examination preparation, delay to do reading tasks, delay to do administrative tasks, delay to attend a meeting, delay to do the whole academic tasks (Solomon and Rothblum, 1984).

Binder (2000) mentions several possible interventions to reduce academic procrastination, for example, psychodynamic counseling, behavioral counseling, and cognitive counseling. Behavioral approach is directed to gain new behaviors, remove maladaptive behaviors, and strengthen as well as defend the desired behaviors (Corey, 2007: 196).

Christopher's study (2013) explains that the token economy is considered to be an effective method for management in various settings. Aljuhaish (2015) argues that a token economy is the most effective method to manage classroom behavior, and improve students' motivation. Their studies findings cover procrastination areas, such as learning tasks, reading additional materials and exams preparation. When students' motivation is high automatically, the students will not do academic procrastination. Besides, Mujiyati's study (2015) concludes that token economy technique is proved effective to reduce university students' academic procrastination. It is because token economy focuses on the behaviors that individuals must do to meet the designated targets using positive reinforcements.

Another behavior modification intervention possible to apply is behavior contract technique. Diaz' study (2010) shows that behavior contract contributes substantial reduction to maladaptive behaviors. Cutrell (2010) mentions that behavior contract technique is effective to be a behavior management technique for various kinds of students. Daroji (2016) and Wahyudi (2017) conclude that behavioral counseling with behavior contract technique is effective to improve students' discipline in attending class. Students who are not discipline are those who

cannot manage their time or in other words, they experience academic procrastination.

Regarding the phenomena and the findings of previous studies on academic procrastination, the researchers attempted to reveal academic procrastination practices that covered writing task discipline, learning tasks, reading tasks, administrative tasks, meeting attendance, and overall academic activities in broader areas. Besides, the use of reward in behavioral counseling with token economy, and behavior contract was aimed at eliminating dependence on any behaviors that are able to reduce academic procrastination. There was also psychological reinforcement to balance the material reinforcement. This study was expected to provide contribution to related institutions, such as school or guidance and counseling teachers in reducing academic procrastination using behavioral counseling with token economy and behavior contract techniques.

METHODS

This study was experimental and involved repeated measure design. It examined one individual sample more than once in the same dependent variables. This was done to test the effectiveness of behavioral counseling with token economy and behavior contract techniques.

The population in this study was 87 SMP students. It included 16 students selected using purposive random sampling technique. For more, the researchers involved these students in the following procedure: performing pretest assessment to pick up the sample to be the subjects in the experimental group. The selected students were those who gained the high score in academic procrastination based on the classification.

In this study, the behavioral counseling was carried out in four steps: assessment, goal setting, technique implementation, evaluation, and termination. After the researchers obtained the subjects, treatment (X) with token economy was given 6 times to group A with 8 subjects, and behavior contract to group B with 8 subjects with the duration of 40 minutes. The details of the meetings are explained in the following table 1.

Table 1. Counseling Implementation

Sessions	Agenda	Objectives
1	Rapport & Assesment	Able to build relationship with counselees, give explanation, understand the goals, do counseling general procedures, apply the principle of confidentiality and the time requirement. The counselees are able to identify and describe the target's behavior, find out the cause and explain the impact of the problem.
2	Goal setting	The counselees are able to comprehend problems being faced. The objectives are behavior changes & determination of solutions and aims of self-change.
3	Technique Implementation	The counselees perform behavioral monitoring tasks, and comprehend the implementation of the counseling with token economy, and behavior contract.
4	Follow-up Treatment	The researchers are continuing the implementation of behavior contract technique that has been implemented in the previous meeting. Review whether there are changes or not after treatment
5	Follow-up Treatment	Review whether the counselees has started to make decision that is very positive and valuable for them.
6	Evaluation and termination	Provision of reinforcement The counselees explain what they feel after joining the counseling, and decide what they will do in the future Evaluate the overall results of counseling and termination

The procrastination data were measured using academic procrastination scale by Solomon and Rothblum (1984). This scale consists of 41 items covering six aspects of academic procrastination. Its R-table values for N = 32 have 5% significant level= 0.349 and 1% significant level= 0, 449, and consist of six academic areas as follows: 1) writing a term paper, 2) studying for an exam, 3) keeping up with weekly reading assignments, 4) performing administrative performance, 5) attending class, 6) overall academic performance. Before the scale was distributed to the respondents, it went through expert validator. Once the process was done and the researchers got permission from the expert validators, inventory was used to distribute the scale to the sample.

The scale scores were interpreted using likert scale. In details, there were two kinds of items used in the scale, namely positive and negative items. The positive items were scored 5 for very appropriate answer to 1 for very inappropriate answer. On the other hand, the negative items scoring covered 1 for very appropriate answer to 5 for very inappropriate answer.

The data analysis was done using repeated measure one way ANOVA and mixed ANOVA tests. The repeated measure one way ANOVA test was aimed at comparing repeated measurement on the same subjects, namely pretest, posttest, and follow up in the experimental group. Meanwhile, mixed ANOVA test was used to determine the comparison of effectiveness between the experimental group.

RESULTS AND DISCUSSION

Initially, the pretest data of the token economy experimental group gained the value of 171.50 or categorized as "very high" with the standard deviation of 11.74. After the group was treated using behavioral counseling with token economy technique, the initial mean data reduced to 148.12 and 131.12 in posttest and follow up with standard deviation of 13.52 and 6.85 respectively. These data showed that the academic procrastination reduced from "high" to "fair".

The mean of behavior contract group in pretest was 165.00 or categorized as "high" category with the standard deviation of 11.74. After the group received the intervention of behavioral counseling with behavior contract technique, the initial data reduced to 131.50, and 92.87 (posttest, and follow up) with the standard deviation of 8.75 and 4.51 respectively. Thus, the academic procrastination level of the group reduced from "high" to "fair" category.

To know the details of mixed ANOVA analysis of the descriptive characteristics of academic procrastination variable in pretest, posttest, and follow-up, the following table 2 is presented.

Table 2. The Descriptive Characteristics of Experimental Groups Academic

Groups	Pretest		Posttest		FollowUp	
	M	SD	M	SD	M	SD
TE	171.5	11.2	148.2	13.5	131.1	6.8
KP	165.0	11.7	131.5	8.1	91.5	4.4
M_{time}	168.25		139.81		111.31	
	SD=11.60		SD=13.95		SD=21.20	

Table 3. The Results of Mixed ANOVA Analysis

Effects	F	Df	P	η2p
Time	212.09	2.28	<0.01	0.93
Techniques	30.37	1.14	<0.01	0.99
Time*Techniques	18.85	2.28	<0.01	0.57

By referring to table 2, the mean of token economy group in pretest gained (M = 171.50, SD = 11.23), posttest (M = 148.25, SD = 13.52) and follow-up (M = 131.12, SD = 6.85), while the mean of the contract behavior group in pretest gained (M = 165.0; SD = 11.7), posttest (M = 131.5, SD = 8.1) and follow-up (M = 91.5, SD = 4.4).

When the main effect of time is observed, the experimental group gained significant reduction of academic procrastination (F (2.28) = 212.09, p <0.01, η2p = 0.93). The effect of time at the time of measurement showed the details of reduction in pretest (M = 168.25, SD = 11.60, posttest (M = 139.81, SD = 13.95) and follow-up (M = 111.31, SD = 21.20).

The results of main effect on the techniques used to reduce procrastination in experimental group revealed a significant difference (F (1.51) = 30.37, p <0.01, η2p = 0.99). According to these results, the differences in token economy and behavior contract techniques in reducing the academic procrastination of the experimental group were (M = 150.29, SD = 11.70) by the behavior contract, and (M = 100.30, SD = 48.91) by the token economy. Therefore, behavior contract was more effective to reduce the academic procrastination of the students of SMP IT Insan Cendekia Semarang.

Table 4. The Pairwise Comparison of Time Effects

Time Asisment	Token Economy			Behavior Contract		
	MD	SE	p	MD	SE	P
Pretest -postest	23.4	3.2	<0.01	33.5	4.1	<0.01
Pretest - followup	40.4	3.5	<0.01	73.5	5.2	<0.01
Postest - followup	17.0	3.1	<0.01	40.0	3.9	<0.01

Table 4. shows that changes in token economy group academic procrastination at the time of pretest to posttest was (MD = 23.4, SE = 3.2, p <0.01), pretest to follow-up was (MD = 40.4, SE = 3.5, p <0.01), and posttest to follow-up was (MD = 17.0, SE = 311, p <0.01). Meanwhile, the other group gained changes at the time of pretest to posttest of (MD = 33.5, SE = 4.1, p <0.01), pretest to follow-up of (MD = 73.5, SE = 5.2, p <0.01), and posttest to follow-up of (MD = 40.0, SE = 3.9, p <0.01).

Furthermore, the comparison of both group from pretest to posttest, and follow up can be seen in table 5.

Table 5. The t Test Results of Token Economy and Behavior Contract Techniques

Measurement Time	T	df	P
T_1	1.131	14	p>0.05
T_2	2.919	14	p<0.01
T_3	13.753	14	p<0.01

According to table 4., the t test results of token economy and behavior contract at the time of pretest showed no significant difference (t (14) = 1,131, P> 0.01). On the other hand, the results in posttest revealed significant difference (t (14) = 2,919, p <0.01) and at the time of follow-up there happened a significant difference again (t (14) = 13.753, p <0.01).

Regarding the data of mean, test within subject effect, and test between subject from repeated measure test, it was concluded that token economy and behavior contract techniques implemented to the behavioral counseling was effective to reduce academic procrastination. However, when it is deeply observed in terms of mean difference from pairwise comparison, the behavior contract technique was more effective than token economy technique. The effectiveness of both techniques is displayed in figure 1.
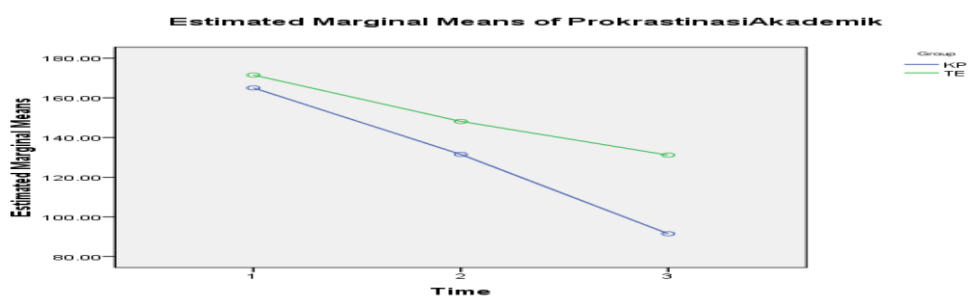
Figure 1. The Comparison of Academic Procrastination by Token Economy and Behavior Contract Techniques

Another test carried out by the researchers was time interaction test. Through this test, the interaction between techniques and academic procrastination was found to have significant effect (F (2.28) = 18.85, p <0.01, η2p = 0.57). It indicated that there was an interactional effect by behavioral counseling with token economy and behavior contract in reducing students' academic procrastination.

In a broad outline, the token economy group and behavior contract group contributed to the reduction of the procrastination. However, if carefully observed, the blue line of behavior contract group continuously showed reduction in each measurement. Oppositely, the reduction in the green line of token economy group had got no similar result to the previous technique. Therefore, the behavior contract technique was the intervention that was more effective than the token economy technique.

This study intended to examine the effectiveness of the behavioral counseling with token economy and behavior contract techniques. Based on the results, the procrastination experienced reduction after the treatments were given. It showed that the implementation of behavioral counseling with token economy and behavior contract techniques was already in accordance with the procedures, and effective to solve students' procrastination problems. This is in line with the aim and function of individual counseling, namely problem solving (Mugiarso, 2009:64)

Based on the data calculation, the behavior contract technique performed better at reducing students' academic procrastination than the token economy technique. It was concluded that behavior contract technique was effective to reduce students' academic procrastination in the experimental group than the other group.

The findings implied that in dealing with academic procrastination, it is important to prepare counseling strategies that are appropriate for the field. One of strategy that can be done is behavioral counseling as a counseling that has been proved to reduce academic procrastination and help students dealing with academic effects.

Token economy implementation to reduce academic procrastination is in line with Anggraini's study (2017) which found that token economy technique is effective to reduce the academic procrastination of the seventh grade students of SMP N 1 Bengkulu City. Other studies findings also revealed that token economy has successfully reduced the unwanted learning behavior, such as off task, and disruptive behaviors. (Chevalier, 2012). Besides, token economy also takes part in the improvement of discipline attitude (Rahmwati, 2015), learning achievement (Sari, 2015), and class participation (Boniecki & Moore, 2003)

Furthermore, Timothy's study (2013) mentions that behavior contract is able to improve commitment and motivation that lead to changes in performance. The changes cover self-report priorities and behaviors related to learning (homework and reading tasks), recording number attendances, and exams preparation. Widiyastuti (20160 in her study shows that the application of behavior contract

in counseling service affects the reduction of the academic procrastination of the students of grade VIII G of SMP Negeri 10 Magelang City. For more, Busmayaril (2018) revealed that behavior contract can make students who have an issue of truancy discipline. In this case, truancy is an element of meeting attendance tasks. Meanwhile, Chalimi's study (2012) conclude that behavior contract can motivate students to finish their homework. Here, homework is a part of writing task procrastination.

The findings of this study are also in accordance with the basic assumption of behavior by Skinner (in Alwisol, 2009: 320), namely: 1) behavior follows certain laws: 2) behavior can be predicted; 3) behavior can be controlled. Basically, behavioral counseling with token economy and behavior contract techniques were directed at the goal of obtaining new behaviors, eliminating maladaptive behavior, and strengthening and maintaining desirable behavior.

Based on studies related to academic procrastination, both techniques in this study were effective, but the most effective one was behavior contract technique. It was because the punishment in behavior contract is cleared, and finally made students more committed and consistent in the implementation.

CONCLUSIONS AND SUGGESTIONS

This study examined the effectiveness of behavioral counseling with token economy and behavior contract techniques to reduce students' academic procrastination. Both techniques worked well, but it was found that behavior contract performed better. It is because the behavior contract technique has clearer punishment consequence, and commitment.

An implication was made for the future implementation in guidance and counseling services, namely counselors should understand and accept counselees, be cooperative, and believe each other so that the counselees will be consistent and committed to the contract. Beside the treatment, the counselors can also observe

and supervise the development of counselees' behaviors during the provision of the treatment.

The future researchers are expected to advance the study on students' academic procrastination, covering the level of differences in procrastination based on gender and academic procrastination factors. It is said so because this study was only focused on reducing the procrastination. Additionally, the use of repeated measure design is expected to have longer time span for the second posttest (follow up) in order to reduce any possible procrastination which may appear.

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