

Self-management Strategy to Eliminate Academic Procrastination of Junior High School Students

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ABSTRACT

The common symptom experienced by junior high school students is academic procrastination. This study aims to examine the self-management strategy to eliminate of academic procrastination of junior high school students. Based on the research result the Manual of Self-management Strategy was developed in order to help counsellors and teachers can administrated easily. There are three combinations of techniques: (1) a combination of self-monitoring with self-reward techniques, (2) a combination of self-monitoring with stimulus-control techniques, and (3) a combination of self-monitoring with self-reward and stimulus-control techniques. The present experimental study with a pretest-posttest-control group design found that the combination of self-monitoring with stimulus-control techniques was most effective to eliminate academic procrastination of junior high school students (effect size: 1,87) while the other combination of techniques was less effective.

Keywords: procrastination, self-management, self-monitoring, self-reward, stimulus-control

INTRODUCTION

The common symptom experienced by junior high school students is academic procrastination. Procrastination is the act of unnecessarily postponing decisions of actions. For example, a person is procrastinating when they delay working on an assignment until right before its deadline for no reason, even though they know that it will be better for them to start earlier [1]. Academic procrastination as the knowledge that a student has to complete one or more tasks or administer any activity, such as writing a term paper, finishing a class project, completing a reading assignment, or preparing for examination, but lack motivation to do so within a specified time frame [2]. Academic procrastination also defined are students who are aware of what is required of them, are capable of doing it because the work is within their curricular experience and are attempting to do it but do not accomplish it [3]. Academic procrastination, a type of domain specific behaviour, refer to tendency of students to delay or postpone completing academic tasks, such as studying for an exam, doing homework, or writing an essay, even though the know they should perform these actions and have a specific deadline for completion [4].

Academic procrastination occurs when students postpone completion of activities, projects, and assignment unnecessarily. Such procrastination may create unnecessarily stress and anxiety for people when they attempt to complete their assignments with rush until the last deadline [5]. For students, procrastination is associated with a wide range of academic issues, such as worse exam scores, worse grade, having to repeat assignments, increase course of failures, increase course withdrawals, longer study duration, and increased likelihood of dropping out. For many students, academic procrastination is associated with dysfunctional learning outcomes such as low academic performance, low quality of academic work, lack of knowledge, time pressure, dropout, and lengthened course of study [6]. Accordingly, academic procrastination is often detrimental to those who engage it. Academic procrastination leads to frantic completion of assignments, usually at a lower level. Academic procrastination is also associated with low conscientiousness and self-regulatory failure [7][8]. Additionally, reasons for academic procrastination include factors such as fear of failure and aversiveness of the task, with no difference in study habits or time management [5]. Academic procrastination connected to negative functioning and risks to mental health. Student who procrastinates tend to have high level of anxiety as well as poor impulse control. Procrastination is even linked to physical illness.

A crucial question here is what strategies and techniques are effective to eliminate academic procrastination behaviour of junior high school students? It is important to answer this question because the development strategies offered by the experts to eliminate academic procrastination behaviour of junior high school students are still are general and recommendatory. The specific techniques and steps that can make counsellors or teachers easier to use them are still not offered clearly. This study concern to a self-management strategy that will be applied systematically to eliminate academic procrastination behaviour of junior high school students.

The self-management strategy is a process that individual perform in directing their behavior by employing a technique or a combination of techniques [9][10] to manipulate internal and external events [11]. Self-management is a form of behavioral change in which the process is mostly carried out by the concerned individuals, not directed or pushed by the counselor. Self-management is based primarily on the responsibility of individuals to act through the manipulation of internal and external events [9]. There are three techniques of self-management strategy, they are: (1) self-monitoring, (2) self-reward and (3) stimulus-control[9][10]. The present study applied three combined techniques to examine their effectiveness namely, (1) a combination of self-monitoring with self-reward techniques; (2) a combination of self-monitoring with stimulus-control techniques and (3) a combination of self-monitoring, self-reward and stimuli-control techniques.

Based on the above background, the present research problem be formulated into the following research questions: (1) How effective is the self-management strategy of self-monitoring combined with self-reward techniques to eliminate the academic procrastination behavior of junior high school students?; (2) How effective is the self-management strategy of self-monitoring combined with stimulus-control techniques to eliminate the academic procrastination behavior of junior high school students?; (3) How effective is the self-management strategy of self-monitoring combined with self-reward and stimulus-control techniques to eliminate the academic procrastination behavior of junior high school students?;

and (4) Which self-management strategy is the most effective of these combinations techniques to eliminate the academic procrastination behavior of junior high school students?

The objective of this study is to obtain the objective information of empirical evidence and to describe the effectiveness of self-management strategy to eliminate the academic procrastination behavior of junior high school students. The effectiveness of this self-management strategy will be compared between the combination of self-monitoring with self-reward techniques; the combination of self-monitoring with stimulus-control techniques; and the combination of self-monitoring, self-reward and stimulus-control techniques; also compared with the junior high school students who do not get treatment.

METHODOLOGY

This research involves two variables, they are (1) self-management strategy as an independent variable and (2) academic procrastination behavior as a dependent variable. The self-management strategy has three techniques, they are self-monitoring, self-reward and stimulus-control. In this study conducted by combining of the three techniques, so there are three technical combinations namely, (1) combination of self-monitoring with self-reward techniques; (2) combination of self-monitoring with stimulus-control techniques; and (3) combination of self-monitoring with self-reward and stimulus-control techniques. The purpose of combining these techniques is to gain the effective way to eliminate academic procrastination behavior as the target behavior [9]. The academic procrastination behavior in this study was developed by Ferrari [12] that covers four aspects: (1) procrastination to start and to complete of assignment, (2) slowly in carrying tasks, (3) the gap of time between planning and actual performance, and (4) conducting useless activities.

The subjects of this research were junior high school students. The samples were 30 people for each experimental group and control group, using multistage proportional random sampling technique. This number of samples was considered sufficient for statistical analysis in a causal-comparative form. In reference to a methodological principle, a statistical analysis in a comparative causal form requires minimally 15 subjects for each group [13][14].

To examine the effect of independent variables on dependent variables, the most appropriate study was experimental research [14][15][16]. Therefore, this research, of which the aim was to determine the effectiveness of self-management strategy to eliminate academic procrastination behavior of junior high school students was conducted using an experimental method. The experimental method used here was a quasi-experimental study in "pretest-posttest-control group design".

The research data were collected using (1) a guideline to run an experimental group treatment, (2) a self-monitoring log, and (3) an Academic Procrastination Inventory. The guideline for the treatment of the experimental group was developed by understanding the concept of self-management strategy and the three concerned techniques: self-monitoring, self-reward and stimulus-control techniques. The self-monitoring format was adapted directly from the example of "Self-monitoring Log" presented by Cormier and Cormier [9]. The academic procrastination inventory was developed from the concept proposed by Ferrari [12]. This inventory comprised 80 items distributed evenly into four aspects. Thus, each aspect had 20 items, but the questions were arranged spontaneously not clustered in every aspect. Through

build-in-try-out and then tested, its reliability showed that the Alpha Cronbach test result showed that the level of reliability was very high, that was 0.840. Therefore, it was eligible to be used as an instrument for collecting the research data.

The research procedure covered administering a pre-test, giving a treatment, and administering a post-test. The pre-test was given to all research subjects to set the initial condition of academic procrastination quality of junior high school students before they were given the treatment using a self-management strategy. The pre-test was administered by the concerned teacher. The research setting was defined as natural as possible and the junior high school students were not made aware of being researched. The instrument used to perform the pre-test was an academic procrastination inventory.

The treatment with self-management strategy was done eight times. The first meeting covered the class discussion about the academic procrastination concept completed with its concrete examples. The second meeting involved the individual task, enlisting as many concrete academic procrastination behaviors as possible and establishing the number of the achievable low academic procrastination. The third meeting dealt with the practice of fulfilling the form of academic procrastination record in accordance with their respective experimental groups and followed by giving tasks to perform by the students on the following days. The fourth meeting gave feedback on the tasks that the students did in the previous week and a practice of computing the frequency of activities and displaying it in a graph. The fifth meeting evaluated the student's activity by comparing it with the target behavior. The sixth to the eighth meetings evaluated the previous activities and made the students motivated to improve the next activities.

After eight treatments the students were given a grace period of three weeks to see the development of their academic procrastination behavior as a result of the given treatment. With the end of the grace period, the students were given the post-test using the Academic Procrastination Inventory to know the effectiveness of the given treatment.

The data collected through the form or the self-monitoring checklist were computed in percentage. The students' attitudinal profile and academic procrastination behavior were found out by computing the actual score percentage of the ideal maximal score based on the normal curve. The data of the pre-test and the post-test were analyzed using t-test for paired samples analysis. The analysis of variance was used to test the significance of the effectiveness difference of the combination of three techniques. The effectiveness of the self-management strategy to eliminate academic procrastination behavior were analyzed using effect-size analysis. It was analyzed using SPSS for MS Windows Release 16.0.

THE RESEARCH RESULTS

Based on the analysis of percentage, that is, dividing the number of students who performed each component of activities with the whole students in each experimental group, the results were presented for each experimental group as shown in Table 1.

Table 1: The Ability of Self-Management of Junior High School Students

No	Aspect of Ability	Experimental Group		
		Group 1	Group 2	Group 3
1.	Determining the target behaviors personally	100%	100%	100%
2.	Using daily recording forms	100%	100%	100%
3.	Drawing behavior development graphs	75%	80%	70%
4.	Showing the graphs to other people	20%	70%	30%
5.	Recording behaviors regularly	65%	75%	70%
6.	Using verbal/symbolic rewards	40%	--	40%
7.	Using material rewards	75%	--	70%
8.	Using imaginary rewards	60%	--	65%
9.	Using current rewards	70%	--	70%
10.	Using current rewards	70%	--	70%
11.	Using potential rewards	65%	--	70%
12.	Seeking external reward sources	70%	--	70%
13.	Bringing positive person stimulus nearer	--	88%	80%
14.	Bringing positive non-person stimulus nearer	--	90%	80%
15.	Keeping the negative personal stimulus away	--	85%	75%
16.	Keep the negative non-personal stimulus away	--	75%	65%
17.	Changing the antecedent combination and behavior	--	80%	65%
18.	Expanding low academic procrastination in other situations	--	85%	65%

Notes:

Group 1: Combination of self-monitoring with self-reward

Group 2: Combination of self-monitoring with stimulus-control

Group 3: Combination of self-monitoring with self-reward and stimulus-control

The academic procrastination behavior profile of the junior high school students given a treatment using a combination of self-monitoring and self-reward techniques is shown in Table 2.

**Table 2: Academic Procrastination Behaviour Profile of Junior High School Students
Experimental Group 1 (Combination of Self-monitoring with Self-reward Techniques)**

No	Aspects of Variable	Xideal	Pretest		Posttest	
			Xaktual	Level	Xaktual	Level
1.	Procrastinate to start and to complete of assignment	2250	1823	81% (H)	1305	58% (M)
2.	Slowly in carrying tasks	1260	995	79% (H)	756	60% (M)
3.	The gap of time between planning and actual performance	1260	1008	80% (H)	781	62% (M)
4.	Conducting useless activities	1350	1107	82% (H)	851	63% (M)

M= Moderate; L= Low

Table 2 shows that before being given a treatment (the result of pre-test) the academic procrastination behavior of junior high school was categorized "high level". It was seen in all aspects. However, after they were given a treatment and they were given the post-test, the

academic procrastination behavior of junior high school was categorized "moderate level" in all aspects. It could be interpreted that the self-management strategy by combining self-monitoring with self-reward techniques was less effective to eliminate academic procrastination behavior of junior high school students.

The academic procrastination behaviour profile of the junior high school students given a treatment using a combination of self-monitoring with the stimulus-control techniques was shown in Table 3.

Table 3: Academic Procrastination Behaviour Profile of Junior High School Students Experimental Group 2 (Combination of Self-monitoring with Stimulus-control Techniques)

No	Aspects of Variable	Xideal	Pretest		Posttest	
			Xaktual	Level	Xaktual	Level
1.	Procrastinate to start and to complete of assignment	2250	1868	83% (H)	426	19% (L)
2.	Slowly in carrying tasks	1260	1058	84% (H)	239	19% (L)
3.	The gap of time between planning and actual performance	1260	1071	85% (H)	227	18% (L)
4.	Conducting useless activities	1350	1134	84% (H)	243	18% (L)

H= High; L= Low

Table 3 shows that before the students were given a treatment (the results of pre-test), their academic procrastination behavior in all aspects was categorized "high level." After they were given a treatment and a post-test, their academic procrastination was decrease categorized "low level". It could be interpreted that the self-management strategy that combined self-monitoring with stimulus-control techniques was very effective in eliminating academic procrastination behavior of junior high school students.

The academic procrastination profile of the junior high school students given a treatment using the combination of self-monitoring with self-reward and stimulus-control techniques can be seen in Table 4.

Table 4: Academic Procrastination Behavior Profile of Junior High School Students Experimental Group 3 (Combination of Self-monitoring with Self-reward and Stimulus-control Techniques)

No	Aspects of Variable	Xideal	Pretest		Posttest	
			Xaktual	Level	Xaktual	Level
1.	Procrastinate to start and to complete of assignment	2250	1800	80% (H)	1170	52% (M)
2.	Slowly in carrying tasks	1260	1046	83% (H)	743	59% (M)
3.	The gap of time between planning and actual performance	1260	1071	85% (H)	731	58% (M)

4.	Conducting useless activities	1350	1107	82% (H)	810	60% (M)
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H= High; M= Moderate

Table 4 shows that before the students were given a treatment (the result of pre-test) their academic procrastination behavior in all aspects was categorized "high level." After the students were given a treatment and the post-test, their academic procrastination behavior was categorized "moderate level." It could be interpreted that the self-management strategy that combined self-monitoring with self-reward and stimulus-control techniques was also less effective.

The analysis of variance to test the significance of the effectiveness difference of the combination of three techniques can be seen in Table 5.

Table 5: Effectiveness Differences of Combination of Three Techniques to Eliminate Academic Procrastination Behaviour of Junior High School Students

Source	db	Sum of Square	Mean of Square	F	p
Inter-group	2	57481,054	29785,029	171,798	0,000
In-group	87	13961,027	167,889	--	--
Total	89	72576,104	--	--	--

Table 5 shows that F-test = 169.874 was significant at $p < 0.00$. It means that there is a very significance difference in the academic procrastination behavior of junior high school students among those who were treated with the combination of self-monitoring with self-reward techniques; the combination of self-monitoring with stimulus-control techniques; and the combination of self-monitoring with self-reward and stimulus-control techniques. The most effective combined technique was that of self-monitoring with stimulus- control techniques while the other two combinations were less effective.

The analysis of effect size Cohen's d to test the effectiveness of self-management strategy to eliminate academic procrastination behavior. The index of effect size indicates the effectiveness of self-management strategy to eliminate academic procrastination behavior of junior high school. It based on the criteria of effect size Cohen's d as can be seen in Table 6.

Table 6: The Criteria of Effect Size Cohen's d

No.	Effect Size	D
1.	Small	0,20
2.	Medium	0,50
3.	Large	0,80
4.	Very Large	1,20

Based on the result of analysis of effect size Cohen's d and refer to the criteria of effect size Cohen's d on the Table 6 the findings as can be seen in Table 7.

Table 7: The Result of Effect Size Cohen's d Test of Self-management Strategy to Eliminate Academic Procrastination Behavior of Junior High School

No.	Combination of Techniques	Effect Size	Category
1.	Self-monitoring with Self-reward	0,78	Medium
2.	Self-monitoring with Stimulus-control	1,87	Very Large
3.	Self-monitoring with Self-reward and Stimulus-control	0,50	Medium

Table 7 shows that effect size Cohen's d test indicate that the combination of self-monitoring and stimulus-control techniques was categorized "very large (1,87)" while the other combination of techniques, they are combination of self-monitoring with self-reward techniques and combination of self-monitoring with self-reward and stimulus control techniques were classified "medium" (0,78 and 0,50). It can be interpreted that the most effective combined technique of self-management strategy to eliminate academic procrastination of junior high school was that of self-monitoring with stimulus- control techniques while the other two combinations were less effective.

DISCUSSION

The finding indicates that there was only one combination of technique that most effective to eliminate academic procrastination of junior high school, that is, the combination of self-monitoring with the stimulus-control techniques while the combination of self-monitoring with self-reward techniques and the combination of self-monitoring with self-reward and stimulus-control techniques were less effective.

The question is "What factors have made the combination of self-monitoring with self-reward techniques and the combination of self-monitoring with self-reward and stimulus-control techniques less effective in eliminating academic procrastination of junior high school students?" There were several identifiable causes.

Firstly, the individual was generally easier to self-punish than to self-reward [9]. Furthermore, Cormier & Cormier [9] claims that when ones are successfully doing something, they will not reward themselves straight off. It is sometimes not seen as something special. On the contrary, when ones fail in doing a task, they will immediately punish themselves, for example, self-repenting, self-blaming, and self-irritating.

Secondly, of the available rewards, namely, verbal/symbolic, material, imaginary, current, and potential rewards, there were rewards that were not quite common or even difficult for junior high school students to perform. This type of reward is commonly practiced by Westerners when making a success but not by junior high school of Easterners. For Westerners, the words that they uttered were verbal or symbolic self-rewards to increase their own self-motivation and assurance. However, if such words were expressed by a junior high school student when getting the first rank in his class, shouting for example, "I am the greatest person in this classroom", he might be thought as an arrogant person. This cultural setting made it difficult for the students to reward themselves verbally or symbolically to eliminate their academic procrastination.

Similarly, imaginary self-reward is like imagining oneself as a scientist when one succeeded in doing an experiment. A common metaphor among the Indonesian society is "Don't think

outside the box!" This cultural metaphor can hamper students to use an imaginary self-reward when they can eliminate their academic procrastination behavior well.

Thirdly, the students were not diligent in recording their own academic procrastination decreasing progress regularly, and drawing the graph of their academic procrastination progress, and showing them to others. The data of this study indicated that there were only 20% of students that made the graphs of their academic procrastination behavior decreasing and showed them to others. In the mean time, there were only 65% of students that recorded their academic procrastination behavior progress regularly.

Fourthly, the locus-control of Indonesian society including junior high school students is generally external [17] so it is difficult to reward themselves. The self-reward can be used effectively in the West because the locus of control of Westerners generally tends to be internal [18]. Therefore, self-reward is potentially very effective in the West but it is less effective to apply in Indonesia.

The present research was also found that the combination of self-monitoring with stimulus-control techniques was very effective to eliminate the academic procrastination behavior of junior high school students. It is a very interesting finding because the stimulus-control itself is theoretically less effective when applied alone: "Stimulus control methods are often insufficient to modify behavior without the support of other strategies" [9]. Here, of course, a question raises "Why is the combination of self-monitoring with stimulus-control techniques found very effective to eliminate academic procrastination behavior of junior high school students? Some possible causes can be identified.

Firstly, the power of self-monitoring in combination with the stimulus-control is because the self-monitoring includes the element of re-evaluating the quality of self-esteem by recording the daily activities of the individual being aware of what he has done.

Secondly, the stimulus-control technique was applied by adjusting or changing the "cues" that were available in the surroundings either in the personal forms or in the impersonal ones. These cues were outside the individual, not within the individuals. Then, it made the students easier to do it rather than the self-reward that must control something inside. It suited the locus-control of Indonesian society including the junior high school students, who tended to be external. Here is the advantage of the stimulus-control as claimed by Yates [10], "One advantage of stimulus-control is that only minimal self-initiated steps required to trigger environmental changes that affect desired or undesired response."

Thirdly, the basic principle of the stimuli-control, if the antecedent is consistently associated with the behaviors that are supported in their emergence (not in their absence), will be able to control these behaviors. If the antecedent is a stimulus to a certain behavior, it can be a stimulus-control. It means that the expected responses can emerge if a particular antecedent is present. Combining stimulus control and self-monitoring enables students to immediately record everything that is related to the emergence of the expected responses when a certain antecedent is present. The rapid response to recording the self-monitoring enables individuals, include junior high school students, to immediately get away from "cues" that may obstruct the academic procrastination behavior and promptly bring nearer the "cues" that can decrease

academic procrastination behavior [9]. This factor enables the combination of self-monitoring with stimulus-control techniques to be highly effective in eliminating the academic procrastination behavior of junior high school students. Fourthly, if the data of self-management activities were analyzed, the students of this group were almost all active in any aspects of the activity (70% and above). This students' activity can support their efforts to eliminate the academic procrastination behavior in a better direction.

Another research finding is that the combination of self-monitoring with self-reward and stimulus control techniques were less effective to eliminate the academic procrastination behavior of junior high school students. Compared with the combination of self-monitoring with the stimulus-control techniques, this combination was very effective but the combination of self-monitoring with the self-reward techniques was less effective. It can be predicted that the less effective combination of the three techniques namely, self-monitoring and self-reward, and stimulus-control techniques was because of the inclusion of self-reward technique. Thus, the students' self-monitoring activities to eliminate academic procrastination behavior by controlling various personal and impersonal stimuli within their environment are disrupted by the activities applying various types of rewards in order to raise happy feelings for academic procrastination elimination.

Moreover, it may be due to combining three techniques, they are self-monitoring with self-reward and stimulus-control is more difficult for the students to apply than combining two techniques, they are self-monitoring with self-reward or self-monitoring with stimulus-control. If the self-reward technique was not included, it can be assumed that its effectiveness is parallel to the combination of self-monitoring with stimulus-control techniques.

CONCLUSION

Based on the findings and discussion, it can be concluded that

1. overall, the self-management strategies are effective to eliminate the academic procrastination behavior of junior high school students;
2. the self-management strategy of the combined self-monitoring with the self-reward techniques is less effective to eliminate the academic procrastination behavior of junior high school students. This ineffectiveness is shown in the decreasing of all its aspects that are categorized "moderate".
3. The self-management strategy of the combined self-monitoring with stimulus-control techniques was very effective to eliminate the academic procrastination behavior of junior high school students. This highly effectiveness is shown from the development of all its aspects that are classified from "high level" to the "low level".
4. The self-management strategy combining self-monitoring, self-reward, and stimulus-control techniques is not effective to eliminate the academic procrastination behavior of junior high school students. It can be seen when it is viewed from the decreasing of its aspects, one of which is classified from "high level" to "moderate level."
5. Of these three combined techniques in the self-management strategy, the most effective way to eliminate the academic procrastination behavior of junior high school students was the combination of self-monitoring with stimulus-control techniques.

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