The Effect of Self Directed Learning on Students' Academic Procrastination Attitudes

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Abstract

This study aims to determine the effect of Self Directed Learning on academic procrastination attitudes in students. Self Directed Learning is an individual's ability to manage the learning process independently, while academic procrastination is the tendency to postpone academic tasks. This study uses a quantitative approach with a correlational method. Samples were taken from junior high school students using cluster random sampling. Data were collected through questionnaires that had been tested for validity and reliability, then analyzed using the Mann Whitney U Test. The results showed that there was no significant effect of students who applied Self Directed Learning on students' procrastination attitudes. However, there was a decrease in academic procrastination attitudes in mathematics in students who applied Self Directed Learning, which can be seen from the average value of students' procrastination attitudes.
Keywords**:** Self Directed Learning; students; Academic Procrastination Attitudes

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh Self Directed Learning terhadap sikap prokrastinasi akademik pada siswa. Self Directed Learning merupakan kemampuan individu dalam mengelola proses belajar secara mandiri, sedangkan prokrastinasi akademik merupakan kecenderungan untuk menunda tugas-tugas akademik. Penelitian ini menggunakan pendekatan kuantitatif dengan metode korelasional. Sampel diambil dari siswa SMP dengan menggunakan cluster random sampling. Data dikumpulkan melalui angket yang telah diuji validitas dan reliabilitasnya, kemudian dianalisis menggunakan Mann Whitney U Test. Hasil penelitian menunjukkan bahwa tidak terdapat pengaruh yang signifikan antara siswa yang menerapkan Self Directed Learning terhadap sikap prokrastinasi siswa. Akan tetapi, terdapat penurunan sikap prokrastinasi akademik mata pelajaran matematika pada siswa yang menerapkan Self Directed Learning, yang dapat dilihat dari nilai rata-rata sikap prokrastinasi siswa.
Kata Kunci : Pembelajaran Mandiri; Siswa; Sikap Prokrastinasi Akademik

PRELIMINARY

Education is a learning process that aims to develop individual potential, both in terms of knowledge, skills, and attitudes, in order to become a person who is useful for himself, society, nation, and country. Education is not just a process of transferring knowledge, but also character building and developing human potential as a whole.

As Muslims, we must have a specific goal in education so that great motivation and enthusiasm are born in seeking knowledge or achieving the highest education. The goal of education according to Islam does not only focus on intellectual intelligence, but also includes the formation of noble morals and the development of human potential as a whole to become obedient servants of Allah and caliphs on earth. Studying mathematics today aims to equip students with the ability to think logically, analytically, systematically, critically, and creatively, as well as to apply mathematical concepts and skills in everyday life (Diana, 2021). Of course, to understand mathematics you have to study (Manoi et al., 2022). Mathematics is studied from kindergarten, elementary school, middle school and high school to college (Hasan & Timur, 2021). Mathematics is a very important subject because in real life and daily activities it is always related to mathematics.

However, many people consider mathematics lessons very difficult and boring and are not liked by students. Many students find it difficult to understand mathematical concepts because the learning approach is less interesting or too abstract. This difficulty causes frustration which then develops into boredom and lack of motivation to learn, causing academic procrastination. Based on a preliminary study at one of the junior high schools in Padangsidimpuan, students experienced academic procrastination in mathematics learning. It can be seen from students often delaying in completing math assignments or homework, even

though the deadline is approaching, causing delays in completing assignments according to the specified time. Even the assignments given by the teacher are not completed by students at all. Procrastination is the attitude of delaying doing assignments and feeling unable to solve math problems so that they choose to delay facing them (Salsabiela et al., 2018). Students who procrastinate do not have a number of stimuli to carry out activities that must be done at a certain time. (Asri, 2018).

Assignments are learning activities given to students by teachers or educators in the form of questions, exercises, or projects related to the material (Fatimah, 2021). However, students' daily assignments are learning activities given by teachers to students to be done every day, both at school and at home, with the aim of strengthening their understanding of the subject matter that has been taught. This assignment can be in the form of practice questions, material summaries, observations, or simple projects. One of the factors that causes academic procrastination is being busy outside of school such as organizing, events with family, already having a job, and choosing to do it later at home (Evelina et al., 2020). Academic procrastination in students can be seen from students' beliefs in their ability to complete tasks or achieve certain goals. When students feel unable to understand or solve math problems, they tend to procrastinate on doing assignments or studying, because they are afraid of failing or feeling stressed.

Previous research that has been conducted (Afandy, 2021) to reduce academic procrastination, especially in mathematics learning with Self-Regulated learning. This study looks at the effect of Self-Directed Learning on academic procrastination attitudes in mathematics learning. Self-Directed Learning is a learning process based on one's own will and self-control so that one can solve problems or assignments (Puspitasari et al., 2020). This learning motivates

students to have a high desire to learn independently. Through the Self-Directed Learning System, students take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying learning resources, choosing and implementing learning strategies, and evaluating their learning outcomes.

METHODS

The type of research used by the researcher is quantitative research. The method used in this study is the quasi-experimental design method with the type of correlational research Pretest-Posttest Control Group Design in two different classes which are divided into experimental class and control class. This study uses a quantitative approach with a correlational research type. This approach is used to determine the relationship between two variables, Self Directed Learning and academic procrastination attitudes. The data obtained will be analyzed statistically to see the strength and direction of the relationship between variables.

Table 1
Reseach Design

Class	*Pretest*	Treatment	*Posttest*
Experiment	T_1	X	T_2
Control	T_1	-	T_2

This design was used to examine the difference in the reduction of academic mathematics procrastination between students who applied Self Directed Learning and students who applied conventional learning at SMP N 4 Padangsidimpuan. In this study, researchers used the Cluster Random Sampling technique because the conditions of all classes in this school have heterogeneous conditions for each class. The classes taken as samples were class VIII-4 with 26 people (called the control class) and class VIII-5 with 26 people (called the Experimental class). To obtain data appropriate to

this research, the author used a data collection tool in the form of a questionnaire. The academic procrastination questionnaire grid can be seen in the table below:

Table 2
Academic Procrastination Questionnaire Grid

N	Indikator	Item		Number Of Item
		F	UF	
1	Delays in starting and completing tasks.	5, 10, 26, 31, 34	2, 13, 21, 29	9
2	Delay in completing tasks.	3, 8, 14, 24, 33	7, 12, 17, 30, 36	10
3	Time gap between plan and actual performance.	4, 6, 23, 32	9, 16, 20, 22, 28	9
4	Do more fun activities.	1, 11, 15, 27, 35	18, 19, 25	8
Sum		19	17	36

Alternative respondents can be seen in the table below:

Table 3
Alternative Respondents

Information	Weight
S : more agree	4
: agree	3
S : don't agree	2
TS : more disagree	1

Before giving the test to the research subjects, the researcher tested it in other classes outside the control and experimental classes. This trial aims to find out whether the questionnaire meets requirements such as validity and reliability. Based on the calculations carried out, the value $r_{11} = 0{,}823$. This value is considered high, in other words this question instrument is suitable for use in research.

Questionnaire data analysis was carried out by calculating the percentage of student answers for each question, then analyzed descriptively and quantitatively. In the initial analysis, normality and homogeneity tests were carried out on the data. The

results of the study on the initial data (Pre Test) in both the experimental and control classes showed similar conditions. Furthermore, based on the results of the normality and homogeneity tests, it is known that the two classes are not normally distributed but have homogeneous variances. From the results of the Post Test requirements test that have been carried out, the two classes are not normally distributed and not homogeneous, so to test the hypothesis, a non-parametric statistical test is used using the Mann-Whitney U Test with the help of the SPSS application.

RESULT AND DISCUSSION

Based on the research results, a description of the research results is obtained, namely as follows:

1. Pre-Test Data

   The data described to obtain an initial picture regarding the academic procrastination of mathematics in the control class can be seen in the following table:

Table 4
Pre Test Results Data on Mathematics Academic Procrastination in the Control Class

Distribution	Value
Maximum	97
Minimum	36
Range	61
Mean	53,16
Median	47
Mode	47
Std. Deviation	13,542
Variance	183,390
Sample	25

The data described to obtain an initial picture of the academic procrastination of mathematics in the experimental class can be seen in the following table:

Table 6
Pre-Test Results Data on Mathematics Academic Procrastination in the Experimental Class

Distribution	Value
Maximum	77
Minimum	29
Range	48
Mean	53,69
Median	52,50
Mode	43
Std. Deviation	11,224
Variance	125,982
Sample	26

2. Post Test Data

An overview of the academic procrastination of mathematics in the control class, namely by applying conventional learning models, can be seen in the following table:

Table 7
Post Test Results Data on Mathematics Academic Procrastination in the Control Class

Distribution	Value
Maximum	94
Minimum	36
Range	58
Mean	53,62
Median	48,50
Mode	43
Std. Deviation	12,738
Variance	162,246
Sample	26

An overview of academic mathematics procastination in the experimental class can be seen in the following table:

Tabel 8
Post Test Results Data on Mathematics Academic Procrastination in the Experimental Class

Distribution	Value
Maximum	64
Minimum	31
Range	33
Mean	50,04
Median	51
Mode	47
Std. Deviation	7,247
Variance	52,518
Sample	26

From the results of the research that has been conducted on the initial data (Pre Test) both in the experimental class and the control class shows that the conditions obtained are the same. Then after the normality and homogeneity tests were carried out, the two classes were not normally distributed but homogeneous.

From the results of the Post Test requirements test that had been carried out, the two classes were not normally distributed and not homogeneous, so to test the hypothesis, a non-parametric statistical test was used using the Mann-Whitney U Test with the help of the SPSS v. 22 application, namely seeing the effect of Self Directed Learning on Students' Academic Procrastination Attitudes

Table 9

Results of the Mann-Whitney U Test: The Effect of Self-Directed Learning on Students' Academic Procrastination Attitudes

Test Statistics[a]

	Sikap Prokrastinasi
Mann-Whitney U	258.500
Wilcoxon W	609.500
Z	-1.456
Asymp. Sig. (2-tailed)	.145

a. Grouping Variable: Kelas

It can be seen from table 4.9 that the value Z_{hitung} obtained in the output above is -1.456. Then, in the output above, Asymp. Sig. (2-tailed) is obtained as 0.145, there is no significant influence of students who apply Self Directed Learning on students' procrastination attitudes. However, there is a decrease in the attitude of academic procrastination in mathematics in students who apply Self Directed Learning, which can be seen from the average value of students, in the table below:

Table 10
Average Value of the Influence of Self-Directed Learning on Students' Academic Procrastination Attitudes

Ranks

	Class	N	Mean Rank	Sum of Ranks
Procrastination attitudes	PreTest	26	29.56	768.50
	Post Test	26	23.44	609.50
	Total	52		

From the data above, students' academic procrastination in mathematics is classified as moderate procrastination. If seen from the results of the pre-test and post-test, academic procrastination in mathematics in the experimental class decreased.

Academic procrastination is students who delay doing mathematics assignments given by the teacher. This academic procrastination is done deliberately by students, because the nature of procrastination is a tendency of the students themselves. There are several indicators of academic procrastination in mathematics learning, namely: students feel anxious or confused in doing assignments so that they always delay in completing them, students do not complete assignments according to the time set by the teacher, do not collect mathematics assignments at all.

Academic procrastination must be reduced, so that learning targets are achieved with satisfactory learning outcomes. One of the learning models that can reduce

academic procrastination is Self Directed Learning, namely the learning process based on one's own will and self-control so that one can solve problems or tasks (Puspitasari et al., 2020). This learning motivates students to have a high desire to learn independently. Through this Self Directed Learning System, students can be more active and freer in determining the targets they want to get from learning.

Self Directed Learning is a learning process where students create and determine the targets they want to achieve, students also create strategies and solve problems faced when achieving these targets and review the activities carried out in achieving the targets or goals they want to achieve (Akbar et al., 2017). In this learning, students try to achieve their goals themselves. With self-motivation by determining their own learning steps (Elyaumi, 2020). This learning can also be described as a planned activity that is managed independently to achieve certain goals (Permatasari & Anggaryani, 2021).

Procrastination in the study decreased after students applied the Self Directed Learning learning model. This is in line with Lala Nailah's research, with the application of the Self Directed Learning learning model, it can improve students' mathematical understanding. The essence of the application of the Self Directed Learning learning model is an independent learning system. This independent learning can develop students to be more active and free to determine the learning objectives to be achieved (Nailah & Ruswana, 2018). This Self Directed Learning learning is learning that considers the uniqueness of the student's style and gives students independence in planning learning, students determine the learning targets they want to achieve, then observe and evaluate their learning. Self-Directed Learning increases knowledge, skills, achievements and individual development that begins with one's own initiative using one's own learning plan and is carried out independently, realizing one's own learning needs in achieving learning goals by creating one's own learning strategies and assessing one's own learning outcomes.

The implementation of this research was carried out with great care with steps in accordance with quantitative research procedures. This is done in order to get the best possible results. However, it is very difficult to get perfect results, because in the implementation of this research there are limitations: 1) In giving pretest and posttest questions. Students still fill out the questionnaire carelessly, or do not read the questionnaire correctly. 2) This research only had two meetings, so it is recommended to be continued by further researchers by implementing the self-directed learning model for more than 4 meetings so that the decrease in procrastination attitudes increases.

CONCLUSION

From the research conducted, conclusions were obtained in accordance with the objectives of the problems that had been formulated, and based on the results of the data analysis conducted, namely from the Mann-Whitney U test, the value Z_{hitung} obtained in the output above is -1.456. Then, in the output above, Asymp. Sig. (2-tailed) is obtained as 0.145, there is no significant influence of students who apply Self Directed Learning on students' procrastination attitudes. However, there is a decrease in academic procrastination attitudes in mathematics in students who apply Self Directed Learning, which can be seen from the average value of students' procrastination attitudes.

REFERENCES

Afandy, Althif. "Upaya Mereduksi Prokrastinasi Akademik Pada Tugas Matematika Selama Pandemi Covid-19 Melalui Strategi Self Regulated Learning." *Briliant: Jurnal Riset Dan Konseptual* 6, no. 2 (2021): 398–409. https://doi.org/10.28926/briliant.v6i2.632.

Asri, Dahlia Novarianing. *Prokrastinasi Akademik: Teori Dan Riset Dalam Perspektif Pembelajaran Berbasis Proyek Dan Self-Regulated Learning*. Edited by Davi Aprianidi. Madiun: UNIPMA PRESS, 2018.

Chang, Woan Ching. "Impact of Gender on Self-Directed Learning Among Elearning Nursing Undergraduate in Malaysia." *Journal of Educators Online* 20, no. 4 (2023). https://doi.org/10.9743/JEO.2023.20.4.4.

Diana, Nana. "Kesiapan Guru Dalam Mengembangkan Modul Berbasis STEM Untuk Mendukung Pembelajaran Di Abad 21 Teachers ' Readiness in Developing STEM -Based Module to Support Teaching and Learning in the 21 St Century." *Jurnal Pendidikan Matematika* 11 (2021).

Elyaumi. "Self Directed Learning Berbasis Literasi Digital Pada Masa Pandemi Covid-19 Di Madrasah Ibtidaiyah." *Elementary Islamic Teacher Journal* 8 (2020): 183–208.

ERSOY, Nazife SEN, and Yunus DOGAN. "Self-Directed Learning and Mooc Integration Into Higher Education Efl Classrooms." *Turkish Online Journal of Distance Education* 24, no. 4 (2023): 348–61. https://doi.org/10.17718/tojde.1220697.

Evelina, Dian, Sahaya Ami, Tri Nova, Hasti Yunianta, Universitas Kristen, and Satya Wacana. "Profil Karakter Prokrastinasi Akademik Pada Siswa SMP Dalam Pembelajaran Matematika" 04, no. 01 (2020): 414–23.

Fatimah, Ai Tusi. "Koneksi Matematis Siswa Pada Tugas Matematis Berbasis Hasil Pertanian: Konteks, Konsep, Dan Prosedur Matematis." *Jurnal Elemen* 7, no. 2 (2021): 295–309. https://doi.org/10.29408/jel.v7i2.3176.

Hasan, H, and Lombok Timur. "Meningkatkan Hasil Belajar Matematika Melalui Penerapan Model Contextual Teaching And Learning Pada Era New Normal." *Indonesian Journal of Educational Development* 1 (2021): 630–40.

Isrok'atun. *Model-Model Pembelajaran Matematika*. Jakarta: PT Bumi Aksara, 2018.

Manoi, Gledis, Robert Harry Soesanto, Sekolah Lentera, Harapan Sangihe, and Sulawesi Utara. "Stimulus Keaktifan Siswa Melalui Penerapan Media Interaktif Pada Pembelajaran Matematika Secara Daring [Stimulating The Activeness Of Students Through The Implementation Of Interactive Media In Online Mathematics Learning]" 6, no. 1 (2022): 43–56.

Nailah, Lala, and Angra Meta Ruswana. "Penerapan Model Pembelajaran Self-Directed Learning Untuk Meningkatkan Kemampuan Pemahaman Matematis Mahasiswa." *Jurnal Pendidikan Matematika Indonesia* 3 (2), no. September (2018): 52–56.

Permatasari, Silvia Ayu, and Mita Anggaryani. "Penerapan Self-Directed Learning (SDL) Dalam Pembelajaran Fisika SMA Berbasis Daring Pada Pokok Bahasan Hukum Newton." *PENDIPA Journal Of Science Education* 5, no. 3 (2021): 403–11.

Puspitasari, Norma, Arie Wahyuni, Indonusa Surakarta, and Universitas Ivet. "Peningkatan Hasil Belajar Aljabar Linear Melalui Self Directed Learning Mahasiswa." *Journal of Medives : Journal of Mathematics Education IKIP Veteran Semarang* 4, no. 1 (2020): 181–86.

Putu, Ni, Meina Ayuningsih, and Ni Made Dwijayani. "Pengaruh Model Treffinger Berorientasi Kearifan Lokal Berbantuan Tugas Berjenjang Terhadap Self Efficacy Matematika Siswa SMP." *Kreano Jurnal Matematika Kreatif-Inovatif* 10, no. 1 (2019): 105–11.

Salsabiela, Arina -, Bayti - Atieq, Annisa Amalia Husna, Anissa Nurwakhid Utami, Nanda Nurullah Qurrotaa'yun, and Hazhira - Qudsyi. "TRASI (Training Motivasi) Untuk Menurunkan Prokrastinasi Akademik Siswa-Siswi MTs (Madrasah Tranawiyah)." *Persona:Jurnal Psikologi Indonesia* 7, no. 2 (2018): 177–86. https://doi.org/10.30996/persona.v7i2.1501.

Sirait, Erlando Doni, and Dwi Dani Apriyani. "Pengaruh Penggunaan Strategi Pembelajaran Aktif ICM (Index Card Match) Terhadap Hasil Belajar MatematikA." *Jurnal Pendidikan Matematika Indonesia*, 2020, 46–48.

Siswono, Tatag Yuli Eko. *Pembelajaran Matematika Berbasis Pengajuan Dan Pemecahan Masalah*. Bandung: PT Remaja Rosdakarya, 2018.