



# Navigating Academia: Decoding the Nexus Between Self-Regulated Learning and Procrastination in Student Achievement

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**Abstract.** Academic procrastination is a problem that often occurs in students and an initial survey that has been conducted by researchers on 25 students of Muhammadiyah University of Sidoarjo, shows that there are still students who deliberately delay starting and completing assignments, so that tasks cannot be completed properly and on time. One of the factors that influence academic procrastination behavior is *self-regulated learning*. This study aims to determine the relationship between *self-regulated learning* and academic procrastination in students of Universitas Muhammadiyah Sidoarjo. This research uses correlational quantitative method. The population in this study were students of Universitas Muhammadiyah Sidoarjo as many as 10518 students. The sample in this study amounted to 370 students of Muhammadiyah Sidoarjo University according to the Krejcie & Morgan table with a significance level of 5%. The sampling technique used was *Proportional Random Sampling*. Data collection techniques using *self-regulated learning* scale and academic procrastination with Likert scale method. The analysis technique used in this research is *Spearman's Rho* correlation technique assisted by JASP 0.14.1.0 for windows. The results of data analysis obtained correlation coefficient  $r = -0.605$  with  $p < 0.001$  ( $<0.05$ ) which means the hypothesis is accepted, that the higher the *self-regulated learning*, the lower the academic procrastination of students. Conversely, the lower the *self-regulated learning*, the higher the students' academic procrastination. *Self-regulated learning* has an influence of 36.6% on academic procrastination, and there is 63.4% influence of factors other than *self-regulated learning* that affect academic procrastination.

*Keywords - Self Regulated Learning, Academic Procrastination, College Students*

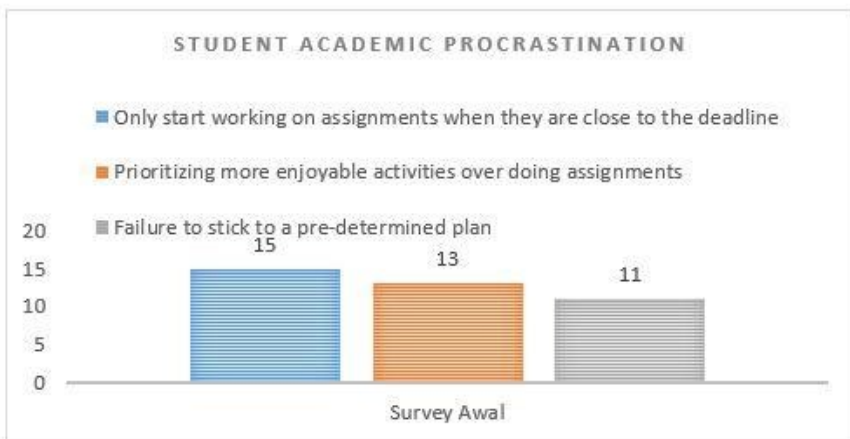
## 1 Introduction

Education is a medium to build individual intelligence and personality in order to become a better human being. [1]. The higher the level of education, the more academic tasks and demands. Students are students who are at the level of education at a tertiary institution, both private and state. [2]. Students in achieving their undergraduate degree must deal with many tasks and other activities that must be completed, such as having to complete assignments from each lecturer with short *deadlines*. A student is usually in the early adult phase so that ideally a student already has full awareness of his responsibilities as an individual. This is in accordance with Erikson's theory, it is stated that in the adult stage individuals begin to feel and take on heavier responsibilities than in previous times. [3]. Likewise on campus, students must be

responsible for completing their academic assignments and completing their education on time. But in reality, classic problems are still often found in academic procrastination behavior carried out by students.

Procrastination is a delay made by an individual when starting or completing a task, resulting in the task not being completed in a timely manner. [4]. Another definition of academic procrastination is a behavior of delaying tasks that are carried out intentionally. [5]. Academic procrastination consists of 4 aspects, including: (1) *Perceived time*, procrastinators are individuals who are unable to meet deadlines because they only aim at the current phase and do not think about the future phase. (2) *Intention-action gap*, procrastinators have difficulty doing something according to the deadline they have set for themselves. (3) *Emotional distress*, delaying behavior has negative consequences, namely bringing uncomfortable feelings to the procrastinator. (4) *Perceived ability*, doubts about one's ability can cause someone to procrastinate. [6]. Academic procrastination behavior in students will have a negative impact on the students themselves such as: (1) students will lose a lot of time in vain as a result of the delays they make, (2) tasks cannot be completed properly and on time, (3) anxiety during the task because of the narrow time resulting in difficulty concentrating.

Based on research conducted which states that most students who do academic procrastination are more likely to do things they like rather than doing lecture assignments, as well as the pleasure of delaying assignments caused by laziness. [7][8]. Furthermore, research conducted also said that students who do procrastination usually often spend time on unproductive activities, such as watching TV, playing social media, or just playing with friends. [9]. Research conducted [10] also in line with the above research, in their research showed the results that as many as 65% of students often postpone academic activities by preferring to spend their free time on useless activities such as watching TV, playing cellphones or playing with friends such as hanging out.



**Image 1.** Initial Survey Results

Based on an initial survey conducted by researchers on 25 students of Universitas Muhammadiyah Sidoarjo, the results showed that there were still students who deliberately delayed starting and completing their assignments, as evidenced by the fact that 15 students only

started working on assignments when they were close to the *deadline*. Then 13 students prefer to prioritize more enjoyable activities such as playing social media or *games* rather than doing their assignments and 11 students cannot complete the assignment according to the predetermined time because they fail to keep the plans they have set before. The survey results are in line with Ferrari's opinion that academic procrastination can be observed through certain characteristics: (1) Delays in starting and completing tasks. (2) Delay in doing the task. (3) Time gaps between plans and actual performance, usually procrastinators find it difficult to complete tasks according to the predetermined time. (4) Doing more enjoyable activities [9].

Academic procrastination behavior carried out by students is caused by two factors, namely internal and external factors. The internal factors come from within the individual itself which include; (1) mental aspects, (2) self-efficacy, (3) self-regulation. While external factors come from outside the individual which consists of (1) social support and (2) peer influence. [11]. Based on several factors mentioned above, self-regulation in learning is one of the factors that influence the academic procrastination variable. The inability of individuals to estimate the time needed to complete a task is one of the main problems in academic procrastination. [12]. Students with self-regulated *learning* will be able to organize, direct and control themselves, especially in dealing with the tasks given. Students who have high *self-regulated learning* are individuals who effectively use their potential in monitoring, managing, and controlling their cognition, motivation and behavior in the process of learning activities [13] Therefore, the ability of self-regulated *learning* is needed in academic activities, *self-regulated learning* itself is the process of organizing, planning, guiding, and monitoring behavior to achieve goals using techniques that involve physical, mental, emotional, and social components.

*Self-regulated learning* is a process that can help students to manage their thoughts, behaviors, and emotions so that they are able to direct their learning experience. [14]. *Self regulated learning* has three aspects, among others; (1) metacognition, includes cognitive activities that require individuals to change or adapt their cognition, (2) motivation, involves purposeful individual activities, (3) behavior, includes individual efforts in managing themselves, choosing, compiling and utilizing and creating an environment that can help their learning activities optimally. [15].

Based on previous research conducted by Avati and Aisyah (2019), it states that there is a negative relationship between *self-regulated learning* and academic procrastination, it can be seen that the correlation coefficient ( $r = -0.758$ ), this shows that the higher the *self-regulated learning* in a person, the lower the academic procrastination, and vice versa. [16]. In line with research conducted said that the correlation coefficient was ( $r = -0.415$ ) with sig. 0.000 ( $p < 0.05$ ) it shows that the coefficient is negative and based on the coefficient of determination, it shows that *self-regulated learning* makes an effective contribution of 17.2% to academic procrastination. [17]. Based on the research above, it can be seen that students who have high *self-regulated learning* abilities will be able to direct themselves when learning, make plans, organize material, direct themselves and be able to evaluate themselves in the learning process so that they can divide college activities and other activities because they already have plans and priorities in carrying out the activities carried out. A person who has high *self-regulated learning* also has motivation, namely self-confidence to be able to engage and create behaviors that can support goals in learning, so they will avoid negative beliefs about their inability to complete academic tasks, so they can create productive behavior in learning goals, so students will avoid academic procrastination. Students who apply *self-regulated learning* strategies will show good learning efforts, have a clear goal orientation, have better self-control abilities. [18].

Based on the description and explanation above, that there are still students who do academic procrastination, thus this study was conducted with the aim of knowing "the relationship

between *self-regulated learning* and academic procrastination". This research needs to be done in the hope that it can provide benefits in the form of insight and education for students regarding the application of *self-regulated learning* strategies in their learning activities to reduce academic procrastination behavior.

## 2 Methods

This type of research is correlational quantitative research. Correlational research aims to find whether or not there is a relationship between one variable and another, and if so, how close the relationship is and whether or not the relationship is meaningful. [19]. The variables in this study are *self-regulated learning* (x) and academic procrastination (y).

The population in this study, namely Muhammadiyah University students in the 2021-2022 academic year, totaling 10518 students, with a sample size according to the Krejcie & Morgan table with a significance level of 5%, totaling 370 students. The sampling technique used is the *Simple Random Sampling* technique, namely that each member of the population has the same opportunity to be selected as a subject and the sampling is carried out randomly without regard to the strata in the population. [20].

**Table 1.** Research Sample Table

No.	Faculty	Number of Students
1	Faculty of Business Law & Social Sciences	107
2	Faculty of Psychology & Education	112
3	Faculty of Islamic Studies	49
4	Faculty of Science & Technology	99
5	Faculty of Health Sciences	3
<b>Total</b>		<b>370</b>

The data collection techniques used are the *self-regulated learning* scale and the academic procrastination scale with a modified *Likert* scale model by eliminating doubtful answers with the consideration that the subject does not give answers that collect in the middle. Subjects are asked to express agreement or disagreement with *favorable* and *unfavorable* statements in four possible answers by choosing one of the answer choices that matches the subject's situation or condition, namely strongly agree (SS), agree (S), disagree (TS), or strongly disagree (STS). [21].

*Self-regulated learning* is measured using the *self-regulated learning* scale adopted from the scale compiled by Putri (2017) with reference to the scale compiled which has a reliability of 0.886 with 30 valid items, based on the aspects proposed by Zimmerman, namely aspects of (1) metacognition: *rehearsal strategies, elaboration strategies, organizational strategies, metacognitive self-regulation* (2) motivation: *mastery self-task, relevance enhancement, situational interest enhancement, performance/relative ability self-task, performance/extrinsic self-task, self-reinforcing, environmental structuring* (3) behavior: *effort regulation, regulating time and study environment, help seeking* (3) behavioral: *effort regulation, regulating time and*

study environment, help seeking (4) behavioral: effort regulation, regulating time and study environment, help seeking. [15].

While academic procrastination is measured using an academic procrastination scale adopted from a scale compiled has a reliability of 0.644 with 23 valid items based on the characteristics of academic procrastination, namely (1) procrastination: delaying starting and completing tasks (2) delay: the inability to prioritize and complete tasks beyond the predetermined time limit (3) the gap between plans and performance: prioritizing work that has nothing to do with the task without taking into account the time (4) doing other activities: doing activities that are considered more enjoyable. [9][22].

The data analysis technique in this study used the Spearman's Rho correlation test technique using JASP 0.14.1.0. Before analyzing the data, the authors conducted an assumption test by conducting a normality test and linearity test, for the linearity test technique using SPSS 23 for windows.

### 3 Results and Discussion

#### 3.1 Assumption Test

##### 3.1.1 Normality Test

Table 2. Normality Test Results

		Shapiro-Wilk	P
SRL	- Academic Procrastination	0.951	< .001

Based on the results of the data normality test that has been carried out on the self-regulated learning variable with academic procrastination, it shows that the data is not normally distributed. It is known that the Shapiro-Wilk value is 0.951 with sig = <.001 <0.05, which means that the data is not normally distributed so that the hypothetical test uses non-parametric statistics.

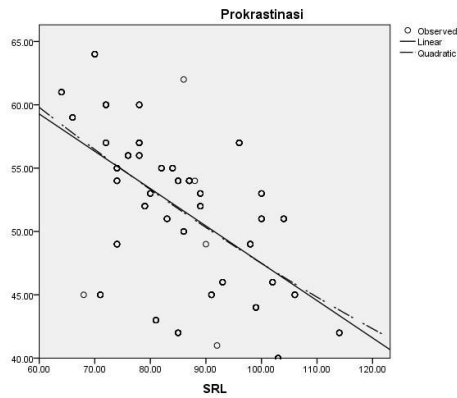
##### 3.1.2. Linearity Test

Table 3. Linearity Test Results

ANOVA Table							
			Sum of Squares	Df	Mean Square	F	Sig.
Procrastinati on * SRL	Between Groups	(Combined)	11395.424	32	356.107	103.457	.000
		Linearity	4628.557	1	4628.557	1344.694	.000

	Deviation from Linearity	6766.867	31	218.286	63.417	.000
Within Groups		1159.984	337	3.442		
Total		12555.408	369			

Based on the linearity test using SPSS 23 *for windows*, it can be seen that there is a linear relationship between *self-regulated learning* and academic procrastination, this is evidenced by the significance value ( $p$ ) = 0.000 ( $p < 0.05$ ).



**Image 2.** Curve Estimation

The research data shows that in general the relationship between variables X and Y forms a linear pattern based on the findings of the linearity test using *curve estimation*. Therefore, it can be concluded that there is a linear relationship between *self-regulated learning* and academic procrastination.

**3.2.Hypothesis Test**

**Table 4.** Hypothesis Test Results

		Spearman's rho	p
SRL	- Academic procrastination	-0.605 ***	< .001

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Hypothesis testing is done with *Sprearman's Rho correlation* test Based on the correlation calculation table above, the coefficient  $r_{xy}$  is  $-0.605$  with significance  $(p) < .001 (<0.05)$ . With this it can be concluded that there is a negative relationship between *self-regulated learning* and academic procrastination in students of Muhammadiyah Sidoarjo University.

The effective contribution given by *self-regulated learning* to academic procrastination is 36.6%. The condition above shows that the *self-regulated learning* variable has an influence of 36.6% on the academic procrastination variable. While the remaining 63.4% is influenced by other factors.

### 3.3. Descriptive Analysis

In addition to conducting hypothesis testing, the researcher conducted a descriptive analysis intended to provide an overview of the highs and lows of the two variables in this study, namely the description of self-regulated learning and procrastination of the research subjects. The description is as shown in table 4 below.

**Table 5.** Self Regulated Learning Category of Research Subjects

Category	Subject Score	
	<i>Self Regulated Learning</i>	
	$\Sigma$ Students	%
Low	53	14%
Medium	228	62%
High	89	24%

Based on the categorization table on *self-regulated learning*, students who have a low level of self-regulated learning are 14%, students with a moderate level of *self-regulated learning* are 62%, and students with a high level of *self-regulated learning* are 24%. Judging from the aspects, an overview is obtained as shown in the table below

**Table 6.** Overview of the level of *Self Regulated Learning* in terms of aspects

Aspects	Subject Score
	%
<b>Metacognition</b>	72%
<b>Motivation</b>	73%
<b>Behavior</b>	70%

Based on table 6. from each aspect of *self-regulated learning*, it can be seen that the metacognition aspect has 72%, the motivation aspect is 73%, and the behavior aspect is 70%. This means that the level of *self-regulated learning* in Muhammadiyah University students when viewed from its aspects is the highest (73%) in the motivation aspect, even though students apply metacognition (72%) and behavior (70%). This means that students are able to organize, maintain their willingness to prepare for the next task or complete activities according to their goals. Students are less able to manage themselves, arrange and utilize the environment that can support their learning activities.

**Table 7.** Categories of Academic Procrastination of Research Subjects

Category	Subject Score	
	<b>Academic Procrastination</b>	
	<b>Σ Students</b>	<b>%</b>
Low	81	22%
Medium	215	58%
High	74	20%

The next categorization table on the academic procrastination variable that has a low level of academic procrastination is 22%, students with a moderate level of academic procrastination are 58%, and students with a high level of academic procrastination are 20%. The findings show that more than half of the students of Universitas Muhammadiyah Sidoarjo belong to the moderate academic procrastination category. Based on the categorization analysis above, 58% of students of Universitas Muhammadiyah Sidoarjo do academic procrastination. Given that there are still a large number of students who do procrastination, researchers try to analyze the form of procrastination carried out by Muhammadiyah Sidoarjo University students as in table 8 below.

**Table 8.** Overview of Academic Procrastination Levels in terms of Aspects

Aspects	Subject Score
	%
<b>Delay</b>	60%
<b>Delay</b>	55%
<b>Plan &amp; Performance Gap</b>	61%
<b>Doing Other Activities</b>	52%



The data above shows that some students procrastinate in the form of doing assignments outside the original plan, delaying assignments (60-61%), although there are also some students who procrastinate by doing other activities that are more fun and are late in completing assignments (52-55%).

## 4 Discussion

Based on the results of the above analysis using *Spearman's Rho* correlation with the help of JASP 0.14.1.0 the results show -0.605 with significance ( $p < .001$  ( $< 0.05$ ). Thus there is a negative relationship between *self-regulated learning* and academic procrastination. This result shows that the higher the ability of *self-regulated learning*, the lower the level of student academic procrastination, on the contrary, if the lower the *self-regulated learning*, the higher the level of student academic procrastination.

The results of this study are also in accordance with previous researchers, namely those conducted by Rohmaniyah regarding "the relationship between *self-regulated learning* and academic procrastination" showing the results that *self-regulated learning* has a negative correlation with academic procrastination, a correlation coefficient of -0.468, indicating that there is a fairly good relationship between *self-regulated learning* and academic procrastination, meaning that the higher the *self-regulated learning*, the lower the academic procrastination of a student. [23]. Furthermore, research conducted by Bunyamin found a relationship value of 0.646 or 64.6% between *SRL* and academic procrastination, it shows that there is a strong relationship between the two variables, meaning that *self-regulated learning* and academic procrastination are related to each other [1].

Students with high *self-regulated learning* will be able to utilize existing facilities, be able to create a plan to achieve goals, and be disciplined in learning and not procrastinating in doing and completing assignments. This is in accordance with the opinion put forward by Zimmerman that students with high *self-regulated learning* are individuals who effectively use their potential in monitoring, regulating, and controlling their cognition, motivation and behavior in learning activities [13]. Individuals who use *self-regulated learning* strategies will avoid academic procrastination behavior. [12]. This is because students who have high *self-regulated learning* are able to independently regulate and control several things that can direct their thoughts, motivation, and behavior to achieve goals. The existence of strategies such as time division in academic activities can support the achievement of learning goals, and indirectly students will have a structured time pattern that becomes an effective learning activity schedule that leads to the achievement of learning goals.

Based on the results of the categorization analysis, it can be seen that the level of academic procrastination of Muhammadiyah Sidoarjo University students is obtained by 20% or 74 students in the high category, 58% or 215 students in the medium category, and 22% or 81 students are in the low category. Judging from this, more than half of the students of Universitas Muhammadiyah Sidoarjo are classified in the moderate academic procrastination category. From the categorization analysis, it can be seen that as many as 58% of students of Universitas Muhammadiyah Sidoarjo do academic procrastination, it means that students still show procrastination behavior towards the collection of academic tasks, rejection of difficult task material or due to the inability to manage time so as to cause delays in completing tasks [7].

Procrastination is usually synonymous with delay and laziness regardless of age, race, occupation, gender, belief or ethnicity. [24]. Procrastination can be caused by inaction in doing and completing tasks. The inaction in question is the behavior of students who are lax in doing coursework. [10]. This is because students think that the time given is still quite a lot so they choose to delay doing their academic work. Milgram, et al. revealed that individual motivation can be the cause of academic procrastination [25] Motivation itself is one aspect of *self-regulated learning*. If motivation towards academic tasks is low, students do not have an interest in the tasks given, as a result students will tend to procrastinate in doing assignments. In addition, procrastinators usually prefer to do things that they consider fun rather than completing their academic tasks. [8].

Meanwhile, in the ability of *self-regulated learning* of Muhammadiyah Sidoarjo University students, it is known that 24% or 89 students are in the high category, 62% or 228 students in the medium category, and 14% or 53 students in the low category. The findings show that more than half of the students of Universitas Muhammadiyah Sidoarjo have moderate *self-regulated learning* skills, they also still do procrastination in their academic activities. The inability of students to predict the time needed to complete tasks is one of the main problems in the emergence of academic procrastination in students. Another indicator that influences the emergence of academic procrastination is that students prefer to do unproductive things such as watching TV, playing games and playing social media rather than doing lecture assignments. This is in line with Saman's opinion who says that procrastinators usually often spend their free time on unproductive activities such as watching TV, social media, or just *hunting* with friends that do not bring benefits compared to doing assignments. [9].

The group of learners who have *self-regulated learning* ability shows a significant increase in learning outcomes in the field of time management skills and self-reaction, compared to the group of learners who do not have *self-regulated learning*. [18]. Students who apply *self-regulated learning* strategies will show good learning effort, have a clear goal orientation, and have better self-control skills. [18]. Based on the above opinion, it can be seen that students with low *self-regulated learning* will tend to commit academic procrastination, it is due to the inability of students to manage time and make plans properly so that they often delay the completion of their assignments, as a result they fail to keep the plans they have made before. Disinterest in the tasks given is also one of the factors that students ignore the tasks given so that learning objectives cannot be achieved optimally. It can be caused by the low motivation of students so that they have no interest in their academic activities, most students who do academic procrastination are usually more likely to do things that they like rather than doing coursework [7].

The results above show that the variable of *self-regulated learning* gives an effective contribution of 36.6% to the academic procrastination variable. This condition shows that the level of consistency of the academic procrastination variable is 36.6% influenced by *self-regulated learning*. While the remaining 63.4% shows that there are other factors that influence academic procrastination that are not revealed in this study, such as self-efficacy factors, social support, and peer influence. [11]. In a study conducted showed that 28.3% of academic procrastination was influenced by *self-efficacy*. Furthermore, in research conducted by Salsabila said that the academic procrastination variable of 14.5% was influenced by emotional intelligence.

However, this study has limitations, because researchers only examine one variable that affects academic procrastination, namely *self-regulated learning*, so it is hoped that future researchers can conduct research on more than one variable that can affect academic procrastination, such as *self-efficacy*, social support, and peer influence.

## 5 Conclusion

Based on the research that has been done above, the conclusion that can be drawn is that there is a negative relationship between *self-regulated learning* and academic procrastination in students of Universitas Muhammadiyah Sidoarjo. The correlation coefficient obtained is -0.605 with significance ( $p$ ) < .001 (< .05), meaning that the higher the *self-regulated learning*, the lower the academic procrastination, otherwise the lower the *self-regulated learning*, the higher the academic procrastination.

The effective contribution of *self-regulated learning* on academic procrastination is 36.6% while the remaining 63.4% is influenced by other factors.

The limitations in this study are that the object of study is less broad because it cannot explain other factors that can affect the academic procrastination variable. Then, in collecting data, the researcher used a google form so that the researcher could not monitor whether the subjects who became the research sample understood or not the items that were compiled. So that suggestions for further research should conduct more detailed research and not focus only on one variable. In addition, suggestions for students, it is hoped that they will be able to apply self-regulated *learning* strategies in their academic activities so that they can regulate themselves in their academic activities so that they can carry out their coursework properly without making delays.

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