



Self-regulated Learning and Academic Procrastination in College Students During Online Learning

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Abstract. Academic procrastination is a common behaviour among college students. This study aims to determine empirically the relationship between self-regulated learning and academic procrastination in college students during online learning. The hypothesis predicts a negative relationship between self-regulated learning and academic procrastination in college students during online learning. Respondents were 307 college students from island of Java and underwent full or blended online learning during second semester of 2021/2022 learning period. The Self-Regulated Online Learning developed by Arbiyah & Triatmoko (2016) and the Academic Procrastination Scale (McCloskey & Scielzo, 2015) were used to collect the data. The results showed that there was a significant negative relationship between self-regulated learning and academic procrastination in students while undergoing online learning with a Pearson product moment correlation value of $r = -0.234$ and a significance of $p = 0.000$ ($p < 0.05$). In conclusion, the hypothesis in this study was accepted, while the analysis of the difference test (gender and type of study) became further discussion.

Keywords: Academic procrastination · self-regulated learning · pandemic

1 Introduction

After the stipulation of the COVID-19 pandemic in March 2020, Indonesia has established new various policies to reduce the spread of the virus, especially in the education sector. Some of the scenarios applied are the implementation of online learning and the transformation of curriculum and learning styles. Online learning is considered to be able to minimize the spread of the COVID-19 virus, because there is no direct contact with other people (Yulianto, Cahyani, & Silvianita, 2020).

The transformation of offline learning to online learning during the COVID-19 pandemic is not easy. Both students and lecturers need adaptation and knowledge to find out how the most effective learning media and learning methods are. According to Rachmad & Krisnadi (2020), online learning is considered less effective because students can't understand the material given by the lecturers. In addition, students experience

challenges in poor time management, insuitable learning strategies, feelings of isolation, lack of motivation, lack of preparation and procrastination (Hong, Lee, & Ye, 2021).

Procrastination become a concern during the pandemic because learning conditions carried out from home are considered difficult for students to receive materials and do assignments (Prihantoro, & Ohorella, 2021). Based on cognitive behavior theory, procrastination behavior occurs as a result of errors in thinking and having irrational thoughts on tasks such as fear of failure in completing a (Knaus, 1973; Solomon, & Rothblum, 1984).

Procrastination can occur in all activities, but academic procrastination is the most common thing (Rosario dkk., 2009). Academic procrastination is a tendency to delay doing tasks that are done intentionally because of irrational beliefs that cause discomfort, depression, anxiety and restlessness. Procrastination is mostly done by students. According to previous research, more than 70% of students reported procrastination and 20% of them become their habit (Handaru, Lase, & Paramita, 2014).

Another study states that 75%-95% of students are involved in procrastination behavior (McFadden, 1999). During the pandemic, 39.5% of students had high procrastination (Miswanto, 2022). The high level of procrastination certainly prevents students from developing because of the serious impact it has. According to (Febriani & Erfantinni, 2020) procrastination is a non-adaptive behavior that initiates new problems such as truancy, to drop out. Research by Yuhan & Yamleam (2021) found a negative correlation between academic procrastination and student achievement during online learning.

Procrastination in general is caused by a feeling of laziness that causes the urge to delay doing tasks. There are also those who think that procrastinators have non-adaptive motivational beliefs, poor use of learning strategies, inability to meet deadlines and poor academic performance (Wolters et al., 2017). Students who manage their time effectively should, of course, be less prone to the misappropriation of time and effort characterized by procrastination. Other studies suggest that procrastination is deeply rooted in the failure of the individual's self-regulation process and a malfunction of low levels of self-regulation (Wolter, 2003; Steel, 2007; Kim, & Seo, 2015).

The solution that can be done to avoid academic procrastination behavior based on the research is to apply self-regulated learning. Milgram, et al (1988) argue that students who use self-regulation strategies in learning rarely do procrastination. The application of self-regulated learning to students is considered to be able to overcome various problems, ranging from improving learning outcomes, reducing learning stress, and uncertainty of goals (Fazriah, 2019).

Self-regulated learning is more important to use in online learning than face-to-face learning (Jonassen et al., 1995). This is because online learning requires a proactive attitude and good self-regulation to get good academic results. This study predicts that there is a negative relationship between self-regulated learning and procrastination in students when learning online. Several previous studies that strengthen the negatif correlation between self-regulated learning and academic procrastination have been carried out including research by Rizkyani, et al. (2021), Pradnyadwari & Susilawati (2019); Santika & Sawitri (2016).

Although research with the same theme has been carried out several times, the use of online learning contexts is an important thing to do considering that online learning is actively being carried out recently and has the potential to continue to be carried out as a substitute or complement to the learning system in the future. In addition, several new measuring tools were found equipped with online learning contexts. Therefore, the researcher sees an urgency to conduct research on the effect of self-regulated learning on student academic procrastination during online learning with the latest theories and measuring tools adapted to the existing context.

2 Method

This research is a correlational quantitative research conducted on 307 respondents who are currently carrying out full online or blended higher education on the island of Java in the second semester of the 2021/2022 period among the ongoing outbreak of COVID-19. The self-regulated learning variable was measured using the Self-regulated Online Learning Scale (2016). The 24 items of this measuring instrument were translated and developed by Arbiyah & Triatmoko (2016) based on the Online Self-Regulated Learning Questionnaire compiled by Barnard, et al (2009). Then the number becomes 22 items with a Cronbach Alpha coefficient (α) of 0.918 after elimination.

While the academic procrastination variable is measured by the Academic Procrastination Scale by McCloskey & Scielzo (2015) which has been translated and adapted into Indonesian by the researcher. The final items were 21 items and the Cronbach Alpha coefficient (α) is 0.930. Quantitative data were collected through the online distribution of questionnaires to respondents with certain criteria on 29 May 2022 until 16 June 2022. The statistical technique used was the Pearson product-moment correlation analysis test which aims to test the hypothesis between two related variables.

3 Results and Discussion

Table 1 showed the sociodemographic profile of respondents. A total of 79.8% of the subjects of this study were female and the remaining 20.2% were male. According to the form of learning during the pandemic, the characteristics of the subjects were also categorized based on the form of learning, full online learning and blended learning with the percentage of subjects in each being 47.6% fully online and 52.4% blended.

Survey from this reaserch show that 55% of student respondents have moderate levels of procrastination, 29% have a high level of academic procrastination and 14% have a low level of academic procrastination. This means that academic procrastination in students is still a phenomenon that takes place during the online learning period. In line with the opinion of Handoyo, et al. (2020) about students who do a lot of academic procrastination during online lectures.

In the Table 2, the result from correlation using Product-moment Pearson showed that there is negative correlation between self-regulated learning and academic procrastination in college student who underwent online learning $r = -0.234$ with a significance of $p = 0.000$ ($p < 0.05$). A negative relationship between self-regulated learning and academic procrastination was also found in research (Rahmanillah, & Qomariyah, 2019;

Table 1. Sociodemographic Profile of Respondents

Demographic	Kategori	n	%
Gender	Male	62	20,2%
	Female	245	79,8%
Learning Style	Full Online	146	47,6%
	Blended	161	52,4%
Total		307	100%

Table 2. Correlation Test

Variable	r	R Square	Sig. (p)
Self-Regulated Learning and Academic Procrastination	-0,234	0,054	0,000

Rizkyani, Feronika, & Saridewi, 2020). The R value shows that the effective contribution given by self-regulated learning to academic procrastination is 5.4%, while the other 94.6% came from other factors that could not be explained by the independent variables. Approved by Lubis (2018) which states that self-regulated learning is one of the factors that affect the level of individual procrastination. Other factors that influence academic procrastination based on previous research are the learning environment, fear of failure, dislike of tasks and parenting styles (Milgram et.al, 1988; Steel, 2007; Sebastian, 2013; Ferrari & Olivette, 2018).

The Table 3 shows that there are differences in the correlation between aspects of the self-regulated learning variable and the academic procrastination variable. The aspect with the highest negative correlation was found in the help seeking aspect with a correlation value of $r = -0.252$ ($p < 0.05$) and the environmental structure aspect with a correlation value of $r = -0.251$ ($p < 0.05$). While the time management aspect is known to have no significant correlation with the academic procrastination variable with a correlation value of $r = -0.073$ ($p > 0.05$).

Table 3. Intercorrelation between variables

Variable	Aspect	r	R Square	p
Academic Procrastination	Environment Structure	-0,251	0,063	0,000
	Goal Setting	-0,126	0,0158	0,000
	Help Seeking	-0,252	0,063	0,000
	Self-Evaluation	-0,215	0,046	0,000
	Task Strategies	-0,115	0,013	0,022
	Time Management	-0,073	0,005	0,100

Online learning that is carried out during the pandemic is strongly influenced by access, existing facilities and infrastructure, for example the internet network. The availability of the internet network helps students in searching for literature to deepen the material. Seeking help is one of the aspects with a large influence on academic procrastination based on the findings of this study with a value of $r = -0.252$ ($p < 0.05$). So that the lack of access, facilities, and infrastructure can lead to high academic procrastination.

In addition, the transformation of offline learning to online also changes the structure of the environment around students $r = -0,251$ ($p < 0,05$). Students need the ability to adapt to the online environment and determine effective learning strategies. Students lacking self-regulatory learning skills may misconstrue the autonomy of the online learning environment and may not accomplish learning tasks they expected due to procrastination. Based on the findings, the structure of the environment and learning strategies are factors that influence the occurrence of academic procrastination.

This study distinguishes the types of online learning into two forms, full online learning and blended learning. The demographics of the respondents found that 146 students underwent full online learning and another 161 students underwent blended learning. In the Table 4, the results of the study found that there was no significant difference between full online learning and blended learning. This is different from the research by Febriani & Erfantinni (2020) which states that blended learning is able to reduce the level of procrastination in students.

This is due to increased learning independence and self-initiative when faced with online learning. The independence and self-initiative of students when learning online can be the main determinant in their learning outcomes. However, neither blended nor online learning had difference level of self-regulated learning and academic procrastination.

Table 4. Independence Sample T-test on Learning Style

Variable	Learning Style	N	Mean	p
Academic Procrastination	Blended	161	67,58	0,178
	Full Online	146	65,15	
Self-Regulated Learning	Blended	161	90,00	0,503
	Full Online	146	91,04	

Table 5. Independence Sample T-test on Gender

Variable	Gender	N	Mean	p
Academic Procrastination	Male	62	69,64	0,072
	Female	245	65,62	
Self-Regulated Learning	Male	62	90,59	0,949
	Female	245	90,47	

The Table 5 shows that there is no significant differences according to the average of male and female subjects. In line with research by Ferrari, et al (1995) which stated that there was no influence of gender on academic procrastination and self-regulated learning. This can also be caused by the behavior of academic procrastination which has become a personality trait for students. It means procrastination is not only defined as delaying behavior, but involves other behavioral components or mental structures that are interrelated (Ghufron, 2003). In online learning environments, both male and female students can regulate their personal functions through using self-regulation related strategies to benefit from the online learning. Thus, the change in environment requires learners to engage in SRL to ensure that they can adapt to online learning as soon as possible.

Suggestions for educational institutions are to take steps that can minimize academic procrastination in students by providing appropriate guidance and counseling services on campus, rewards and positive comments on assignments, presentations, group work, displays and other academic activities, giving encouragement and rewards. Appropriate to students for their good academic performance. Performance, developing and maintaining academic relationships with fellow students and lecturers, and dividing work or job assignments to students according to their potential and talents to reduce or minimize delays between universities.

Overall, the researcher considers this research still has many shortcomings. First, the small effective contribution results can be caused by the use of academic procrastination measurement tools that do not use the online learning context. Second, the distribution of questionnaires conducted online led to a lack of control and supervision during filling out, thus affecting the validity of the contents. Things that become interesting findings in this study are procrastination behavior which is still a common behavior even when learning online. Although various studies have mentioned the serious impact of procrastination behavior, individuals still do procrastination. The increasing number of studies on procrastination can explain why individuals still carry out procrastination behavior. In the future, research can be carried out on younger subjects to find out how procrastination behavior affects child development.

4 Conclusions

This study concludes that there is a negative relationship between self-regulated learning and academic procrastination in students when learning online. This means that the higher the self-regulated learning that is owned, the lower the academic procrastination of students when learning online. Vice versa, the lower the self-regulated learning, the higher the academic procrastination that students have when learning online. This indicates that the hypothesis proposed in this study is accepted. Aspects of self-regulated learning that affect academic procrastination are seeking help, environmental structure, learning strategies, self-evaluation and task assignment. Neither self-regulated learning nor academic procrastination is influenced by gender or the type of online learning, both full online and blended.

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