

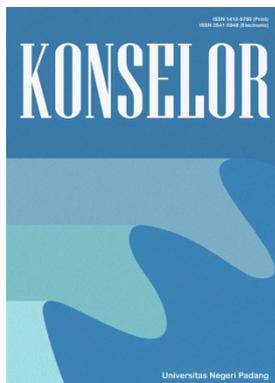
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Jl. Prof. Dr. Hamka Air Tawar Barat, Kota Padang, Sumatera Barat, 25130, Indonesia.

☎ +62 (0754) 41650; Website: <http://pps.fip.unp.ac.id/>; ✉ jk@konselor.org / info@konselor.org

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Navigating Academic Challenges: Self-Regulated Learning Analysis of Academic Procrastination Students

Nurul Fajri¹, Yuda Syahputra², Sally Putri Karisma³, & Ildil Ildil⁴

¹Universitas Islam As syafi'iah, Jakarta, Indonesia

²Universitas Indraprasta PGRI, Jakarta, Indonesia

³Universitas Cenderawasih, Papua, Indonesia

⁴Universitas Negeri Padang, Padang, Indonesia

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Correspondence regarding this article should be addressed to:

Ildil Ildil, Department of Guidance and Counseling, Faculty of Education, Universitas Negeri Padang. Jalan Prof. Dr. Hamka, Air Tawar Padang, Sumatera Barat.

Email: ildil@fip.unp.ac.id

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Navigating Academic Challenges: Self-Regulated Learning Analysis of Academic Procrastination Students

Nurul Fajri¹, Yuda Syahputra², Sally Putri Karisma³, & Ifdil Ifdil^{4*}

¹Universitas Islam As syafi'iah, Jakarta, Indonesia

²Universitas Indraprasta PGRI, Jakarta, Indonesia

³Universitas Cenderawasih, Jayapura, Indonesia

⁴Universitas Negeri Padang, Padang, Indonesia

Abstract: The study aims to understand the correlation between self-regulated learning and academic procrastination. By examining responses from 104 students through comprehensive questionnaires, it provides insights into how students manage their learning and delay tasks. The use of simple regression analysis underscores the statistical significance of the findings, highlighting that improving self-regulated learning skills can directly reduce academic procrastination. This research not only contributes to the academic understanding of these concepts but also offers practical guidance for educators and policymakers. By focusing on enhancing self-regulated learning abilities, educational strategies can be developed to address and mitigate procrastination, ultimately improving the overall quality of student learning experiences.

Key Words: Self-regulated learning; Academic procrastination; Students academic

INTRODUCTION

The government of Indonesia has taken many steps to prevent the spread of the Covid-19 virus, one of which is the existence of Official Letter from the Ministry of Education and Culture, Directorate of Higher Education (Kemendikbud Dikti) Number 1 of 2020 regarding preventing the spread of Covid-19 in the world of education. In the letter, the Ministry of Education and Culture advised students to study from their homes using a distance learning system. This is in line with Sintema (2020) stating that during the current pandemic emergency, the learning system requires that the learning system be replaced with online learning. In online learning, students are required to be more independent in all aspects, such as doing assignments independently (Miftahuddin et al., 2022), understanding the material provided responsively, feeling confident in the assignments they make, and being able to maximize their time well. However, this is not easy for students to do considering the obstacles that often occur in the learning process at home (Utami, 2020). In fact, there are still many students who think that with online learning the situation becomes pressured by the pressure of assignment submission timeframes (Fauzi et al., 2021; Labiro & Kusumiati, 2022).

In online learning, students who delay academic assignments will be in a hurry when the deadline for submitting assignments approaches, so assignments completed in a hurry will be less than optimal, while those who delay starting studying will lack time to understand the material that will be tested, so that in during the exam students were unable to answer the questions correctly. The habit of procrastinating an academic activity is called academic procrastination. Procrastination is linked to the

*Corresponding author: Ifdil Ifdil, Department of Guidance and Counseling, Faculty of Education, Universitas Negeri Padang. Jalan Prof. Dr. Hamka, Air Tawar Padang, Sumatera Barat.
Email: ifdil@fip.unp.ac.id

cognitive abilities of deliberate activity and self-regulation (such as starting or ceasing behavior). There is a correlation between lower executive function and increased procrastination, as found by Sirois & Kitner (2015) emphasized that there is a positive correlation between procrastination and maladaptive learning techniques, such as denial and behavioral disengagement. Academic procrastination poses a significant obstacle to students' academic success by impeding their progress in mastering the various educational levels. This is due to the postponement of studying the different subjects required to meet academic requirements (Steel, 2007). Academic procrastination refers to the deliberate and avoidable postponement of academic tasks (Zhao & Elder, 2020). Hussain and Sultan (2010) discovered that academic procrastination can forecast learning performance and trigger psychological issues. Academic procrastination leads to distressing emotions and unfavorable learning encounters (Sirois & Pychyl, 2016). In addition, academic procrastination can negatively impact the completion of homework (Grunschel et al., 2013), and even influence the choice to withdraw from online learning courses.

Amidst the coronavirus lockdown in China, the majority of online courses were conducted through live lectures delivered by lecturers, which students attended to acquire knowledge. In order to assess the efficacy of online learning during the COVID-19 lockdown, (Zheng et al., 2020) conducted a study that investigated the relationship between online learning behavior (such as attendance and level of participation in discussions) and learning outcomes. Additionally, the study compared the overall impact of online learning with that of traditional learning. Nevertheless, limited research has been conducted on the specific elements that contribute to the lack of engagement, which in turn affects the efficacy of learning owing to procrastination (Michinov et al., 2011), particularly in the context of the ongoing coronavirus pandemic. In this study, we investigated the impact of procrastination on college students' perceptions of online learning. The participants were students who completed online courses during the coronavirus lockdown in China. Trait activation theory (TAT) is a personality theory that combines personality qualities with conditions to explain work functioning. It serves as the foundation for the current study and has been supported by research conducted by Tett & Guterman (2000) as well as Tett et al. (2013). The Trait Activation Theory (TAT) posits that individuals must demonstrate coherence between their thoughts and behaviors, leading to the development of a more enduring personality characteristic (Scheuble et al., 2019). Procrastination, identified as a stable personality trait by Van Eerde (2003), refers to the deliberate postponement of a planned action, even when one anticipates negative consequences from the delay, as defined by (Steel, 2007). Several research utilizing the TAT model have demonstrated that procrastination can disrupt self-regulated behavior (e.g., Loeffler et al., 2019; Ziegler & Opendakker, 2018). Given its high predictive ability (Jayawickreme et al., 2019), the Trait Activation Theory (TAT) can be employed to examine the indirect influence of procrastination on the effectiveness of online learning (Broadbent & Poon, 2015). The objective of this study was to examine the relationship between procrastination and learning efficacy, with self-regulated online learning (SROL) acting as a mediator, during the coronavirus lockdown. The objective of this study was to offer valuable perspectives to assist teachers in improving their students' online learning experiences during or following the coronavirus lockdown.

According to Lumongga (2014), one of the causes of procrastination is that it is influenced by self-regulated learning. Self-regulated learning is a concept that is able to reduce academic procrastination in students regarding how a person can regulate themselves or the regulator. Zimmerman (2000), explains that self-regulated students tend to apply specific processes that transform pre-existing abilities into task-related behavior, not only in terms of school content, but in different functional areas. This social-cognitive perspective of SRL includes three phases, namely, thinking, performance (volitional control), and self-reflection, which interact with each other.

This research gap lies in the lack of in-depth understanding of how academic procrastination influences the effectiveness of online learning among Indonesian students, especially in the context of the COVID-19 pandemic. Previous research tends to focus on evaluating the overall effectiveness of online learning, but has not sufficiently explored the specific elements that cause students' lack of engagement, especially related to procrastination. Therefore, in-depth research is needed to fill this knowledge gap and provide the insights needed for the development of more effective online learning strategies in the future. For this reason, the aim of this research is to analyze the influence of self-regulated learning on students' academic procrastination.

METHOD

This research is quantitative descriptive statistical research on students of SMK Negeri 2 Bogor. The population in this study was all students of class X at SMK Negeri 2 Bogor, the sample used in the Slovin formula was 104 students. Sampling used purposive sampling technique. Data was collected through two questionnaires, including a self-regulated learning instrument developed from theory (Schunk, 2013) with 34 items and an academic procrastination instrument developed from theory (Solomon & Rothblum, 1984) with 32 items. The questionnaire uses a 4-point Likert Scale model including answer choices; strongly agree, agree, disagree, and strongly disagree. The instrument has been validated using the Rasch model (Ifdil et al., 2022; Linacre, 2021; Syahputra et al., 2022; Trevor G Bond & Christine Fox, 2015). The results of the RASCH model analysis on the self-regulated learning instrument show item reliability of 0.77, meaning that the instrument has well enough quality to measure self-regulated learning and the items on the instrument are representative for measuring self-regulated learning. Meanwhile, the results of the RASCH model analysis on the academic procrastination instrument show item reliability of 0.68, meaning that the items have quite good quality also for the measurement conditions carried out, namely measuring academic procrastination. Furthermore, the data was analyzed using SPSS version 25 software with simple regression analysis techniques.

RESULTS

The results of the analysis of the influence of self-regulated learning on students' academic procrastination will be tested using linear regression, but before that it will be tested visually through plots to see the normal distribution in Figure 1.

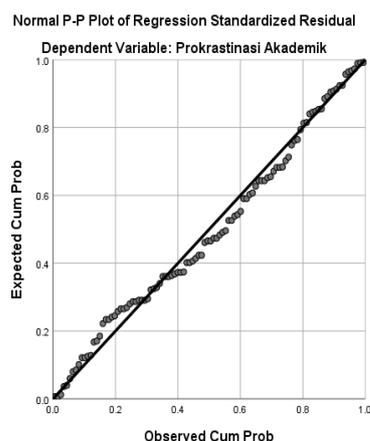


Figure 1 Data Normal Distribution

A thorough examination of the visual representation, utilizing a plot, reveals that the data points are systematically distributed along a linear trajectory, with all points residing within the confines of the line. This observation suggests that the residuals exhibit a normal distribution pattern.

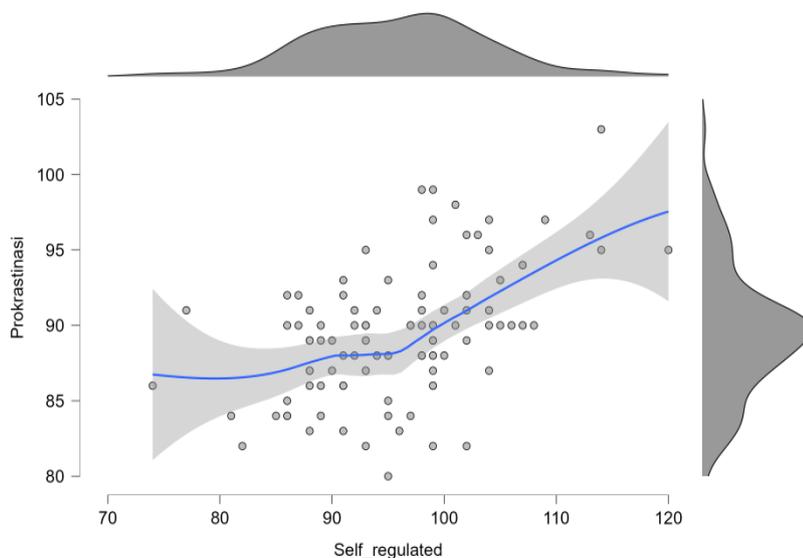


Figure 2 Distribution of Data on Self-Regulated Learning and Academic Procrastination

Figure 2 clearly illustrates the data distribution pattern of the Self-Regulated Learning and Academic Procrastination variables. In this image, it can be seen visually that the average score for Self-Regulated Learning is at level 96, while the Academic Procrastination level reaches 89. Image analysis provides an in-depth visual understanding of the distribution and comparison between the two variables, providing a basis for further interpretation regarding their relationship. Subsequently, an in-depth analysis of the contribution of self-regulated learning to academic procrastination is undertaken through linear regression, and the detailed findings are systematically presented in Table 1.

Table 1. Results of Simple Linear Regression Analysis and Significance of Self-Regulated Learning on Academic Procrastination

Model	R	R Square	Sig.
X.Y	0.513	0.263	0.000

Table 1 shown there is a significance value of 0.000 which states that it is smaller than 0.05 ($0.000 < 0.05$), so it can be concluded that the self-regulated learning variable (X) has an effect on the variable (Y). In addition, the R value is 0.513; this indicates a strong relationship between the two variables between self-regulated learning and academic procrastination. It can be seen that the R Square value is 0.263, meaning that self-regulated learning (X) has an effect on academic procrastination by 26.3%. while the remaining 73.7% is influenced by other variables that cannot be explained in this study. To further see the regression equation, see Table 2.

Table 2. Regression Equation of Self-Regulated Learning on Academic Procrastination

	Unstandardized Coefficients	
	B	Std.Error
(Constant)	62.653	4.465
Self-Regulated	.279	.046

In table 2 above, the constant value (a) is 62.653, while the self-regulated learning value (b) is 0.279, the regression equation becomes: $Y = 62.653 + 0.279X$. This regression formulation shows that every one point increase in self-regulated learning is accompanied by an increase of 0.279 in academic procrastination. The regression coefficient is positive, so it can be stated that the influence of the variable self-regulated learning (X) on academic procrastination (Y) is positive, which means that an increase in

self-regulated learning will cause an increase in academic procrastination. To determine the magnitude of the influence of self-regulated learning on academic procrastination, analysis of the coefficient of determination (Adjusted R Square) can be used. The coefficient of determination (Adjusted R Square) can be seen in Table 3.

Table 3. Coefficient of Determination Calculation Results (Adjusted R Square)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.513a	.263	.256	3.699

Based on the results of the analysis in Table 3, it shows that the magnitude of the influence of the self-regulated learning variable on the academic procrastination variable is 0.263, so the contribution of the influence of the self-regulated learning variable (X) to the dependent variable academic procrastination (Y) is 26.3%. This means academic procrastination is 26.3% influenced by the self-regulated learning variable while the remaining 73.7% was influenced by other factors not included in this research.

DISCUSSION

Procrastination poses a significant obstacle in the academic realm, impeding students' ability to excel in their school assignments that necessitate the attainment of mastery in learning. Procrastination refers to the deliberate yet unnecessary postponement of academic responsibilities (Zhao & Elder, 2020). Conversely, SRL is recognized as a crucial element for successful online learning. Therefore, the perception of academic control by students is a significant factor that influences self-regulated learning (You & Kang, 2014). Academic procrastination is a specific characteristic that is strongly linked to behavioral shortcomings in the majority of self-regulation models (Loeffler et al., 2019). To substantiate this, we investigated the correlation between academic procrastination and each of the six components of the Self-Regulated Online Learning (SROL) framework: task-strategy, mood-adjustment, self-evaluation, environmental-structure, time-management, and help-seeking, amidst the coronavirus lockdown. The study findings indicated that those with elevated levels of SROL components exhibited a decreased perception of learning ineffectiveness. In simpler terms, they held a more favorable view of the efficacy of their learning. To fully recognize the significance of including self-regulated learning (SRL) strategies in online education, it is crucial to assess students' utilization of SRL strategies and identify those students who are inclined to invest effort in online courses (Cicchinelli et al., 2018). Self-regulated learning (SRL) can improve students' ability to monitor and reflect on their learning process, hence enhancing their learning effectiveness (Dorrenbacher & Perels, 2016). Nevertheless, past research on the subject has yielded inconclusive findings about the associations between self-regulated learning (SRL) and academic outcomes (Jansen et al., 2020). In order to examine the relationship between self-regulated online learning (SROL) and the perception of online learning ineffectiveness during the coronavirus lockdown, we hypothesized that self-regulated learners require the ability to anticipate and adjust to the learning environment, as well as actively participate in and assess their progress in online learning.

In accordance with the findings of this research, it shows that Self Regulated Learning has a significant influence on the Academic Procrastination of Class X Students majoring in Informatics Engineering at SMKN 2 BOGOR. The significance value is 0.000 with the linear regression equation, namely $Y = 62.653 + 0.279X$. In line with research by Sarajar (2016) at Mercu Buana University, Yogyakarta, it supports that Self Regulated Learning training has an effect on reducing procrastination behavior in completing theses in final year students. The group that received training showed a decrease in procrastination, while the group without training experienced no change.

Students with varying levels of self-regulation exhibit notable disparities in their academic achievement. For instance, learners who practiced self-regulation performed better than learners who had minimal self-regulation in terms of the completion of a design job (Li et al., 2020). A prior investigation also indicated that students who diligently participated in task preparation, such as by systematically organizing relevant information to establish connections, demonstrated greater

proficiency when faced with unfamiliar situations, and consistently enhanced their task completion performance (Irvine et al., 2020). These behaviors, such as planning, adaptation, and monitoring, are crucial elements in the context of online learning (Irvine et al., 2020). Thus, we define "forethought" as the self-regulated conduct exhibited by students prior to engaging in online learning. Moreover, students face a higher likelihood of disengaging from their academic responsibilities if they encounter emotional maladjustment (Skinner & Pitzer, 2012). The learning outcomes in SROL are significantly impacted by both the current circumstances, such as the quality of the Wi-Fi connection, and individual traits, such as mood, as demonstrated by Taminiau et al. (2013). Given that mood has been found to stimulate pre-reflection in SROL (Lehmann et al., 2014), and considering the teacher-centered instructional paradigm as a method for transmitting knowledge (Rajabi, 2012), we incorporated mood adjustment as a pre-prompt in place of goal setting in SROL. This substitution is particularly relevant in the context of Chinese educational culture, where teachers commonly emphasize goal setting (Bai & Wang, 2021).

The model utilized in this study incorporated six sub-constructs of SROL, namely task strategy, mood adjustment, self-evaluation, environmental structure, time management, and help-seeking. Self-regulated learning (SRL) is crucial in evaluating the efficacy of student learning in online education, enabling institutions and teachers to offer appropriate assistance. Several notable research have discovered substantial connections between academic achievements and self-regulated learning (SRL) as a whole (Cicchinelli et al., 2018), as well as specific aspects such as time management (Bruso & Stefaniak, 2016) and effort regulation (Dunnigan, 2018). To successfully navigate the coronavirus lockdown, those who are learning online must adjust to the learning environment and actively participate in the online learning process in order to meet the objectives of the course. Nevertheless, the investigation of task methods, progress monitoring, and goal evaluation in the context of online learning during the coronavirus lockdown has been limited. Therefore, this study aims to examine the role of foresight and the adaptive function of Self-Regulated Online Learning (SROL).

Self Regulated Learning there is academic procrastination in vocational high school students, as for the influence both positive and negative, this is because many students are still low in self-regulation, individuals who have high self-regulation will not carry out academic procrastination and vice versa . For students, self-regulated learning is very necessary in the learning process, if you have self-regulated learning you are able to achieve your goals and have confidence in yourself. Students who have self-regulation in the learning process in the academic field will gain knowledge and be able to improve their cognitive skills by using metacognition in completing their academic tasks. In accordance with Bandura (2012) good self-regulated learning is characterized by monitoring cognitive and affective processes which are included in completing academic tasks well.

Prior research has demonstrated that online learning can detrimentally impact students' learning behavior, particularly when the learning assignments are intricate. Specifically, when students display procrastinating habits, the adverse consequences encompass the burden of fulfilling the course requirements and completing assignments (Alghamdi et al., 2020). Research suggests that students who actively participate in online learning and utilize self-regulated learning (SRL) strategies tend to receive higher grades compared to students who do not engage in online learning (Magalhaes et al., 2020). Online learning systems are widely recognized as effective platforms for teaching. However, (Panigrahi et al., 2018) study highlighted a varied outcome when utilizing online learning to enhance learning effectiveness, which might be attributed to the learners' disposition or background. Online education necessitates a higher level of self-discipline in comparison to traditional classroom education, as observed by (Allen & Seaman, 2007).

In line with research from Lestari (2023) revealed that self-regulation has a positive effect on academic procrastination with a value of $p=0.000$ ($p<0.05$). The results of research from (Santika & Sawitri, 2016) entitled "Self Regulated Learning and Academic Procrastination in Class XI Students of SMA Negeri 2 Purwokerto" reveal that there is a significant negative relationship between self-regulated learning and academic procrastination ($r_{xy} = -.82$ with $p < .01$). Based on the results of this research, it shows that there is conformity with the research described above, based on testing from a simple linear regression test. Variable (X), namely Self-Regulated Learning and Variable (Y), namely Academic Procrastination, the influence obtained is 0.000 from the maximum standard of 0.05. This means it can be used to predict variables (X) and variables (Y) with a coefficient of determination R Square, namely 0.263.

Suggestions for future research are to carry out further investigations regarding factors that might moderate or mediate the relationship between self-regulated learning and academic procrastination. This research can also be expanded by considering variations in self-regulated learning training methods and involving student samples from various study programs or higher education institutions. Practically, higher education institutions can integrate self-regulated learning training programs in their curriculum as a proactive effort to help students develop time management and self-improvement skills, which in turn can reduce the level of academic procrastination. Thus, these findings can provide a basis for developing more effective educational strategies to improve the quality of student learning.

CONCLUSION

The findings of this research indicate that there is a significant influence between the variables of self-regulated learning and academic procrastination. The magnitude of the contribution of 26.3% shows that some of the academic procrastination behavior can be explained by the level of students' self-regulated learning skills. However, around 73.7% of the remainder was influenced by other factors not examined in this study. This conclusion highlights the important role of self-regulated learning in reducing academic procrastination, but also recognizes the complexity and multifactoriality of this phenomenon. Therefore, future research can expand the scope to understand more deeply other factors that influence academic procrastination. The practical implication is that efforts to improve self-regulated learning skills can be an effective strategy, but need to be considered in a broader context to design holistic interventions to reduce academic procrastination.

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