

Self-Management as a Factor Related to Academic Procrastination of High School Students in the Digital Era

Nisa Ceres ^{1a}, Atrup ^{1b}, Yuanita Dwi Krisphianti ^{1c}

¹ Universitas Nusantara PGRI Kediri, Indonesia

nisaceres.tugas04@gmail.com ^a; atrup@unpkediri.ac.id ^b; Ju.wahyu@gmail.com ^c

* Corresponding Author

Abstract: Self-management is an individual's ability to manage behavior to achieve desired goals. This ability is important for students in facing learning challenges in the digital era, one of which is related to academic procrastination. This study aimed to examine the relationship between self-management and academic procrastination among students in the digital era at SMAN 1 Gurah. The study used a quantitative approach with a correlational design. A total of 37 students were selected using simple random sampling from a population of 343 Grade XI students. Data were collected using a self-management scale and an academic procrastination scale. Data were analyzed using the Pearson Product Moment correlation. The results showed that the self-management and academic procrastination variables were both in the moderate category. The correlation coefficient was -0,672 with a significance value of 0,000 ($p < 0,05$), indicating a significant negative relationship between self-management and academic procrastination. Thus, higher self-management scores were associated with lower academic procrastination scores. These findings provide an implication for guidance and counseling services to support students in developing self-management skills when facing academic demands in the digital era.

Keywords: Self-management; Academic Procrastination; Senior High School Students; Digital Era

INTRODUCTION

In today's digital era, technology provides quick and easy access to information and various resources. The increasingly rapid development of technology enables people to use the internet to access educational and non-educational content, both positive and negative (Tabroni, 2019). One significant impact of the rapid growth of the internet is the emergence of social media (Ulfa et al., 2024). The growing use of social media directly affects individuals in terms of behavior patterns, creativity, and character building. The development of digital technology has brought significant changes to students' lives, especially in the learning process.

In Senior High School era, the challenge of character creation is greater because students are in the final youth phase characterized by self-discovery, increased influence of peers, and an intensity of digital media use. At this stage, students are faced with more complex demands than previous grades. Not only is mastering the more profound lesson material required, they also need to have the ability to manage their time, to set priorities, and to develop higher discipline and responsibility in completing school assignments. Transition from junior high school to senior high school is one of the crucial periods because students must adapt to more dense curriculum, different learning styles, and higher teacher and school environment expectations. At senior high school level, students receive more complex tasks as learning tools to cultivate a sense of responsibility for the roles they have (Hastuti et al., 2019).

The use of smartphones, social media, and digital platforms provides easy access to information and support academic activities. However, on the other hand, technological progress also brought in various districts that could disrupt the student's concentration of study. The frequency of excessive social media use can adversely affect the learning frequency of youth (Kartikasari et al., 2023), the condition potentially increases students' tendency to delay the completion of academic assignments or is known as academic procrastination. Procrastination is a tendency to put off starting to finish by engaging in other useless activities that lead to stunted work, unfinished on time and often late (Kokka et al., 2021) academic procrastination, then, constitutes a deliberate postponement of both starting and completing academic tasks even if individuals recognize any potentially harmful consequences. These behaviors can cause job completion delays, decreased quality of learning results, increased anxiety,

and a lack of student academic achievement. Academic procrastination phenomena is one of the fairly frequent problems found in students, especially in the digital era characterized by senior high levels of technological use and social media.

Based on observations taken by researchers at public high school 1 Gurah, it was found that there were still students who exhibited academic procrastination behavior in completing school assignments. This is seen by students postponing the performance of a task close to the time of the gathering, doing some homework on a particular period of study, and being unable to time between academic and non-academic activities. Furthermore, some students seem to spend more time on digital devices, such as social media, online games, and other digital entertainment than caring for academic responsibilities. This condition causes some of the homework to be done quickly, even late. In addition, students' involvement in school activities, such as organizations and extracurriculars, also has the potential to reduce the time available to learn if it does not make up for the ability to manage good time. According to Melgaard etc., (2021) academic procrastination consists of three aspects: waste time, task avoidance and blaming others, academic procrastination: the first, to waste time, in which individuals who have a tendency to waste time eventually do a delay. This is because the individual has a tendency to delay in doing duty or work. Second, task avoidance is where individuals tend to avoid doing chores because they have difficulty doing unpleasant things. Third, blaming others, where individuals tend to blame external or other people for any consequence of academic procrastination. Factors that affect between self-awareness, guilt, intrinsic motivation and self-regulation and perfectionism.

The fact that students' self-management ability still needs to be improved in order to minimize academic procrastination in the digital era. In this study, the term "digital era" is used as the research context rather than as a separately measured variable. The digital context refers to students' learning environment, including the use of smartphones, social media, online games, digital entertainment, and internet access that may provide sources of distraction. Therefore, this study does not measure the intensity of digital technology use as a separate variable, but examines the relationship between self-management and academic procrastination among students who learn in a digital environment. One factor related to academic procrastination is self-management. Self-management is the individual's ability to manage oneself, manage time, set goals, control behavior, and direct oneself to achieve set goals (Elvina, 2019). Thus, students with good self-management skills tend to organize study activities effectively, control distractions, and complete assignments on time, which is associated with lower academic procrastination. Several previous studies have shown relationships between self-management and academic procrastination. Yustika (2023) and Maharani (2024) found that the application of self-management techniques was effective in reducing academic procrastination among students. In addition, Azzumar (2025) and Yudoningtyas (2023) also found significant relationships between self-management and academic procrastination.

However, most previous research has considered self-management as an intervention for reducing academic procrastination, and previous research has mainly involved university students or young adults, while studies that specifically explore the relationship between self-management and academic procrastination among high school students in the context of the digital era are relatively limited. High school students are closely connected to digital technology and may therefore encounter various distractions that can be related to academic procrastination. This study examines the relationship between the two variables among students who live and learn amid the increasingly rapid development of digital technology. The theoretical contribution of this study is to provide empirical evidence concerning the relationship between self-management and academic procrastination among high school students in a digital learning context. Based on this description, this research aims to determine the relationship between self-management and academic procrastination among students in the digital era at SMAN 1 Gurah as a basis for developing effective strategies in guidance and counseling services, while also supporting students' academic achievement.

METHODS

The research applies a quantitative approach with a correlational research design to identify the relationship between self-management and academic procrastination among students at State High School 1 Gurah. This design was selected to determine whether a relationship exists between the two variables and does not permit causal conclusions. The population in this study consisted of all Grade XI students at State High School 1 Gurah, totaling 343 students. The sample was determined using simple random sampling, which is a probability sampling technique, with approximately 10% of the population selected as the sample size. The calculation resulted in 37 students distributed across 10 classes. The sample was allocated proportionally to each class, and students were then selected randomly from each class according to the predetermined allocation. Data collection was conducted using instruments that had undergone expert validation and item validity and reliability testing before being administered to respondents.

Data collection in this study was conducted using a Likert-scale questionnaire with four response options: strongly agree, agree, disagree, and strongly disagree. The self-management variable was defined as a technique for organizing individual behavior aimed at directing and managing oneself in order to achieve independence and live productively. In this study, self-management emphasizes practical behavioral management, including goal setting, self-organization, self-control, and self-development. This construct is distinguished from self-regulation. Self-regulation has a broader meaning involving the regulation of thoughts, feelings, and behavior in pursuing goals, whereas self-management in this study focuses on the practical organization and control of behavior. Thus, self-regulation is used as a related theoretical concept, but it is not measured as a separate research variable. The self-management scale contained 30 statements developed based on the four aspects of Gie theory: self-motivation, self-organization, self-control, and self-development. Meanwhile, the academic procrastination variable was defined as the tendency of students to intentionally delay starting or completing academic tasks despite knowing the possible negative consequences. The academic procrastination scale also consisted of 30 items based on Ferrari's theory, including delays in starting and completing tasks, delay in performing tasks, the time gap between plans and actual performance, and engaging in more enjoyable activities.

Self-management strategies, where students use both cognitive management and behavioral strategies related to the participation of physical activities such as, set goals and positive self-strengthening (Trost, 2015), a self-management scale contains 30 statements developed based on the four aspects of Gie theory, self-motivation, self-organization, self-control, self-development. Meanwhile, academic procrastination variables are defined as students' tendency to delay starting or completing academic tasks intentionally in spite of knowing the possible negative consequences, academic procrastination scale also consists of 30 items, which refer to Ferrari theory includes the aspect of delays to begin and complete the task, delay in the task at hand, the time gap between actual plans and performance, and engage in more fun activities.

Before being applied in the main research, the two study instruments were first tested with 58 students. The instruments underwent expert validation and item validity testing. The validity tests showed that each scale had 28 valid items and 2 invalid items. The invalid items were then eliminated from the final instruments, so that each scale used in the main study consisted of 28 valid items. Reliability testing showed Cronbach's alpha coefficients of 0,903 for self-management and 0,918 for academic procrastination, indicating high reliability because both coefficients exceeded the minimum criterion of 0,70. Data analysis in this study involved normality, linearity, and hypothesis testing using SPSS version 25.

The normality tests were conducted using the Shapiro-Wilk method. The results showed significance values of 0,413 for self-management and 0,656 for academic procrastination, indicating that both variables were normally distributed. Linearity testing was conducted using ANOVA to assess whether there was a linear relationship between the research variables. The significance value for linearity was 0,000, indicating a linear relationship. After the prerequisites were met, hypothesis testing was conducted using the Pearson Product Moment correlation through SPSS version 25. The purpose

of this test was to determine whether there was a significant relationship between self-management and academic procrastination.

RESULTS AND DISCUSSION

RESULT

The results of the study present data obtained through the administration of the self-management and academic procrastination scales to 37 students at State High School 1 Gurah. The study used simple random sampling to select the sample from the population of Grade XI students. The sample was proportionally allocated across the 10 classes, and students were randomly selected within each class according to the predetermined sample size. The distribution of the population and sample is presented in the following table:

Table 1. Population and samples research

No.	Class	Population	Calculations (10%)	Sample
1.	XI-1	31 Students	31	3
2.	XI-2	35 Students	35	4
3.	XI-3	36 Students	36	4
4.	XI-4	30 Students	30	3
5.	XI-5	31 Students	31	3
6.	XI-6	36 Students	36	4
7.	XI-7	36 Students	36	4
8.	XI-8	36 Students	36	4
9.	XI-9	36 Students	36	4
10.	XI-10	36 Students	36	4
Total		343 Students		37 Students

Based on Table 1, the research population was distributed across 10 Grade XI classes with a total of 343 students. Referring to Arikunto (2019), when the population is more than 100, a sample of 10–25% may be taken. Considering the time and efficiency limitations of the study, this research involved 37 Grade XI students selected through simple random sampling. The sample was distributed across the 10 classes with approximately 10% taken from each class, and students were selected randomly within each class. Thus, each class was represented in the sample. Descriptive statistical analysis was then conducted to provide an overview of the levels of self-management and academic procrastination among the students.

Tabel 2. Statistik Deskriptif Variabel Research

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
Self-Management	37	63	97	77,00	7,835
Prokrastinasi Akademik	37	35	92	65,35	11,617
Valid N (listwise)	37				

Based on table 2, self-management scores have a minimum of 63 and a maximum of 97 with an average (mean) of 77.00 and a deviation standard of 7.835. Meanwhile, academic procrastination scores had a minimum value of 35 and a maximum of 92 with an average (mean) of 65.35 and deviation standards of 11.617. The results indicate that in general the self-management and academic procrastination levels of students are in the moderate category. The average self-management scores show that most of the respondents already have considerable ability to manage goals, manage time, control behavior, and develop yourself. Nevertheless, the average academic procrastination score still in the moderate category suggests that students still experience a tendency to delay the performance of academic tasks in certain situations. These conditions indicate that the student's self-management abilities have not been fully optimal in preventing the development of academic procrastination behavior.

From the results of normality tests which indicate (p self-management = 0,413) and (p academic procrastination = 0,656), so both variables are declared normal distribution. Additionally, linearity tests show significant value of 0,000 ($p = 0,000$) that suggests that the relationship between the two variables is linear. So, the data qualifies for analysis using the Pearson product correlation. Further hypothetical testing is done using a Pearson product moment coordinated technique through SPSS version 25 to find out the relationship between self-management and academic procrastination. The results of the correlation analysis are presented at Table 3:

Table 3. Result Correlation Test

Correlations			
		Self-Management	Prokrastinasi Akademik
Self-Management	Pearson Correlation	1	-0,672**
	Sig. (2-tailed)		0,000
	N	37	37
Prokrastinasi Akademik	Pearson Correlation	-0,672**	1
	Sig. (2-tailed)	0,000	
	N	37	37
**. Correlation is significant at the 0.01 level (2-tailed).			

Based on Table 3, the analysis using Pearson Product Moment correlation with SPSS version 25 showed a correlation coefficient of -0,672 with a significance value of 0,000. The absolute value of the correlation coefficient was greater than the r -table value of 0,256 at the 5% significance level with $df = 35$, and the obtained significance value was also below 0.05. Therefore, H_0 was rejected and H_1 was accepted. The correlation coefficient of -0,672 indicates a strong relationship between self-management and academic procrastination. The negative sign indicates that the two variables were related in opposite directions. Thus, higher self-management scores were associated with lower academic procrastination scores, whereas lower self-management scores were associated with higher academic procrastination scores. Because this study used a correlational design, this finding indicates a statistical relationship and should not be interpreted as evidence that self-management causes a decrease in academic procrastination.

Thus, it may be concluded that there is a significant negative relationship between self-management and academic procrastination. Moreover, the coefficient of determination (R^2) was 0,452 or 45,2%. This means that 45,2% of the variance in academic procrastination scores was statistically associated with self-management, while the remaining 54,8% was associated with other factors not examined in this study. The R^2 value should not be interpreted as a causal effect because the study used a correlational design.

DISCUSSION

The research aimed to examine the relationship between self-management and academic procrastination. The analysis showed a significant negative relationship between self-management and academic procrastination among Grade XI students at State High School 1 Gurah, with a correlation coefficient of -0,672 and a significance value of 0,000 ($p < 0.05$). The correlation coefficient indicates that the relationship between the two variables was strong. Thus, students with higher self-management scores tended to have lower academic procrastination scores. In contrast, students with lower self-management scores tended to show higher academic procrastination scores. These findings indicate that the ability to manage goals, time, and behavior is closely related to students' tendency to delay academic tasks. However, because this study used a correlational design, the result cannot establish that self-management causes academic procrastination to decrease. Other factors may also be related to the observed relationship.

The results agree with the theory presented by Barry J. Zimmerman (Ghufron et al., 2010), which explains that learning success is influenced by an individual's ability to regulate thoughts, feelings, and behavior in order to achieve established goals. In this study, self-management has a more practical focus on organizing and controlling behavior, including goal setting, self-organization, self-control, and

self-development. Self-regulation, meanwhile, has a broader conceptual scope because it includes cognitive, emotional, and behavioral processes in directing oneself toward goals. Therefore, self-management and self-regulation should not be treated as identical constructs in this study. Self-management can be understood as a practical self-management capacity that supports broader self-regulatory processes in learning. Research conducted by Siregar et al. (2022) also suggests a relationship between self-management and academic procrastination, with a contribution of 26% in their research context. This finding supports the relevance of self-management in understanding academic procrastination, while the present study extends the discussion to high school students.

The findings also support the view of Joseph R. Ferrari (in Ghufon, 2020) that academic procrastination is related to difficulties in managing and controlling behavior. In the context of this study, students with higher self-management scores tended to be better able to allocate time, control behavior, and remain focused on task completion despite various distractions. Conversely, limited self-management may be related to a greater tendency to postpone academic responsibilities and choose other activities that provide immediate enjoyment. These results are reinforced by Permana (2019), which suggests that academic procrastination among high school students remains a problem. The findings therefore suggest that the relationship between self-management and procrastination is theoretically plausible, but it should be interpreted together with other personal, task-related, motivational, and environmental factors.

In the digital era, self-management ability is increasingly relevant because students learn in an environment containing multiple potential sources of distraction. The presence of social media, digital entertainment platforms, online games, and easy internet access may reduce students' focus on learning when not accompanied by adequate behavioral control. Putri (2023) found that distractions related to smartphone and social media use can be associated with academic procrastination among high school students. However, in the present study, digital technology use was not measured as a separate variable. Therefore, the phrase "digital era" is used to describe the context in which students learn and encounter digital distractions, not to claim that digital technology directly causes academic procrastination. This distinction is important because the current data only support the relationship between self-management and academic procrastination.

Based on the results of descriptive analysis, self-management among students was in the moderate category, while academic procrastination was also in the moderate category. This indicates that most students had a relatively adequate ability to manage themselves, but this ability was not yet optimal in relation to delaying academic tasks. The strong negative correlation suggests that the two variables tend to move in opposite directions in the observed data. Nevertheless, the R^2 value of 45,2% also indicates that more than half of the variance in academic procrastination was not statistically accounted for by self-management in this study. Therefore, academic procrastination should not be viewed solely as a self-management problem. Future studies may examine other factors such as motivation, self-efficacy, learning environment, task characteristics, and the intensity or pattern of digital technology use.

The implications of this research highlight the importance of the role of guidance and counseling teachers in helping students develop self-management abilities. Guidance and counseling teachers can provide information services, group guidance, and group counseling focusing on time management skills, learning priority setting, academic goal setting, and responsible management of digital media use. Through these services, students are expected to develop more effective self-management skills and support better management of academic tasks. These implications are practical recommendations based on the observed relationship and do not constitute evidence that the services will necessarily cause academic procrastination to decrease.

CONCLUSION

Based on the study results, it can be concluded that there is a significant negative relationship between self-management and academic procrastination among Grade XI students at State High School 1 Gurah in the context of the digital era. Pearson Product Moment analysis showed a correlation coefficient of -0,672 with a significance value of 0.000 ($p < 0.05$). The findings indicate that

higher self-management scores were associated with lower academic procrastination scores, while lower self-management scores were associated with higher academic procrastination scores. The coefficient of determination (R^2) was 45,2%, indicating that 45,2% of the variance in academic procrastination scores was statistically associated with self-management, while 54,8% was associated with other factors not examined in this study. The term “digital era” in this study refers to the students' learning context and was not measured as a separate variable. Therefore, the development of self-management skills through guidance and counseling services may be considered as one supportive strategy, while future research is encouraged to examine digital technology use and other relevant factors more specifically.

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