

The Effect of the Intensity of Artificial Intelligence (AI) Model Use on Academic Procrastination Among Current Students

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Article History

Received: 2026-07-05

Revised: 2026-07-08

Accepted: 2026-07-29

Published: 2026-08-11

Keywords

Artificial Intelligence (AI);

Intensity of AI Use;

Academic Procrastination;

College Students;

Theory of Planned Behavior (TPB)

How to cite:

Sirait, M.S & Simbolon, H. The Effect of the Intensity of Artificial Intelligence (AI) Model Use on Academic Procrastination Among Current Students. *Marlajar: Journal of Science, Technology and Innovation*, 1(2), 78-89.



Abstract

Advances in Artificial Intelligence (AI) have transformed the learning process in higher education by making it easier to search for information, complete assignments, and write academic papers. However, these conveniences have the potential to increase the tendency toward academic procrastination. This study aims to analyze the influence of the intention to use Artificial Intelligence on academic procrastination among currently enrolled students at HKBP Nommensen University in Medan. The study is limited to measuring the intention to use AI based on the Theory of Planned Behavior (Ajzen, 1991) and academic procrastination based on the theory by Ferrari, Johnson, and McCown (1995). This study employed a quantitative approach using a survey method involving 350 students selected through purposive sampling. Data were collected using a Likert scale, while data analysis employed simple linear regression. The results indicate that the intention to use AI has a positive and significant effect on academic procrastination ($R = 0.760$; $R^2 = 0.577$; $t = 21.808$; $p < 0.001$). These findings indicate that 57.7% of the variation in academic procrastination is explained by the intention to use AI, while 42.3% is influenced by other factors outside the scope of this study. Most respondents exhibited moderate levels of both AI usage intent and academic procrastination. This study concludes that the higher students' intent to use AI, the greater their tendency toward academic procrastination. It is hoped that these findings will serve as input for higher education institutions in improving students' AI literacy, ethical use of technology, and self-regulation skills so that the use of AI continues to support the quality of learning.

Introduction

Higher education plays a strategic role in shaping students who are not only academically excellent but also possess character, a sense of responsibility, and critical thinking skills in line with national educational goals (Purba et al., 2025). During their studies, students face various academic demands, such

as completing assignments, attending classes, conducting research, and balancing academic and non-academic activities (Hong et al., 2022). These demands can give rise to various psychological issues, one of which is academic procrastination, the behavior of delaying the start or completion of assignments, submitting work late, experiencing a gap between plans

and execution, and a tendency to choose other, more enjoyable activities over fulfilling academic obligations (Soelistono & Wahidin, 2023). Advances in digital technology, particularly the emergence of generative Artificial Intelligence (AI) tools such as ChatGPT, Gemini, Blackbox AI, Grammarly, and QuillBot have transformed the way students learn by making it easier for them to access information, complete assignments, summarize material, and understand academic concepts more efficiently. However, despite these benefits, the use of AI without strong self-regulation skills has the potential to reduce students' engagement in critical thinking and independent learning. Based on the Theory of Planned Behavior (Jia et al., 2022), Behavior is initiated by an intention that is influenced by attitudes, subjective norms, and perceptions of behavioral control. Therefore, the intention to use AI is viewed as an important factor that can influence students' academic behavior. Although various studies have examined the impact of AI use or dependence on AI, research specifically examining the influence of the intention to use AI on academic procrastination remains relatively limited. Consequently, this study was conducted to provide a more comprehensive understanding of the relationship between the intention to use AI and academic procrastination, as well as to enrich research in the field of Educational Psychology.

This study aims to analyze the effect of the intention to use Artificial Intelligence (AI) on academic procrastination among currently enrolled students at HKBP Nommensen University in Medan, as well as to describe the level of intention to use AI, the level of academic procrastination, and the relationship between these two variables based on the Theory of Planned Behavior (TPB) (Innocenti & Golin, 2022). Theoretically, this study is expected to contribute to the development of psychology, particularly Educational Psychology, by enriching the literature on the relationship between the intention to use Artificial Intelligence (AI) and academic

procrastination, as well as serving as a reference for future research. Practically, this study is expected to serve as a source of information for students on how to use AI wisely, provide input for faculty members and HKBP Nommensen University in Medan in developing learning strategies and policies regarding AI use, and serve as a reference for other researchers studying similar topics (Ominali et al., 2025).

This study has several limitations that should be taken into account when interpreting the results. The study was conducted only among currently enrolled students at HKBP Nommensen University in Medan; therefore, the results cannot yet be generalized to students at other universities. Furthermore, this study only examined the effect of the intention to use Artificial Intelligence (AI) on academic procrastination, while other factors that could potentially influence procrastination, such as self-regulation, time management, learning motivation, self-efficacy, self-control, academic stress, social support, and social media use were not analyzed. Data were collected using self-report instruments, meaning respondents' answers depended on their individual perceptions and honesty, which could lead to perceptual or social bias. This study also employed a cross-sectional design, so it only describes the respondents' conditions at a specific point in time and is not yet able to explain behavioral changes longitudinally (Fern et al., 2025). Measurements of AI usage intentions were generally conducted without distinguishing the frequency, duration, or purpose of use for each AI platform. Furthermore, this study used the Theory of Planned Behavior (TPB) as its primary theoretical framework and simple linear regression analysis; therefore, more complex relationships, such as the roles of mediating or moderating variables have not yet been examined. The coefficient of determination of 57.7% also indicates that 42.3% of the variation in academic procrastination is still influenced by factors outside the research model.

Previous research has generally focused on the actual use of or reliance on Artificial Intelligence (AI) in relation to academic procrastination (Chun et al., 2022). However, research examining AI usage intentions as a psychological factor preceding AI usage behavior remains very limited. Furthermore, most studies have focused more on aspects of technology acceptance, learning effectiveness, and AI usage, while the influence of AI usage intentions on maladaptive behavior, particularly academic procrastination has not been extensively studied. Therefore, this study offers a novel contribution by applying the Theory of Planned Behavior to explain how attitudes, subjective norms, and perceived behavioral control shape AI usage intentions, which in turn influence academic procrastination. This study also provides empirical evidence in the context of students at HKBP Nommensen University in Medan, thereby enriching educational psychology research on the impact of generative AI use in higher education settings.

Method

This study employed a quantitative approach with a correlational design to analyze the effect of intentions to use Artificial Intelligence (AI) on academic procrastination among currently enrolled students at HKBP Nommensen University in Medan. The quantitative approach was chosen because the study aimed to test hypotheses by objectively measuring variables using numerical data analyzed statistically (Waruwu et al., 2025). The independent variable in this study is the Intention to Use Artificial Intelligence (AI), measured based on the Theory of Planned Behavior from (Forootan et al., 2022) whereas the dependent variable is Academic Procrastination, which is measured based on the aspects identified by (Toyokawa et al., 2023).

The study population consisted of 6,620 active students at HKBP Nommensen University in Medan in 2026. The sample size was determined using the Isaac and Michael formula with a 5% margin of error, resulting in

a minimum required sample size of 329 respondents. In practice, the study successfully collected data from 350 students selected using purposive sampling specifically, active students who had used generative artificial intelligence applications, such as ChatGPT, Gemini, Blackbox AI, Grammarly, or QuillBot, in their academic activities.

The Isaac and Michael formula used is as follows (Nugroho et al., 2021)

$$s = \frac{\lambda^2 \times N \times P \times Q}{d^2(N - 1) + \lambda^2 \times P \times Q} \quad (1)$$

where (s) is the sample size, (N) is the population size, λ^2 is the Chi-Square value corresponding to the error level, (P = 0.5), (Q = 0.5), and (d) is the error level (0.05).

Data collection was conducted using two instruments in the form of a four-point Likert scale. The AI Usage Intention Scale was developed based on the instrument which refers to (Kaluarachchi et al., 2021). After the pilot study, 17 valid items were identified with a Cronbach's Alpha reliability coefficient of 0.841. Meanwhile, the Academic Procrastination Scale refers to the instrument according to the theory (Ortega-Ochoa et al., 2024), consists of 40 valid items with a Cronbach's Alpha reliability coefficient of 0.976, indicating a very high level of internal consistency.

Before hypothesis testing, assumption tests were conducted, including a normality test using the One-Sample Kolmogorov-Smirnov Test and a linearity test using the Test for Linearity. After all assumptions were met, hypothesis testing was performed using simple linear regression analysis with the equation:

$$Y = a + bX \quad (2)$$

where (Y) represents academic procrastination, (X) represents the intention to use Artificial Intelligence (AI), (a) is a constant, and (b) is the regression coefficient. Furthermore, the strength of the relationship between the variables was analyzed using the correlation coefficient (R), while the extent to

which the independent variables contribute to the dependent variable was calculated using the coefficient of determination (R^2) using the formula:

$$R^2 = \frac{SSR}{SST} \times 100 \quad (3)$$

Data analysis was conducted using IBM SPSS Statistics version 20 with a significance level of 5% ($\alpha = 0.05$). The research hypothesis was accepted if the p-value was less than 0.05, indicating that the intention to use Artificial Intelligence (AI) has a significant effect on students' academic procrastination

Results And Discussion

Result

The study sample consisted of 350 college students from various faculties, whose characteristics were analyzed based on the type of Artificial Intelligence (AI) used, gender, faculty, age, and semester. The results of the descriptive analysis showed that, based on the type of AI used, the majority of respondents used ChatGPT, namely 271 people (77%). Furthermore, 54 respondents (15%) used Gemini, 16 respondents (5%) used Blackbox AI, while Grammarly and QuillBot were used by 5 respondents (1%) and 4 respondents (1%), respectively. The findings indicate that ChatGPT is the most widely used AI platform among students compared to other types of AI. The dominance of ChatGPT use indicates that chatbot-based AI is the primary choice for students in supporting various academic activities, such as information searches, assignment preparation, and the learning process.

Based on gender, the results show that female respondents were in the majority, totaling 244 (70%), while male respondents numbered 106 (30%). This composition indicates that female students' participation in this study was higher than that of male students.

In terms of faculty affiliation, the respondents came from ten different faculties, providing a fairly diverse picture of the research sample's characteristics. The Faculty

of Teacher Education and Educational Sciences had the largest number of respondents, totaling 81 (23%). Next, the Faculty of Economics contributed 50 respondents (14%), followed by the Faculty of Psychology with 45 respondents (13%), the Faculty of Engineering with 38 respondents (11%), and the Faculty of Languages and Arts with 29 respondents (8%). There were 26 respondents (7%) from the Faculty of Medicine, 24 (7%) from the Faculty of Law, 23 (7%) from the Faculty of Social and Political Sciences, and 22 (6%) from the Faculty of Agriculture. The smallest number of respondents came from the Faculty of Animal Science, totaling 12 (3%). The distribution of respondents across various faculties indicates that this study involved students with diverse academic backgrounds (Kessler, 2018).

Based on age characteristics, the majority of respondents were 19 years old, totaling 98 people (28%). There were 76 respondents (22%) aged 21, while those aged 20 and 22 numbered 74 (21%) and 72 (21%), respectively. Meanwhile, respondents aged 23 constituted the smallest group, totaling 30 people (9%). These results indicate that the majority of respondents fell within the 19–22 age range, which is the typical age range for college students at

Based on age, the majority of respondents were 19 years old, totaling 98 people (28%). There were 76 respondents (22%) who were 21 years old, while those aged 20 and 22 numbered 74 (21%) and 72 (21%), respectively. Meanwhile, 23-year-olds constituted the smallest group, with 30 respondents (9%). These results indicate that the majority of respondents were in the 19–22 age range, which is the typical age range for undergraduate students.

By semester, the largest group of respondents was from the 8th semester, totaling 99 students (28%). Next were 92 respondents (26%) from the 4th semester, followed by 87 respondents (25%) from the 6th semester, while 72 respondents (21%) were from the 2nd semester. The distribution indicates that the study involved students from various academic levels, with the largest

proportion coming from senior students, who are expected to have more academic experience and a higher intensity of AI technology use to support the completion of assignments and learning activities (Kim & Su, 2024).

The results of the descriptive analysis show that currently enrolled students at HKBP Nommensen University in Medan have an intention to use Artificial Intelligence (AI) and a level of academic procrastination that tends to fall into the moderate category. Based on a comparison between hypothetical and empirical data, the variable "intention to use AI" has an empirical mean of 43.60, which is higher than the hypothetical mean of 42.50. This indicates that students' tendency to use AI is above the theoretical average. The empirical standard deviation of 6.494 suggests that the variation in scores among respondents is relatively small, indicating that the level of intention to use AI is fairly homogeneous. Similarly, for the academic procrastination variable, the empirical mean of 102.29 is higher than the hypothetical mean of 100.00. The results show that students' levels of academic procrastination are slightly above the hypothetical average, although the distribution of respondents' scores remains fairly homogeneous, with a standard deviation of 14.338 (Z. Zhang & Huang, 2024).

The results of the categorization of the AI usage intention variable show that the majority of respondents fell into the moderate category, 303 people (86.6%) while 47 people (13.4%) fell into the high category, and no respondents fell into the low category. The findings indicate that, in general, students tend to use AI in academic activities at a moderate level, suggesting that AI use has become part of the learning process but has not yet reached a very high level.

When examined based on the factors influencing the intention to use AI, the "attitude toward behavior" factor was dominated by the moderate category, accounting for 75.7%, followed by the high category at 17.7% and the low category at 6.6%. These findings indicate that the majority of

students have a fairly positive attitude toward the use of AI. Regarding the aspect of subjective norm, the majority of respondents fell into the low category (77.1%), while 22.9% were in the moderate category, and there were no respondents in the high category (L. Zhang & Zhang, 2025). This suggests that the use of AI is based more on personal decision-making than on social pressure or encouragement from the surrounding environment. Meanwhile, regarding perceived behavioral control, the majority of respondents fell into the moderate category (50.9%), followed by the high category (31.1%) and the low category (18%). This suggests that students have a fairly high level of confidence in their ability to operate and utilize AI to support their academic activities (Nowacka & Rzemieniak, 2021).

Based on the type of AI used, all user groups were dominated by the moderate category. Among BlackboxAI users, 87.5% fell into the moderate category and 12.5% into the high category. Among ChatGPT users, 86.7% fall into the moderate category and 13.3% into the high category. Gemini users are also dominated by the moderate category at 83.3%, with the high category accounting for 16.7%, the highest percentage compared to other types of AI. All Grammarly and Quillbot users fall into the moderate category, indicating that the usage intent for both applications has not yet reached the high category.

When analyzed by respondent characteristics, both male and female students were predominantly in the "moderate" category regarding their intention to use AI. However, the proportion of students in the "high" category was higher among male students (17.9%) than among female students (11.5%). By college, all colleges also showed a predominance of the "moderate" category. The College of Agriculture had the highest percentage in the "high" category, at 27.3%, while all respondents in the College of Animal Science fell into the "moderate" category. By age, all age groups were dominated by the "moderate" category, with the 21-year-old age group having the highest proportion in the "high" category at 18.4%. By semester, all

semesters also showed a predominance of the moderate category, although fourth-semester students had a relatively higher percentage in the high category compared to other semesters, at 15.2% (Khuzaini et al., 2024).

The results of the categorization of academic procrastination variables show that the majority of respondents, 287 people (82.0%) fell into the moderate category, while 24 people (6.9%) were in the low category and 39 people (11.1%) were in the high category. These findings indicate that, in general, students still engage in procrastination regarding academic activities; however, this tendency has not yet reached a high level.

Analysis based on aspects of academic procrastination revealed a relatively uniform pattern. Regarding the aspect of delaying the start or completion of tasks, the majority of respondents fell into the moderate category at 57.4%. The aspect of being late in completing tasks was also dominated by the moderate category at 53.7%. Furthermore, regarding the time gap between plans and actual execution, the majority of respondents fell into the moderate category at 51.7%, while the aspect of engaging in other, more enjoyable activities was also dominated by the moderate category at 57.4%. These results indicate that all dimensions of academic procrastination remain at a moderate level; thus, academic procrastination still occurs quite frequently but has not yet reached extreme levels.

Based on the type of AI used, the majority of users of BlackboxAI, ChatGPT, Gemini, Grammarly, and Quillbot fall into the moderate academic procrastination category. ChatGPT users accounted for the largest proportion in the moderate category, at 82.3%, followed by Gemini at 81.5%, Grammarly at 80%, BlackboxAI at 75%, and all Quillbot users, who were all in the moderate category.

When analyzed by gender, both male and female students are predominantly in the moderate category. However, male students have a higher proportion in the high category (19.8%) compared to female students (7.8%), indicating a relatively higher tendency toward

academic procrastination among male students.

By college, all colleges showed a predominance of the moderate category. The College of Law had the largest proportion in the high category at 25%, followed by the College of Agriculture at 22.7%, while all respondents from the College of Animal Science fell into the moderate category, with no respondents in either the low or high categories (Temelkova, 2020).

When analyzed by age, all age groups were dominated by the moderate category. The 21-year-old age group had the largest proportion in the high category at 17.1%, while the 22-year-old age group had the highest proportion in the moderate category at 87.5%. By semester, all semesters also showed a predominance of the moderate category. Eighth-semester students had the highest percentage in the moderate category at 86.9%, while fourth-semester students had the largest proportion in the high category at 14.1%.

Before testing the hypotheses using simple linear regression analysis, tests were first conducted on the basic assumptions of regression, including normality and linearity tests. These tests ensure that the data meet the requirements for analysis so that the regression results obtained can be interpreted accurately.

Based on the results of the normality test using the One-Sample Kolmogorov-Smirnov Test, the test statistic was 0.46 with a Monte Carlo significance level (two-tailed) of 0.74. This significance level is greater than the specified significance level of 0.05 ($0.74 > 0.05$), indicating that the residuals in the regression model are normally distributed. It can be concluded that the normality assumption has been met, so the data are suitable for analysis using simple linear regression.

A linearity test was conducted to determine whether the relationship between the variables "Intention to Use Artificial Intelligence (AI)" and "Academic Procrastination" is linear. The results of the Test for Linearity showed an F-value for Deviation from Linearity of 1.494 with a significance value of 0.063. This value is greater

than 0.05 ($0.063 > 0.05$), indicating that there is no deviation from a linear relationship between the two variables. Thus, it can be stated that the relationship between AI Usage Intention and Academic Procrastination is linear; therefore, the assumption of linearity in this study has been met, and the regression analysis can proceed.

After confirming that all regression assumptions were met, a hypothesis test was conducted using simple linear regression analysis to determine the effect of Intent to Use Artificial Intelligence (AI) on Academic Procrastination among currently enrolled students. The hypothesis proposed in this study is that there is an effect of Intent to Use Artificial Intelligence (AI) on Academic Procrastination among currently enrolled students.

The results of the analysis show that the correlation coefficient (R) is 0.760, indicating a positive relationship with a relatively strong correlation between the Intention to Use AI and Academic Procrastination. These findings suggest that the higher a student's intention to use Artificial Intelligence, the greater the tendency toward Academic Procrastination (Vaddepally, 2025).

The coefficient of determination (R -squared) was found to be 0.577, indicating that 57.7% of the variation in Academic Procrastination can be explained by AI Usage Intention. The remaining 42.3% is influenced by other factors beyond the variables examined in this study.

The results of the model validity test using ANOVA showed an F -calculated value of 475.586 with a significance level of 0.000 ($p < 0.05$). This value indicates that the constructed regression model is valid for explaining the relationship between AI Usage Intention and Academic Procrastination. In other words, AI Usage Intention simultaneously exerts a significant influence on Academic Procrastination among college students.

The results of the partial test (t -test) show that the AI Usage Intention variable has a calculated t -value of 21.808 with a

significance level of 0.000. This value is greater than the critical t -value of 1.967 and has a significance level of less than 0.05. Therefore, H_0 is rejected and H_1 is accepted, leading to the conclusion that AI Usage Intention has a positive and significant effect on Academic Procrastination among active college students.

Based on the analysis of the regression coefficients, the following simple linear regression equation was obtained:

$$Y = 29,798 + 1,684X \quad (4)$$

The equation above shows that the constant value of 29.798 indicates that if the AI Usage Intention is zero, the predicted Academic Procrastination score is 29.798. Meanwhile, the regression coefficient of 1.684 indicates a positive relationship, meaning that a one-unit increase in the AI Usage Intention score will increase the Academic Procrastination score by 1.684 units, assuming all other factors remain constant.

Discussion

This study aims to determine the effect of the intention to use Artificial Intelligence (AI) on academic procrastination among currently enrolled students at HKBP Nommensen University in Medan. Based on the results of simple linear regression analysis, it was found that the intention to use AI has a positive and significant effect on academic procrastination, with a correlation coefficient of $R = 0.760$, a coefficient of determination of $R^2 = 0.577$, an F -value of 475.586 ($p < 0.001$), and a t -value of 21.808 ($p < 0.001$). The results indicate that the higher students' intention to use artificial intelligence, the higher their tendency to engage in academic procrastination. The research hypothesis stating that there is a positive and significant influence of the intention to use artificial intelligence on academic procrastination is accepted.

The findings of this study can be explained through the Theory of Planned Behavior (TPB) developed by (Walker et al., 2023) According to Ajzen, intention is the

primary predictor of behavior. Intention is influenced by three main components: attitude toward behavior, subjective norm, and perceived behavioral control. In this study, the majority of students exhibited moderate intentions to use AI, with an empirical mean higher than the hypothetical mean. This indicates that students have a fairly positive attitude toward using AI as a tool to support their academic activities. Students view AI as a technology that facilitates information searches, assignment preparation, translation, and the completion of various academic tasks more quickly and efficiently.

The results of the intention analysis show that the "attitude toward behavior" dimension falls into the moderate to high category (Papakostas, 2025). This finding indicates that students have a positive perception of the benefits of AI. This is consistent with the opinion (Davis, 1989) The Technology Acceptance Model (TAM) states that perceptions of ease of use and perceived usefulness of a technology will increase an individual's willingness to use that technology. The greater the benefits students perceive from AI, the higher their tendency to integrate AI into their daily learning activities (Valluri, 2024).

Interestingly, the subjective norm aspect in this study fell into the low category. This indicates that students' decisions to use AI are based more on personal desire than on social pressure from peers, instructors, or the academic environment. This finding suggests that the use of AI has become part of students' individual needs in completing assignments, rather than merely following trends or environmental influences. Conversely, the perceived behavioral control aspect fell into the moderate category, indicating that students feel sufficiently capable of operating various AI platforms such as ChatGPT, Gemini, and Blackbox AI. It is this confidence in their ability to use AI that subsequently encourages students to utilize this technology more frequently in their academic activities (Davy Tsz Kit et al., 2022).

The research findings also show that ChatGPT is the most widely used AI platform among college students, with a usage rate of 77%. The dominance of ChatGPT can be understood because the platform offers the ability to generate quick answers, help summarize material, draft essays, translate text, and provide solutions to various academic problems. This phenomenon aligns with the OpenAI report (2024–2025), which indicates that college students are one of the largest user groups of ChatGPT globally due to its ability to enhance efficiency in the learning process. Additionally, various higher education surveys show that generative AI has become an integral part of students' academic activities, particularly in assisting with brainstorming, report writing, and reference searches (Mehta, 2023).

Although AI offers many benefits, the results of this study show that higher intentions to use AI are actually accompanied by increased academic procrastination. This finding can be explained by the Temporal Motivation Theory (TMT) proposed by (Steel & König, 2006). According to this theory, procrastination occurs when individuals prefer activities that provide instant gratification over completing tasks that require greater effort. In the context of AI use, students gain the ability to generate answers very quickly, leading to a tendency to postpone the process of thinking, reading literature, or completing assignments independently. This ease can ultimately reduce the motivation to immediately begin academic work because students feel that assignments can be completed with the help of AI at any time.

The results of this study are also supported by the theory of academic procrastination proposed by (Riyanti, 2023) which explains that procrastination is the behavior of intentionally delaying the completion of a task even though the individual knows that such delay will have negative consequences. In this study, all aspects of academic procrastination fell into the moderate category, including delaying the start of tasks, being late in completing tasks,

the gap between plans and execution, and the tendency to engage in other, more enjoyable activities. This indicates that students still procrastinate on academic tasks quite frequently, although not to an extreme degree.

The findings of this study are also consistent with various previous studies (Q. Zhang, 2023) found that the increasingly intensive use of generative AI is associated with students' growing reliance on technology to complete academic assignments (de Almeida et al., 2021). This reliance can reduce self-regulation skills, making it easier for students to procrastinate on academic work. The study (Yan et al., 2024) It also explains that the use of generative AI in education offers significant benefits in terms of learning efficiency, but if not balanced with critical thinking skills and good time management, students may become dependent on AI (Hoffmann, 2022).

Research (Patil, 2025) A study on generative AI in higher education explains that AI can boost student productivity, but overuse can reduce active engagement in the learning process. Students become more reliant on AI-generated results rather than developing their own analytical skills. This situation has the potential to lead to procrastination because students feel they always have an instant alternative for completing assignments.

These research findings can also be explained through the concept of self-regulated learning proposed by (Zimmerman, 2002). Students with low self-regulation tend to be more likely to use AI as a shortcut to complete assignments. As a result, they are more likely to put off reading original sources, developing their own ideas, or constructing arguments on their own. Conversely, students with high self-regulation will use AI as a learning tool, not as a substitute for the thinking process (Murumkar, 2026).

This phenomenon is increasingly evident in various case studies at universities. For example, since the launch of ChatGPT in late 2022, many universities in the United States, the United Kingdom, Australia, and Indonesia have begun to face an increase in the

use of AI for completing academic assignments. A number of professors have reported that students often delay working on assignments until close to the deadline because they believe AI can generate answers in a matter of minutes (Karasiyevych et al., 2021). In fact, some universities have since developed specific policies regarding the use of AI to ensure that students continue to develop critical thinking skills and do not become entirely dependent on this technology. This phenomenon demonstrates that while the convenience offered by AI can enhance learning efficiency, it can also lead to procrastination if not used wisely (Kochetkova et al., 2022).

This study found that 57.7% of the variation in academic procrastination was explained by the intention to use AI, while 42.3% was influenced by other factors not examined in this study. These factors may include time management skills, learning motivation, self-regulation, academic self-efficacy, self-control, academic stress, task load, the learning environment, and social media usage habits. Although AI contributes significantly to academic procrastination, this behavior remains a multidimensional phenomenon influenced by various psychological and environmental factors.

Conclusion

Based on the research findings, it can be concluded that the intention to use Artificial Intelligence (AI) has a positive and significant effect on academic procrastination among currently enrolled students at HKBP Nommensen University in Medan. These findings indicate that the higher students' intention to use AI, the greater their tendency to engage in academic procrastination. In addition, the majority of students fall into the moderate category for both their intention to use AI and their level of academic procrastination. These findings also support the Theory of Planned Behavior (Ajzen, 1991), which explains that intention is the primary predictor of behavior; thus, the stronger a student's intention to use AI, the greater their

tendency to engage in academic procrastination.

Acknowledgement

The author would like to thank HKBP Nommensen University in Medan for its support and the facilities provided during the course of this research. The author also extends appreciation to the academic advisor for guidance and constructive feedback, as well as to all students at HKBP Nommensen University in Medan who participated as respondents in this study. Thanks are also extended to all parties who provided assistance and support, enabling this research to be successfully completed.

Author Contributions

This article was written by two individuals, Sirait, M.S & Simbolon, H who have read and approved the published version of this manuscript, Sirait, M.S & Simbolon, H designed the study and analyzed the data, while Sirait, M.S & Simbolon, H performed the laboratory work. Sirait, M.S & Simbolon, H, wrote the manuscript. They drafted the original manuscript, prepared the introduction, results, discussion, methodology, and conclusion. Sirait, M.S & Simbolon, H also contributed ideas to the research process, data processing, translation into English, review, and editing. All members of the research team collaborated at every stage until this article was completed.

Funding

Funding in this research is supported by the institution, the amount of which is adjusted to the applicable regulations on campus.

Conflicts of Interest

This research is conducted to provide information to the public regarding the research that has been conducted so that it can be used for educational purposes. In addition, this research is used by researchers for lecturer performance loads and accreditation needs of study programmes and institutions

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