

The influence of the behavior of using artificial intelligence (AI) on the self-efficacy of UNM Guidance and Counseling students

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Abstract: This study examines the relationship between the behavior of using Artificial Intelligence (AI) specifically ChatGPT and the self-efficacy of Guidance and Counseling students at Universitas Negeri Makassar, as well as explores differences based on gender. A quantitative correlational approach was employed with 171 fifth-semester students selected through stratified random sampling to ensure proportional representation of each class. The instruments used were the AI usage behavior scale and the General Self-Efficacy Scale (GSES), with data collected online. Descriptive statistics and Pearson correlation analysis revealed a positive relationship between ChatGPT usage and self-efficacy, as indicated by the high categories in the magnitude (70,8%), strength (77,2%), and generality (98,8%) dimensions. Additionally, no significant differences in self-efficacy were found based on gender. These findings highlight that AI utilization contributes to enhancing students' academic self-confidence and underscores the importance of digital literacy in optimizing AI use.

Keywords: artificial Intelligence; self-efficacy; behavior; chatGPT.

Abstrak: Penelitian ini menganalisis hubungan antara perilaku penggunaan Artificial Intelligence (AI) khususnya ChatGPT dengan self-efficacy mahasiswa Bimbingan dan Konseling Universitas Negeri Makassar, serta melihat perbedaannya berdasarkan gender. Pendekatan kuantitatif dengan metode korelasional digunakan pada 171 mahasiswa semester 5 yang dipilih melalui stratified random sampling agar setiap kelas terwakili proporsional. Instrumen penelitian berupa skala perilaku penggunaan AI dan General Self-Efficacy Scale (GSES), dengan pengumpulan data secara online. Analisis deskriptif dan korelasi Pearson menunjukkan adanya hubungan positif antara penggunaan ChatGPT dan self-efficacy, terlihat dari tingginya kategori magnitude (70,8%), strength (77,2%), dan generality (98,8%). Selain itu, tidak terdapat perbedaan self-efficacy berdasarkan gender. Temuan ini menegaskan bahwa pemanfaatan AI dapat meningkatkan kepercayaan diri akademik mahasiswa dan pentingnya literasi digital dalam penggunaan AI.

Kata Kunci: kecerdasan buatan; efikasi diri; perilaku; chatGPT.

INTRODUCTION

The development of information and communication technology, especially artificial intelligence, has changed the way students learn and interact with information. AI technology is now widely used in education to help access information, complete academic assignments, and improve learning skills. One of the innovations that stands out is chatGPT (Generative Pre-trained Transformer), which enables text-based interactions in real-time. ChatGPT can be used as a learning tool to provide explanations, clarify material, and answer questions quickly.

Survey data shows that more than 70% of college students use AI to compile academic assignments, 30% to find additional references, and 25% to improve writing skills and understand difficult concepts (Zhang & Yang, 2024). Of the various AI technologies used, chatGPT is the most used by students, with 60%, then chatGPT is mainly used to answer academic questions as much as 40%, make summaries of lecture material as much as 30%, and compile and edit academic assignments as much as (30%) (Zhang & Yang, 2024).

This shows that AI not only helps in understanding academic material but also increases students' confidence in facing academic challenges (Abdurrahman et al., 2025; Nasuha & Istiani, 2025). The use of AI by college students can affect various aspects of their psychology, including *self-efficacy*, i.e., an individual's belief in his or her ability to achieve a goal or complete a specific task.

Concept *self-efficacy* first introduced by Albert Bandura in his social cognitive theory in personality development (Bandura & Walters, 1977; Rumjaun & Narod, 2020). A study found that the use of AI has a positive and significant effect on students' interest in learning, where the higher the level of AI use, the more students' interest in learning tends to increase (Meiriza et al., 2024; Muchminiin et al., 2022). *Self-Efficacy* defined as an individual's belief in their ability to achieve a particular goal, is an important factor in the learning process. Students with *self-efficacy* tend to be more confident in facing academic challenges (Schunk & Zimmerman, 2012; Rumjaun & Narod, 2020).

Although the use of AI in education is growing, most previous research has still focused on the influence of AI on academic motivation, interest, or behavior in general.

There have not been many studies that specifically examine how the behavior of using chatGPT including attitudes, subjective norms, and perceptions of behavioral control is directly related to student *self-efficacy*.

In addition, the findings regarding differences *self-efficacy* based on gender in the context of chatGPT usage is still inconsistent. Some studies show variations in the intensity of AI use between genders, but it is not clear how this affects academic *self-confidence* (Rumjaun & Narod, 2020). This gap is important, especially for BK FIP UNM students who are required to have digital literacy and self-regulation skills in the learning process.

Based on the research gaps that have been identified, this study aims to analyze the relationship between chatGPT usage behavior which includes attitudes, subjective norms, and perception of behavioral control and the level of *self-efficacy* of UNM BK students. In addition, this study also aims to find out whether there is a difference in the level of *self-efficacy* between male and female students in the context of the use of chatGPT as an academic tool.

METHOD

This study uses a quantitative approach with a correlational method to analyze the relationship between ChatGPT usage behavior and student *self-efficacy*. The research population is all 5th semester students of the UNM BK study program, with a sample of 171 people.

The sampling technique used is stratified random sampling, which is random sampling based on strata of classes (A, B, C, and D). Each class has a different number of students, so the sample is proportionally determined and randomly selected to ensure a balanced representation. This technique was chosen because the population is divided into groups with different potential characteristics, so it can reduce bias and improve the external validity of the study.

The research instruments include the behavioral scale of AI use based on ATT, SN, and PBC indicators, as well as the General *Self-Efficacy Scale* (GSES) which measures the dimensions of magnitude, strength, and generality. Data were collected through an online questionnaire and analyzed using descriptive statistics and Pearson correlation

tests. Additional analyses were performed to look at differences in *self-efficacy* by gender.

RESULTS AND DISCUSSION

Understand the behavior of using ChatGPT among BK FIP UNM students. BK

students have different needs and learning patterns, so the way they use chatGPT in academic activities can vary. Through this study, it can be found out whether there are differences in the behavior of using chatGPT among students. The results of the analysis are as follows:

Table 1. Results of ATT Analysis in BK Major Students

		Frequency	Valid Presentase	Cumulative Presentation
<i>Valid</i>	Low	1	6	6
	Keep	55	32,2	32,7
	Tall	115	67,3	100,0
	Total	171	100,0	

The results of the attitude toward behavior (ATT) analysis showed that 6% of students were in the low category, indicating a less positive attitude or limited experience in using chatGPT. As many as 32% were in the medium category, which describes a positive assessment but still

accompanied by doubts. The majority of BK students (67%) are in the high category, showing positive perceptions and experiences of the usefulness of using chatGPT in supporting the quality of academic activities

Table 2. Results of SN Analysis on BK Students

		Frequency	Valid Presentase	Cumulative Presentation
<i>Valid</i>	Low	1	6	6
	Keep	38	22,2	22,8
	Tall	132	77,2	100,0
	Total	171	100,0	

Subjective norm (SN) analysis shows that 6% of students are in the low category, indicating a lack of social support to use chatGPT. As many as 22% were in the moderate category reflecting neutral support, while the

majority of BK students (77%) received strong social support. These findings suggest that while social support is generally high, chatGPT's utilization is not entirely aided by environmental support for all students.

Table 3. Results of PBC Analysis in BK Students

		Frequency	Valid Presentase	Cumulative Presentation
<i>Valid</i>	Low	1	6	6
	Keep	99	57,9	58,5
	Tall	71	41,5	100,0
	Total	171	100,0	

An analysis of perceived behavioral control (PBC) showed that 6% of college students were in the low category, which indicates that there is still an inability to use chatGPT effectively. As many as 58% are in the medium category, describing sufficient but still limited capabilities, while 41% are in the high category and feel able to make optimal use of chatGPT. These findings indicate that BK students generally feel capable of using

chatGPT, although some are still in the exploration and adaptation stage.

Self-Efficacy

An analysis of the level of *academic self-efficacy* of BK FIP UNM students based on gender was carried out to see the difference in the influence of chatGPT use on the *self-efficacy* of male and female students. The analysis includes three dimensions of *self-efficacy*,

namely magnitude, strength, and *generality*, using the same dataset. The descriptive results show an overview of the level of *self-efficacy* in

BK students in utilizing chatGPT in higher education in these three dimensions.

Table 4. Results of Descriptive Analysis of the Magnitude of *Self-Efficacy* of BK Students

		Frequency	Valid Presentase	Cumulative Presentation
Valid	Low	2	1,2	1,2
	Keep	48	28,1	29,2
	Tall	121	70,8	100,0
	Total	171	100,0	

Based on table 4, the magnitude analysis shows that 70,8% of students, both male and female, are in the high category, which indicates strong confidence in completing academic tasks by utilizing chatGPT. There were no significant differences between genders, although usage patterns were different: male students were more exploratory, while female students were more reflective and validating.

are still in the medium category, such as classes A (41,8%), C (31,3%), and D (32,6%), which suggests that some students still doubt the effectiveness of chatGPT for tasks that require higher reasoning, such as drafting research proposals or reflective analysis.

This high level of magnitude is likely influenced by students' positive experiences in using chatGPT, both through self-exploration and informal guidance. However, some classes

Low categories only appear in very small proportions, such as 1,2% in class B, which is likely to come from students who are not familiar with AI-based technology or have low digital confidence in optimizing chatGPT for academic need

Table 5. Results of Descriptive Analysis of *Strength Self-Efficacy* of BK Students

		Frequency	Valid Presentase	Cumulative Presentation
Valid	Keep	39	22,8	22,8
	Tall	132	77,2	100,0
	Total	171	100,0	

Analysis on the *strength* dimension showed that 77,2% of students, both male and female, were in the high category, indicating consistency of self-confidence in both genders. However, the usage pattern is different: male students are more exploratory, while female students use chatGPT more as a validation tool. This high level of *strength* is suspected to be influenced by good familiarity with AI technology and an understanding of its functions and limitations. However, some classes are still in the medium category such as class B (32,6%) and class D (24,5%) which shows that there is a group of students who are not fully confident in using chatGPT for academic assignments. This

percentage shows that some students still experience inconsistencies in their confidence in using chatGPT. This is influenced by limited experience, doubts about the accuracy of ChatGPT, and reliance on lecturer validation. These findings affirm the importance of strengthening technology literacy and using AI more critically. The low category was barely found at just 1,1% in grades A and C, indicating that the majority of students have good confidence in using chatGPT, although mentoring is still needed to strengthen consistency across classes

Table 6. Descriptive Analysis Results of *Generality Self-Efficacy* of BK Student

		Frequency	Valid Presentase	Cumulative Presentation
Valid	Keep	2	1,2	1,2
	Tall	169	98,8	100,0
	Total	171	100,0	

The results of the analysis of the level of *academic self-efficacy* (level generality) in BK students based on gender showed very strong consistency in both groups with a percentage above 98%. This indicates that there is no significant difference between males and females in generality. However, variations are still seen in usage patterns, where men tend to be more exploratory and women more reflective and validating. The factor of relatively equal digital literacy in both genders and the support of the academic environment are the main causes of this equality in *the level of self-efficacy*.

However, the medium category is still found in a very small proportion, namely in class A at 1,1% and class C at 1,2%. This low proportion indicates that only a small percentage of students have a difference in the influence of chatGPT use and *self-efficacy* between men and women. This is likely due to the relatively equal digital literacy of students between men and women, so both have equally strong beliefs in utilizing chatGPT. Although not significant, the difference in usage is still visible: male students tend to be more exploratory, while female students are more reflective and validating. In addition, the same support of the academic environment, both from lecturers and peers, also strengthens the equality of *self-efficacy*.

a. The Effect of the Use of ChatGPT on Student Self-Efficacy

These findings suggest that chatGPT usage behavior, which is analyzed through attitude variables (ATT), subjective norms (SN), and perception of behavioral control (PBC), has a close relationship with *students' academic self-efficacy*. The positive attitude of the majority of students (67%) towards chatGPT shows that they value AI as a useful tool to support the completion of academic assignments. High social support (77%) also strengthens students' propensity to use AI, while perceptions of behavioral control (58% in the medium category and 41% in the high category) indicate that students feel capable enough to use chatGPT, although there are still limitations.

These findings are consistent with the theory *Theory of Planned Behavior* (Mahyarni, 2013) which emphasizes that attitudes, subjective norms, and perceptions of behavior control together influence an individual's intentions and behavior. Thus, chatGPT's usage behavior has been shown to contribute to the increase *self-efficacy* student. This can be seen in

the results of the level analysis magnitude (70,8%), strength (77,2%), and generality (98,8%) *self-efficacy* most of which are in the high category. This means that students feel more confident to complete various academic tasks with the help of chatGPT. These findings are also in line with research (Manuel et al., 2023), which found that although 88,9% of respondents used chatGPT to complete tasks, only 26,4% were satisfied with the results. It emphasizes that the use of AI does not automatically increase *self-efficacy* without digital literacy and wise utilization. In other words, positive chatGPT usage behavior will strengthen *self-efficacy*, However, non-critical use risks causing dependence and *false confidence*.

b. The Difference in the Influence of the Use of ChatGPT and Self-Efficacy between Male and Female Students.

The results of the study show that the use of chatGPT has an effect on the increase *self-efficacy* students in general. The descriptive data obtained showed that most students were in the high category in the dimension *magnitude, strength, dan generality*. For example, students of the BK study program in class A obtained 70,8% are in the high category for *magnitude*, 77,2% for *strength*, and 98,8% for *generality*. Similar results were also found in grades A, B, C, and class B who even achieved achievement *generality* up to 100%. This confirms that students have strong confidence in their ability to use chatGPT to support academic activities (Hidayat & Sangka, 2025; Arasyidiah & Marzuki, 2025). Theoretically, these findings are consistent with the theory *self-efficacy* submitted by Bandura, (1997), where the experience of success (*mastery experiences*) is the main source of *self-efficacy*.

ChatGPT as an AI-based technology provides quick feedback, alternative solutions, and contextual guidance that is capable of creating a positive learning experience. The results of the gender-based analysis showed that there was no significant difference between male and female students in the effect of the use of chatGPT on *self-efficacy*.

These findings are in line with research Aldhahi et al., (2021) which shows that gender is not a significant predictor in *self-efficacy e-learning*, while the factors of the field of study and learning experience are more dominant influencing *self-efficacy* student. In addition,

findings that have been made by (Surjo et al., 2024) resulting in no gender differences in *self-efficacy* academic.

However, some recent studies have found that male college students tend to use chatGPT more often than women. According to Galindo-Domínguez et al., (2024) shows that men have a higher intention and frequency of using chatGPT. However, the difference is only visible in the aspect of frequency and intensity of use, not in its impact on *self-efficacy*. These results are reinforced by (Elshaer et al., 2024) through the UTAUT model found that the influence of *performance expectancy* against the use of chatGPT is stronger in men, but the effect of use on the increase *self-efficacy* remain relatively the same on both genders. It can be concluded that the factors of learning experience, field of study, and access to technology have a greater influence on *self-efficacy* students are compared to gender factors. This is in accordance with the findings (Beroíza-Valenzuela & Salas-Guzmán, 2024) which emphasizes that the gender gap in technology use is more influenced by social support, use values, and practical experience, rather than simply because of biological differences (Aini, 2024).

CONCLUSIONS AND SUGGESTIONS

This study shows that the behavior of using *Artificial Intelligence* (AI), especially chatGPT, is positively related to the self-efficacy of Makassar State University (UNM) students. Students with a positive attitude, strong social support, and a good perception of control tend to have high self-efficacy, as seen in the dominance of the categories of magnitude (70,8%), strength (77,2%), and *generality* (98,8%). No significant differences were found based on gender, so digital literacy and experience were more influential than gender. Thus, the use of chatGPT has been proven to contribute to the increase of students' academic self-confidence.

As for the suggestions from the results of this study, first, for educational institutions to strengthen students' digital literacy to ensure the use of AI runs critically and support academic achievement, second, for lecturers to direct the use of chatGPT as a learning support tool that enriches the thinking process, not to replace it, and finally for students to be expected to use AI responsibly to increase academic independence and confidence. Further research can add other

variables to make the results more comprehensive.

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