

ARTICLE

Students' AI Usage Behavior in Final Project Writing: A Library Service Interaction Perspective

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Abstract

Introduction: The growing trend of artificial intelligence (AI) utilization in academic settings has significantly influenced students' approaches to writing their final projects. This study explores how students adopt AI tools during the thesis writing process and investigates the mediating role of information-seeking behavior and library service interaction. The study aims to identify the extent to which students' perceptions of usefulness and ease of use of AI influence their behavior in accessing information and engaging with academic support services, particularly at the Universitas Brawijaya Library.

Method: This research employed a quantitative method with a structural equation modeling–partial least squares (SEM-PLS) approach. Data were collected from 200 final-year undergraduate and graduate students through a structured questionnaire. The study utilized the Technology Acceptance Model (TAM) and Information Seeking Behavior (ISB) theory as its analytical framework.

Results: The findings show that perceived usefulness and perceived ease of use significantly influence both students' information-seeking behavior and their interaction with library services. These two mediating variables, in turn, have a significant impact on the intensity of AI use in academic writing. Indirect effect analysis further confirmed that the strongest pathway to AI adoption is through active information seeking, rather than through direct perceptions alone.

Discussion: The discussion highlights the critical role of librarians as facilitators in bridging students' access to AI-related knowledge and tools. Their guidance supports the ethical and effective use of AI in higher education. Recognizing these roles allows libraries to transform into centers of digital academic literacy. **Conclusions:** Fostering information-seeking habits and enhancing librarian-student interaction are key to promoting



responsible AI integration. Future research should consider longitudinal studies and multi-campus comparisons to further generalize these findings.

Keywords

artificial intelligence; thesis writing; academic libraries; information seeking; technology acceptance.

Introduction

The development of artificial intelligence (AI) technology has had a significant impact on the transformation of higher education, including in the practice of writing final assignments by students. Tools such as ChatGPT, Grammarly, Quillbot, and Elicit are now widely used to help students find references, structure their writing, and improve their grammar and scientific writing style (Abbas et al., 2023). This phenomenon indicates a change in the way students search for, process, and present academic information (González-Calatayud et al., 2021). Library services as academic partners not only function as collection providers but also as facilitators of information literacy and companions in the scientific writing process (Abbas et al., 2023; Pan, 2024).

In practice, interactions between librarians and students in libraries and through social media such as Instagram show an increasing need for guidance on the use of AI tools in an academic context. However, there has not been much research specifically addressing how libraries respond to the use of AI in final projects, especially from the perspective of information service interactions.

Based on the Technology Acceptance Model (TAM) (Davis, 1989), the intention to use technology is determined by two main factors: perceived usefulness and perceived ease of use. This theory is expanded with the Information Seeking Behavior approach (Ellis, 1993) to understand the information search process of students when using AI. With this combination, the study is expected to identify student behavior factors while evaluating the role of library services in supporting ethical and effective AI use.

Several previous studies have examined this phenomenon from the perspective of AI use by students. (Abbas et al., 2023) highlights the tendency of students to use ChatGPT to speed up thesis writing, but does not relate it to the role of librarians. Research by (Kim et al., 2025) discusses students' perceptions of AI as a source of information, but does not explain in depth the dynamics of library services. Meanwhile, (Zahar, 2024) focuses on information search behavior using Perplexity AI, but is limited to technical aspects and does not cover the perspective of information assistance by librarians. Additionally, research by (Ahmed et al., 2025) shows that the integration of AI in higher education still faces resistance due to low AI literacy, unlike the context of Indonesian students who tend to be adaptive and experimental. Thus, there is a research gap in the aspect of user-AI-librarian interaction, which is the area of contribution of this study.

Therefore, the purpose of this study is to analyze the behavior of AI usage by students in writing their final assignments and to explore the role of library services, particularly in providing information guidance and AI literacy based on direct and digital interactions.

Literature Review

Technology Acceptance Model (TAM) in the Context of AI Use

The technology acceptance model or Technology Acceptance Model (TAM) developed by Davis (1989) explains that a person's intention to use technology is greatly influenced by perceptions of perceived usefulness and perceived ease of use. In the context of higher education, this model has been widely used to explain the adoption of digital technology, including AI in academic writing (Venkatesh & Davis, 2000). Students tend to accept the use of AI if they feel that it is useful in increasing writing productivity and is easy to operate without complex technical training. Research by (Kim et al., 2025) shows that students' perceptions of AI as an academic tool are largely determined by these two factors. However, the study does not link its findings to librarian assistance or the ecosystem of digital library services, which are important components in guiding the ethical use of academic technology.

Information Search Behavior and AI Integration

The Information Seeking Behavior theory from (Ellis, 1993) describes the process of information search as a series of strategies such as browsing, chaining, monitoring, and extracting, which are highly relevant to how students utilize AI in searching for reference materials and constructing arguments. Research by (Zahar, 2024) shows that students use AI such as Perplexity to explore topics and filter relevant information. Although this research contributes to the technical understanding of AI use, it has not specifically examined the role of librarians as information facilitators in this process.

This context is important because searching for information through AI is not always accompanied by adequate information literacy skills, so the assistance of librarians is needed to prevent misinformation, plagiarism, and misuse of references.

The Role of Librarians and Library Services in the Age of AI

Library services have now evolved from simply providing information to becoming centers of digital literacy and academic guidance. (Abbas et al., 2023) shows 4 that many students use ChatGPT and similar tools in writing their theses, but the study did not discuss the involvement of librarians in guiding students to optimize the use of AI ethically and appropriately. On the other hand, (Pan, 2024) emphasizes the need for librarians to develop an educational role in AI literacy, including through digital platforms such as social media.

Library service interactions, both in person at the repository and through digital channels like Instagram DMs, are important data sources for understanding AI usage

trends. However, previous studies have not made these interactions a primary variable in analyzing AI phenomena among students, which is the focus of this research.

Identification of Research Gaps

Based on the above review, it can be concluded that although there have been various studies on the use of AI in higher education, most of them still focus on students' perceptions of the technology itself (Kim et al., 2025), technical aspects of information retrieval (Zahar, 2024), or trends in the use of AI applications (Abbas et al., 2023). There has not been much research linking the use of AI in thesis writing with the role and interaction of library services, both in person and digitally. Thus, this study takes a unique position in filling this gap by examining how students use AI in thesis writing and how interactions with librarians, both through physical and digital services, contribute to the process.

Methods

Research Approach and Type

This study uses a descriptive quantitative approach, aiming to explain the relationship between variables that influence the use of AI in writing final assignments by students based on the perspective of library service interaction. This approach was chosen because it is suitable for testing hypotheses and explaining the relationship between constructs with the help of standardized statistical tools (Creswell, 2014).

Research Location and Time

The research was conducted at three universities in Malang City (Brawijaya University, UIN Maliki Malang, and Malang State University). The research was scheduled to be conducted over a period of one month, namely April 2025, covering the preparation of instruments, data collection, and analysis of results.

Research Population and Sample

The research population consists of all students at three universities in Malang City who are currently writing or have written a final project (thesis, dissertation, or dissertation) and have consulted or interacted with library services (offline or online). Technique Purposive sampling was used, with the following criteria:

- Active students in their final semester (semester 7 and above for bachelor's degree, semester 3 and above for master's degree).
- Have used offline repository services or consulted through library social media.
- Admitted to having used or currently using AI-based tools in the process of writing their final assignment

The target number of respondents is 100 students, in accordance with the minimum sample recommendation for SEM-PLS analysis (Hair et al., 2021), as well as considering the ease of data access through Google Forms.

Data Collection Techniques

Data was collected through:

1. Closed questionnaires based on Google Forms, which were distributed online and offline through library services.
2. Secondary data on library visitors at three universities in Malang City (Brawijaya University, UIN Maliki Malang, and Malang State University).

The questionnaire instrument was developed based on validated indicators from the Technology Acceptance Model (Davis, 1989) and Information Seeking Behavior (Ellis, 1993) theories.

Research Instruments

The variables measured in this study and their indicators are as follows:

- Perceived Usefulness (PU): work efficiency, ease of obtaining references, improvement in writing quality (Davis, 1989).
- Perceived Ease of Use (PEOU): ease of using AI tools, ease of learning, simple interface (Davis, 1989).
- Information Seeking Behavior (ISB): browsing, chaining, monitoring, extracting (Ellis, 1993).
- Library Service Interaction (LSI): consultation intensity, information quality, librarian response.
- AI Usage (AIU): intensity, types of tools used, parts of the writing process assisted by AI.

Research Conceptual Model

The conceptual model in this study was designed to describe the relationship between students' perceptions of artificial intelligence (AI) technology and the level of its use in writing final assignments, taking into account the mediating role of information-seeking behavior and library service interactions. The Perceived Usefulness (PU) variable represents the extent to which students assess that AI provides real benefits in the academic writing process, such as work efficiency, ease of finding references, and improving the quality of writing. Students who have a high perception of the usefulness of AI tend to be more active in seeking information through AI (Information Seeking Behavior/ISB) and are also more open to utilizing library services to optimize the use of this technology (Library Service Interaction/LSI). Similarly, the Perceived Ease of Use (PEOU) variable, which measures the extent to which students find AI easy to learn and use, influences their tendency to use AI as a tool in information seeking (ISB) and in interacting with librarians (LSI). Students who find AI easy to use are more likely to incorporate AI into

their scientific information search strategies and feel comfortable discussing it in reference or consultation services at the library.

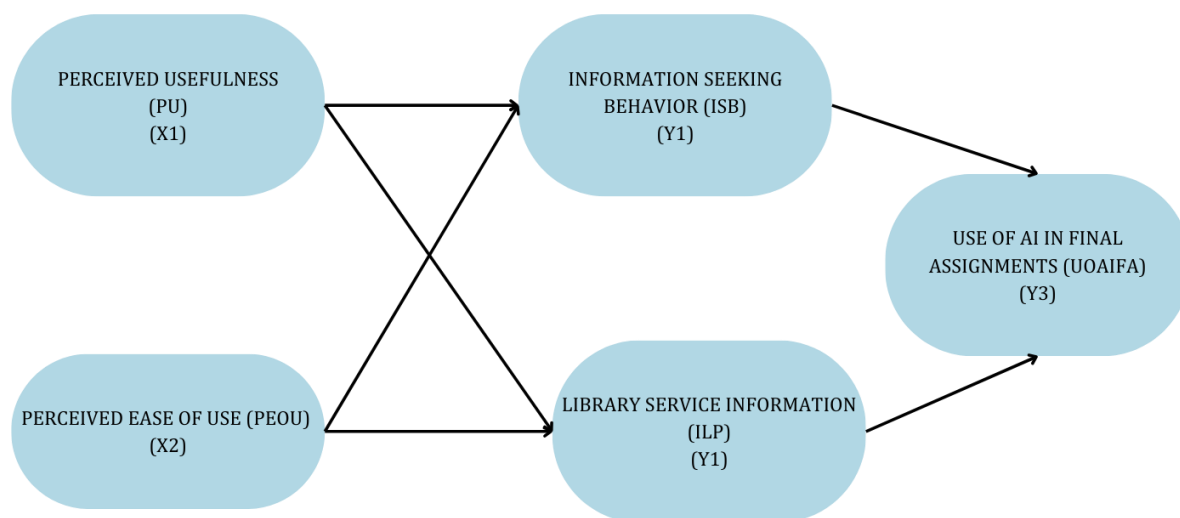


Figure 1. Research Conceptual Model

The conceptual model in this study was designed to illustrate the relationship between students' perceptions of artificial intelligence (AI) technology and their level of use in writing final assignments, taking into account the mediating role of information-seeking behavior and library service interactions. The Perceived Usefulness (PU) variable represents the extent to which students perceive AI to provide tangible benefits in the academic writing process, such as work efficiency, ease of finding references, and improved writing quality. Students with a high perception of AI's usefulness tend to be more active in seeking information through AI (Information Seeking Behavior).

Furthermore, both the ISB and LSI act as important mediators, bridging the relationship between initial perceptions of AI and actual use of AI in writing final assignments (UOAIFA). Students who actively seek information using AI demonstrate a higher intensity of use throughout the final assignment writing process, such as in developing outlines, constructing arguments, and paraphrasing texts.

Conversely, students who receive support or guidance from librarians through library services are more likely to use AI strategically and ethically in writing their final assignments.

Thus, this model provides a comprehensive understanding of how perceived usefulness and ease of use of AI technology can influence user behavior in academic settings and emphasizes the crucial role of librarians and information services in guiding students in the era of AI-based digital literacy.

Data Analysis Techniques

Data analysis was conducted using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) with the help of SmartPLS 4 software. SEM-PLS was chosen because it is robust to non-normal data distributions, suitable for complex

models with many constructs and indicators, and can be used on relatively small samples (Hair et al., 2021). The analysis steps included:

- Convergent and discriminant validity tests (AVE, factor loadings).
- Construct reliability tests (Composite Reliability and Cronbach's Alpha).
- R-square and Path Coefficient tests to measure the strength and direction of relationships between variables.
- Bootstrapping for significance testing.

This technique allows for empirical and reproducible testing of theoretical models based on field data using the same dataset.

Results and Discussion

Figure 2 presents a structural model resulting from a Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) analysis using SmartPLS 3.2.9, which illustrates the relationship between student perceptions, ease of use of AI, information-seeking behavior, library service interactions, and the use of AI in writing final assignments. This model was developed based on the Technology Acceptance Model (TAM) by Davis (1989), which states that perceived usefulness and ease of use influence user intentions and behavior toward technology.

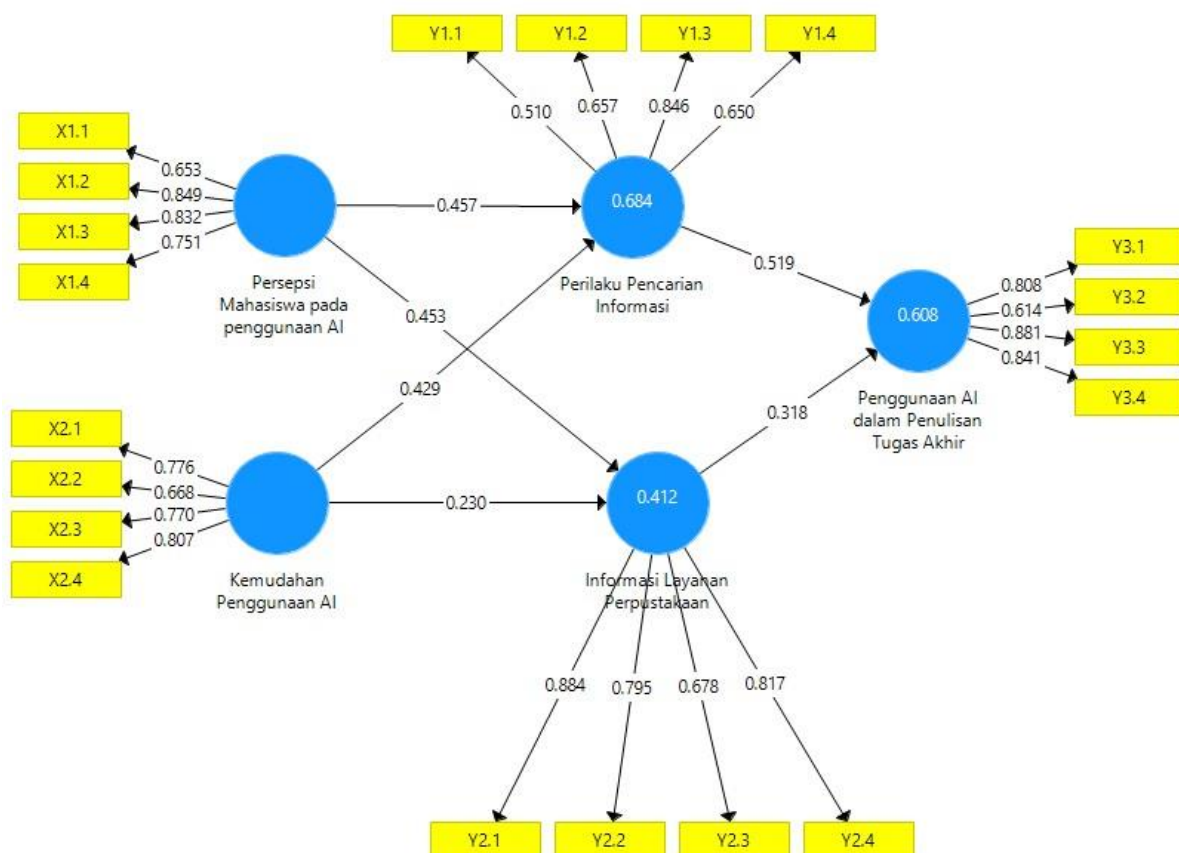


Figure 2. Algorithm Test Results

Furthermore, the Information Seeking Behavior (ISB) concept, adapted from Ellis (1993), was used to explain students' information-seeking patterns when using AI, and the library service interaction variable was developed from the literature on reference services and digital literacy for librarians. The visualization results show that perceived usefulness of AI (X1) significantly influences information-seeking behavior ($Y_1 = 0.457$) and service interaction ($Y_2 = 0.453$), while ease of use (X2) also influences both, albeit with a lower coefficient. These two mediating variables, Y_1 and Y_2 , then significantly influence the use of AI in writing final assignments (Y_3), with the strongest influence coming from information-seeking behavior ($Y_1 \rightarrow Y_3 = 0.519$). This model confirms that information literacy and library service experience contribute to shaping students' behavior in integrating AI into their academic practices. This visualization forms the basis for the complete results presented in the following table.

Table 1. Algorithm Test Results

Variabel	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	R Square
Library Service Information	0.813	0.873	0.635	0.412
Ease of Use of AI	0.749	0.842	0.573	
The Use of AI in Writing Final Assignments	0.799	0.869	0.628	0.608
Information Seeking Behavior	0.591	0.766	0.457	0.684
Student Perceptions on the Use of AI	0.778	0.856	0.601	

Table 1 presents the results of internal reliability (Cronbach's Alpha), composite reliability (Composite Reliability), convergent validity (AVE), and determination value (R Square) for each latent variable. The Cronbach's Alpha values of all constructs are generally above the threshold of 0.70, indicating acceptable internal consistency, although the Information Seeking Behavior construct has a slightly lower value (0.591), but is still within tolerance because its Composite Reliability remains high (0.766). All constructs recorded $CR > 0.70$, which strengthens the overall reliability of the model. In terms of convergent validity, all variables showed an Average Variance Extracted (AVE) value above 0.50, meaning that the indicators of each construct have been able to explain the construct variance adequately. The variables Library Service Information and AI Use in Final Project Writing showed the highest AVE, namely 0.635 and 0.628. Meanwhile, the highest R^2 value was recorded for Information Seeking Behavior (0.684), followed by AI Use in Final Projects (0.608), and Library Service Information (0.412), indicating that this model has fairly good predictive power for the main variables.

After ensuring the reliability and validity of the model were met, the analysis continued by examining the path coefficients between the latent variables, as shown in the following table.

Table 2. Path Test Results (Path Coefficients)

	Library Service Information	The Use of AI in Writing Final Assignments	Information Seeking Behavior
Library Service Information		0.318	
Ease of Use of AI	0.23		0.429
Information Seeking Behavior		0.519	
Student Perceptions on the Use of AI	0.453		0.457

Table 2 presents the results of the path coefficients from the Partial Least Squares (PLS)-based Structural Equation Modeling model, which demonstrates the strength of the relationships between the latent variables in this study. This model measures the influence of student perceptions of AI use (X1) and ease of use of AI (X2) on the use of AI in writing final assignments (Y3), with information-seeking behavior (Y1) and interaction with library services (Y2) as mediating variables.

Mathematically, the relationships between the variables in this model can be formulated as follows:

$$Y1 = \beta_1 X1 + \beta_2 X2$$

$$Y2 = \beta_3 X1 + \beta_4 X2$$

$$Y3 = \beta_5 X1 + \beta_6 Y2$$

By substituting the coefficient values from the analysis results, the equation becomes:

$$Y1 = 0.457X1 + 0.429X2$$

$$Y2 = 0.453X1 + 0.230X2$$

$$Y3 = 0.519Y1 + 0.318Y2$$

The equation above shows that perceived usefulness of AI (X1) significantly influences information-seeking behavior (Y1) with a coefficient of 0.457 and library service interaction (Y2) with a coefficient of 0.453. This means that students who perceive AI as useful tend to actively seek information and are more open to consulting with librarians. On the other hand, ease of use of AI (X2) also influences Y1 (0.429) and Y2 (0.230), although its effect on library services is relatively weaker, indicating that technological convenience encourages independent exploration rather than interaction with librarians. Furthermore, information-seeking behavior (Y1) has the greatest influence on the use of AI in final assignments (Y3), with a coefficient of 0.519, indicating that active information exploration through AI is a primary predictor of widespread AI use in academic writing. Meanwhile, the effect of library service interaction (Y2) on Y3 remains significant with a coefficient of 0.318, indicating the importance of librarians' role in guiding the ethical and appropriate use of AI.

Thus, these results confirm the relevance of the theoretical frameworks of the Technology Acceptance Model (Davis, 1989) and Information Seeking Behavior (Ellis, 1993) in the context of digital libraries and AI-based academic practices, and reinforce the urgency of strengthening technology and information literacy for students in the era of artificial intelligence.

Further analysis was conducted using bootstrapping path coefficients, the results of which are shown in Table 3 below.

Table 3. Bootstrapping Path Coefficient Test Results

	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>T Statistics (O/STDEV)</i>	<i>P Values</i>
Library Service Information → Using AI in Final Project Writing	0.318	0.321	0.133	2.387	0.017
AI Ease of Use → Library Service Information	0.23	0.235	0.101	2.269	0.024
AI Ease of Use → Information Seeking Behavior	0.429	0.425	0.105	4.097	0
Information Seeking Behavior → Using AI in Writing Final Project	0.519	0.526	0.122	4.258	0
Student Perceptions on the Use of AI → Library Service Information	0.453	0.458	0.114	3.979	0
Student Perceptions on the Use of AI → Information Seeking Behavior	0.457	0.467	0.102	4.466	0

Table 3 shows the results of the bootstrapping test on the Structural Equation Modeling - Partial Least Squares (SEM-PLS) model to test the significance of the relationships between latent variables in the research model. Interpretations were based on the original sample (O) values, t-statistics, and p-values, which served as the basis for concluding whether the paths were statistically significant.

The test results indicate that all paths between variables had t-statistics > 1.96 and p-values < 0.05, indicating that all relationships between variables in the model were statistically significant at the 95% confidence level. Specifically, the path from Information Seeking Behavior to AI Use in Final Project Writing recorded the highest t-statistic (4.471) and a p-value of 0.000, indicating that information seeking behavior is the strongest predictor of students' intensity of AI use in final project writing.

Similarly, the path from Student Perceptions of AI Use to Information Seeking Behavior had a high t-statistic (4.522) and a highly significant p-value (0.000), indicating that the more students perceive AI as a useful technology, the more likely they are to actively use AI in their academic information search process. This was

reinforced by the path from AI Ease of Use to Information Seeking Behavior, which was also significant ($T = 3.991$; $p = 0.000$).

For the path involving Library Service Information, the results also showed significant relationships, both from Student Perceptions to Service Information ($T = 3.916$; $p = 0.000$) and from AI Ease of Use to Library Services ($T = 2.219$; $p = 0.027$). Finally, the path from Library Service Information to AI Use in Final Project Writing was also significant ($T = 2.593$; $p = 0.010$), indicating that librarian services play a significant role in supporting the ethical and productive integration of AI in academic writing.

Table 4. Bootstrapping Test Results with Moderation Effects (Total Indirect Effects)

	<i>Original Sample (O)</i>	<i>Sample Mean (M)</i>	<i>Standard Deviation (STDEV)</i>	<i>T Statistics (O/STDEV)</i>	<i>P Values</i>
Information Seeking Behavior → Using AI in Writing Final Project	0.296	0.302	0.076	3.903	0
Student Perceptions on the Use of AI → Using AI in Writing Final Project	0.381	0.39	0.083	4.6	0

Table 4 presents the results of a bootstrapping test to measure the total indirect effects between the independent and dependent variables in this study, specifically the relationship between AI Ease of Use and Student Perceptions of AI Use and AI Use in Final Project Writing, through the mediation pathway of Information Seeking Behavior and Library Service Interaction. This test is crucial to determine whether the influence of student perceptions and ease of use on AI use truly occurs through the indirect mechanism established in the model.

The results indicate that the indirect effect of AI Ease of Use on AI Use in Final Project Writing is 0.296, with a T-statistic of 3.903 and a p-value of 0.000, indicating statistical significance at the 99% confidence level. This means that although the direct pathway from AI ease of use to AI use is not explicitly tested in the model, its influence is still strong through the indirect pathway, namely through increased information seeking behavior and interaction with library services.

A similar effect is evident in the variable "Student Perceptions of AI Use," which showed an indirect effect of 0.381 on the use of AI in final assignments, with a T-statistic of 4.6 and a p-value of 0.000. This indicates that the perception of AI's benefits significantly encourages students to use the technology more actively, through increased information seeking and utilization of librarian services. This effect is even stronger than ease of use, indicating that perceptions of benefits have a greater psychological weight in influencing students' decisions to integrate AI into the academic writing process.

These findings support the research's conceptual model, which positions Information Seeking Behavior and Library Service Interaction as primary mediators. The significant indirect effect clarifies that the influence of perceptions and ease of use

of technology does not occur automatically, but rather through the process of students' active engagement in information seeking and consulting academic services. In other words, sophisticated technology alone is not enough; students' active exploration of information and seeking guidance from librarians are key to the successful use of AI in academic contexts.

Therefore, based on the results in Table 4, it can be concluded that library service development strategies should not only focus on providing technology, but also on strengthening human interaction and developing information literacy that encourages students to become reflective and responsible AI users. Furthermore, educational approaches that foster positive perceptions of the benefits of AI should be integrated into campus digital literacy programs. This approach can strengthen the library's role as a bridge between technology and quality academic practice.

Discussion

The findings of this study strengthen the theoretical frameworks of the Technology Acceptance Model (TAM) and Information Seeking Behavior (ISB), demonstrating that both perceived usefulness and ease of use of AI significantly influence students' information-seeking behavior and interactions with library services. Students' perceptions of AI's usefulness significantly contribute to two important aspects of their final project writing: active engagement in searching for academic information and their tendency to access information assistance from librarians. This reflects that students view AI not only as a technical tool but also as part of a broader information strategy in their academic writing practice.

Bootstrapping test results indicate that the relationship between information-seeking behavior and AI use in final projects is the strongest ($\beta = 0.519$; $t = 4.471$; $p < 0.001$), indicating that the intensity of information exploration is a key factor driving active AI adoption. This aligns with research (Zahar, 2024), which found that students with a strong digital information-seeking strategy adapt more quickly to the use of AI-based tools. However, not all students receive guidance in this process. This is where interactions with librarians become crucial. Although the path from library service interactions to AI use ($\beta = 0.318$) is not as strong as the path from information-seeking behavior, it remains significant ($t = 2.593$; $p = 0.01$), indicating that librarians play a role in ensuring that AI is used ethically and responsibly.

Furthermore, the influence of perceived ease of use of AI on information behavior ($\beta = 0.429$) and interactions with librarians ($\beta = 0.230$) was also significant, but lower than that of perceived usefulness. These findings demonstrate that while interface and accessibility are important, utility remains the primary driver of technology adoption in academic contexts. In this regard, librarians can take a proactive role by not only providing technical services but also instilling a conceptual understanding of the ethics, validity, and reliability of information sources obtained through AI.

The results of this study also address a gap in previous research that has only addressed student use of AI from a technical and individual perspective. The approach used in this study demonstrates the importance of collaboration between end users

(students) and information service providers (librarians) in building an adaptive, collaborative, and responsible digital literacy culture in the era of artificial intelligence.

The results of this study confirm that the role of information service providers, particularly librarians, is crucial in bridging students' needs for AI-based tools for reference searches and final assignment writing. Students, as a digital generation accustomed to technology, often require guidance in integrating the use of AI ethically and effectively into their academic processes. In this context, librarians function not only as collection guardians or technical facilitators, but also as strategic partners assisting students in developing technology-based information literacy.

In response to these findings, the Brawijaya University Library Unit (UPT) is striving to strengthen the role of librarians through more proactive service initiatives. One concrete example of this effort is the implementation of direct outreach in the offline repository service section. In this service, librarians not only serve collection access needs but also play an active role in introducing and providing students with an understanding of the use of AI, both in the initial stages of literature searches and in the structuring and writing of final assignments.



Figure 3. Utilization of Offline Repository at Brawijaya University for Final Assignment Literature Search



Figure 4. Consultation between Librarians and Library Users regarding the Utilization of Offline Repositories and AI Tools



Figure 5. Interaction between Library Staff and Users in Utilizing Offline Repositories and AI Tools

Through this direct service approach, students can experience the dual benefits of gaining access to the final project repository as a primary source, while simultaneously receiving guidance on the wise use of AI technology. Thus, the library functions not only as a provider of information resources but also as a center for academic digital literacy. The active role of librarians in this context becomes increasingly relevant to ensure that technology is used not to replace critical thinking but rather to strengthen the quality of students' scientific writing.

Conclusion

This study was conducted to determine how trends in the use of artificial intelligence (AI) by students in their final project writing process are influenced by their perceptions of technology and interactions with library services. Based on the results of the model analysis, it was found that student acceptance of AI is not only

influenced by the perceived benefits and ease of use of the technology, but is also closely related to how they search for information and interact with librarians. This suggests that the use of AI in academic settings is not merely a technical issue, but also lies within the surrounding social and educational context.

Answering the research objectives and hypotheses, it can be concluded that information-seeking behavior and engagement with library services play a significant mediating role in strengthening the academic use of AI. Students who actively utilize AI to search for information and engage in consultations with librarians are more likely to integrate the technology effectively into their final project writing. These findings suggest that the use of AI in academic settings is the result of a combination of personal, technological, and institutional factors.

This study also emphasizes the importance of the library's role as a space that promotes digital information literacy and academic ethics. Librarians serve not only as service providers but also as facilitators in helping students utilize technology appropriately. Therefore, the presence and role of librarians in the academic process in the era of artificial intelligence need to be strengthened, both through direct services, social media, and through the development of structured and sustainable AI literacy modules.

As a conceptual suggestion for further research, further studies are needed that explore the longitudinal aspects of AI use in academia, including its impact on critical thinking skills, writing ethics, and the scientific quality of final assignments. Further research could also expand the scope by comparing student behavior across study programs, or combining quantitative and qualitative methods to more deeply explore students' experiences using AI.

Practically, the recommendation for libraries throughout Indonesia is to expand the role of librarians in education on AI use through workshops, case-based mentoring services, and the creation of academic ethics guidelines for AI utilization. Libraries can also develop integrated digital literacy policies that reach students from the beginning of their studies, so that AI use is not only efficient but also responsible. In this way, libraries become a key pillar in creating an intelligent, ethical, and competitive academic ecosystem in the technological era.

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