The Use of Artificial Intelligence in Scientific Writing at the Faculty of Medicine, Public Health, and Nursing of Gadjah Mada University, Indonesia

Maniso Mustar [1], Amirul Ulum[2] , Haxa Suprijanto[3], Agung Nurrahman[4]
ariemaniso1205@ugm.ac.id[1], amirul@staff.ubaya.ac.id[2], haxa@mail.ugm.ac.id[3], agungnurrahman@ipdn.ac.id[4]

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Corresponding Author:
Email: ariemaniso1205@ugm.ac.id
Affiliation: Gadjah Mada Universty, Indonesia

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[1,3] Gadjah Mada University, Bulaksumur, Depok, Sleman Regency, Special Region of Yogyakarta 55281
[2] Surabaya University, Jl. Tenggilis Mejoyo No.72, Rungkut, Surabaya, Jawa Timur, 60293
[4] Governance Institut of Home Affairs, Jl. Raya Bandung - Sumedang No.Km.20, Cibeusi, Kec. Jatinangor, Kabupaten Sumedang, Jawa Barat 45363

Abstract

***Problem Statement**: Advances in artificial intelligence (AI) technology have had a significant impact in various fields, including academia. FKKMK UGM has recognized the potential of AI to support scientific writing activities within its environment. **Purpose**: This study aims to describe the use of AI in the scientific writing process at FKKMK UGM. **Method**: This study employed a survey methodology through the distribution of questionnaires to students. The collected data were analyzed descriptively to assess the levels of knowledge, usage, and perceptions regarding the use of AI in scientific writing. **Result**: The results of the study indicate that most respondents are aware of AI and its potential in supporting scientific writing. However, the use of AI in scientific writing practices by college students is still limited. Some of the benefits of AI perceived by respondents include grammar checking, plagiarism detection, and reference writing. This study shows that there are four main strategies for utilizing AI in scientific writing at FKKMK UGM, namely: 1) Using AI to assist in the preparation of scientific writing frameworks, 2) Utilizing AI in the editing and grammar correction process, 3) Using AI for data analysis and visualization, and 4) Integrating AI into reference and citation management systems. However, academic community also identified several challenges, such as concerns about plagiarism, high costs, and the need for intensive training for academic community. In practice, respondents also expressed concerns about ethical issues and the quality of AI usage outcomes. **Conclusion**: This study concludes that there is a great potential for increasing the use of AI in scientific writing at FKKMK UGM. However, efforts are needed to improve understanding and develop guidelines for the use of AI that are in line with the principles of good and proper scientific writing.*

***Keywords:** Artificial Intelligence (AI), Scientific Writing, Strategy Implementation, Academic Productivity; Education Technology.*

Abstrak

Permasalahan: Kemajuan teknologi berupa kecerdasan buatan (AI) telah memberikan dampak yang signifikan dalam berbagai bidang, termasuk di dunia akademik. Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan (FKKMK) Universitas Gadjah Mada (UGM) telah menyadari potensi penggunaan AI untuk mendukung kegiatan penulisan ilmiah di lingkungannya. **Tujuan**: Penelitian ini bertujuan untuk mendeksripsikan pemanfaatan AI dalam proses penulisan akademik di FKKMK UGM. **Metode**: Metodologi yang digunakan dalam penelitian ini adalah metode survei dengan menyebarkan kuesioner kepada mahasiswa. Data yang terkumpul kemudian dianalisis secara deskriptif untuk mengetahui tingkat pengetahuan, penggunaan, dan persepsi terhadap pemanfaatan AI dalam penulisan ilmiah. **Hasil**: Hasil penelitian menunjukkan bahwa sebagian besar responden telah mengetahui tentang AI dan potensinya dalam mendukung penulisan ilmiah. Namun, penggunaan AI dalam praktik penulisan ilmiah oleh mahasiswa masih terbatas. Beberapa manfaat AI yang dirasakan oleh responden antara lain adalah dalam hal pemeriksaan tata bahasa, deteksi plagiarisme, dan penulisan referensi. Penelitian ini menunjukkan bahwa terdapat empat strategi utama pemanfaatan AI dalam penulisan ilmiah di FKKMK UGM, yaitu: 1) Penggunaan AI untuk membantu penyusunan kerangka karya tulis ilmiah, 2) Pemanfaatan AI dalam proses pengeditan dan perbaikan tata bahasa, 3) Penggunaan AI untuk melakukan analisis data dan visualisasi, serta 4) Integrasi AI dalam sistem manajemen referensi dan sitasi. Meskipun demikian,

sivitas akademika juga mengidentifikasi beberapa tantangan, seperti kekhawatiran plagiarisme, biaya yang tinggi, dan kebutuhan pelatihan intensif bagi sivitas akademika. Dalam prakteknya, responden juga mengungkapkan kekhawatiran terhadap isu etika dan kualitas hasil penggunaan AI. **Kesimpulan**: Penelitian ini menyimpulkan bahwa terdapat potensi besar untuk meningkatkan pemanfaatan AI dalam penulisan ilmiah di FKKMK UGM. Namun, perlu adanya upaya peningkatan pemahaman dan pengembangan panduan penggunaan AI yang sesuai dengan kaidah penulisan ilmiah yang baik dan benar.

Kata kunci: Artificial Intelligence (AI), Penulisan Ilmiah, Strategi Implementasi, Produktivitas Akademik, Teknologi Pendidikan.

I. INTRODUCTION

Background. Technological developments in academic libraries are aimed at adaptively responding to emerging technological challenges (Khaerani & Rahmi, 2024). The integration of technology is widely regarded as offering tangible benefits for the advancement of academic libraries (Asmaraningsih et al., 2024). In particular, the advancement of artificial intelligence (AI) has transformed a wide range of fields, including academia—encompassing education, research, and teaching. AI offers considerable potential to enhance research productivity and improve the quality of scientific output. As one of Indonesia's leading academic institutions, the Faculty of Medicine, Public Health, and Nursing (FKKMK) at Universitas Gadjah Mada (UGM) is expected to optimize the use of AI in scientific writing activities to support high-quality research, development, and scholarly publication. AI applications are already widespread in areas such as automated journalism, strategic development in video games, and other domains. Similarly, in scientific writing, AI can assist with data processing, analysis, and the generation of timely and accurate content. In the academic context, AI has been recognized for its benefits in grammar checking, essay composition, and plagiarism detection (Malik et al., 2023; Dewi & Anshar, 2024). Nevertheless, numerous limitations and challenges persist in AI adoption for scientific writing, including concerns about the quality and credibility of the information produced, the reliability of AI systems, and the need for adequate knowledge and experience among writers within academic institutions.

Problems. Students at Universitas Gadjah Mada (UGM) frequently utilize artificial intelligence to search for references when completing academic tasks such as literature reviews, current issue analyses, and mini research projects, primarily due to its efficiency and ease of use. However, this reliance on AI often leads to a neglect of result accuracy (Inayah et al., 2024). In light of this phenomenon, the present study seeks to examine the use of AI in the scientific writing process at FKKMK UGM.

Previous Literature Review. The use of Artificial Intelligence (AI) in scientific writing has become an increasingly popular trend in recent years. AI can assist in data processing, analysis, and news writing. However, its application in scientific writing continues to face several limitations and challenges, including concerns about the quality of sourced information, system reliability, and the necessity for adequate knowledge and experience among academic writers.

A literature review on the use of AI in scientific writing has been written by several studies. For example, research by Mambu et al. (2023) shows that the use of AI can help teachers face teaching challenges by improving teaching effectiveness, personalizing learning, and providing effective feedback to students. The use of AI in scientific writing has been explored in several studies. AI is increasingly playing a role in writing activities,

particularly in journal publications. While minor edits by AI are often accepted without disclosure, more significant edits require authors to disclose their use. Plagiarism, including the use of AI-generated content without attribution, is considered unethical. The focus is on providing clear guidelines for authors to maintain integrity in the scientific process while leveraging AI assistance (Ciaccio, 2023). Jenita et al., (2023) highlight that Artificial Intelligence (AI) is fundamental to modern research and writing. This goes beyond cost savings, improving research processes, and creating significant change. AI can efficiently collect and analyze data, identify patterns, and improve research by expanding time, reducing time, and delivering better results.

In scientific writing, the use of artificial intelligence (AI) enhances both efficiency and quality. By combining respondents' knowledge with AI capabilities, students are able to produce more in-depth and informative papers, thereby maintaining the quality of education and research. However, the application of AI must remain aligned with academic integrity, adhering to ethical principles that support and streamline the writing process for academic staff within educational institutions (Muaddyl Akhyar, Supratman Zakir, Ramadhoni Aulia Gusli, & Rahmad Fuad, 2023).

Meanwhile, according to Altmäe, et al (2023), Artificial Intelligence has the potential to be a valuable tool for researchers in designing studies, conducting analyses, and compiling results into scientific articles. However, this should not replace the work of writers because it requires human supervision and final input for accuracy and reliability. Issues such as ethics, integrity, accuracy, and reliability arise when using AI in scientific writing. While it can produce realistic text in practice, the integrity and accuracy of these models remain unknown. The data generated may be a mix of true and false information. Intellectual property rights and the use of data entered into online systems must also be considered. Proper revisions are essential to avoid presenting incorrect information and non-existent references.

Therefore, it can be tentatively concluded that the use of AI in scientific writing has become an increasingly popular trend in recent years. AI can assist in data processing, analysis, and news writing. However, there are still many limitations and challenges faced in the use of AI in scientific writing, such as the quality of the information used, the reliability of the system, and the need for knowledge and experience among writers. Therefore, the use of AI in scientific writing must be done in an effective and efficient manner.

Previous studies have identified the potential for utilizing AI in scientific writing processes, such as drafting outlines, analyzing data, and managing references (Basuki, 2019; Jenita et al., 2023). However, there are still limited studies that specifically examine the use of AI in the FKKMK UGM context. Therefore, this study aims to describe the use of AI in the scientific writing process at Gadjah Mada University, Yogyakarta.

State of Art. The novelty of this research lies in its focus on analyzing the implementation of AI utilization within a university context, specifically at FKKM UGM. This study seeks to answer the following research question: How is Artificial Intelligence (AI) utilized in the scientific writing process at FKKMK UGM?

Purpose. This study aims to describe the use of artificial intelligence in the scientific writing process at FKKMK UGM.

II. METHODS

This study employed a quantitative descriptive method to collect and analyze data on the use of artificial intelligence in scientific writing at FKKMK UGM. The study population included students and lecturers at FKKMK UGM who were actively engaged in

scientific writing activities. The sample comprised individuals who had recently completed or were in the process of working on final academic projects, such as theses, dissertations, or other scientific works intended for publication.

To collect data effectively, the author employed several techniques. First, an online questionnaire was developed using Google Forms to facilitate response collection from students and lecturers within the academic community. The questionnaire link was distributed to participants via private messages, specifically targeting students and lecturers who had previously participated in the training. A Likert scale was used to measure respondents' levels of agreement with statements related to the use of AI in scientific writing. This study applied a purposive sampling method, selecting respondents based on specific criteria—namely, individuals who were actively using AI tools in their scientific writing activities.

The author subsequently analyzed the data collected through the online questionnaire using descriptive statistical methods, including frequency, percentage, and distribution analysis. Descriptive statistics were also used to calculate the ratio between respondents who agreed with the use of AI and those who disagreed, as well as to identify the AI applications most commonly used by participants. The results of the analysis were then interpreted and presented in the form of tables and graphs to provide a clear overview of the study's findings

III. RESULTS AND DISCUSSION

The Use of Artificial Intelligence in the Scientific writing Process at FKKMK UGM

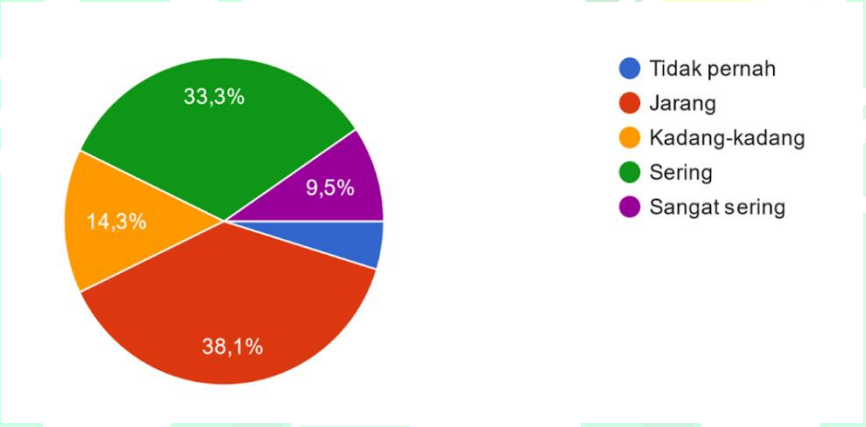
The use of artificial intelligence (AI) in scientific writing can enhance the quality of written work by providing support in areas such as grammar, spelling, and sentence structure, thereby improving efficiency and accuracy. Certain AI tools, for instance, offer immediate feedback on writing tasks and assist in developing outline structures, which can accelerate the completion of academic assignments. Moreover, AI can support students in navigating the literature and constructing coherent arguments, a feature particularly beneficial for writers who are non-native speakers (Kim et al., 2024; Golan et al., 2023).
In this study, according to the author, there are challenges that need to be addressed, such as the potential for excessive reliance on AI, which could reduce the development of critical thinking and in-depth analytical skills among users. Additionally, ethical issues such as plagiarism are a concern, particularly when authors rely on AI suggestions without engaging in critical reflection (Golan et al., 2023). The most prominent AI applications in an academic context include roles as proofreaders, writing tutors, and tools for outlining. However, according to Kim et al. (2024), while AI can improve efficiency, there are still limitations in understanding the nuances or intentions of the author. Based on the above opinions, further research is needed to understand how AI can be optimized to support scientific writing by addressing existing challenges.

This study adopts the Diffusion of Innovation (DoI) theory developed by Rogers (2003). The core concept of this theory outlines five stages in the individual innovation adoption process: knowledge, persuasion, decision, implementation, and confirmation. The findings of this study are categorized into several key areas: (1) respondents' understanding of artificial intelligence, including its types and applications; (2) experiences in using AI, encompassing duration, types of tools used, frequency, skill level, and perceived benefits; (3) strategies for utilizing AI within the FKKMK UGM academic environment, including the identification of needs, alignment between AI use and writing demands, and associated

challenges; (4) respondents' perceptions and expectations, such as satisfaction with AI usage, perceptions of its role in scientific writing strategies, and expectations regarding future AI developments; and (5) suggestions and recommendations for optimizing AI utilization to support scientific writing. Further details are presented in the sections that follow.

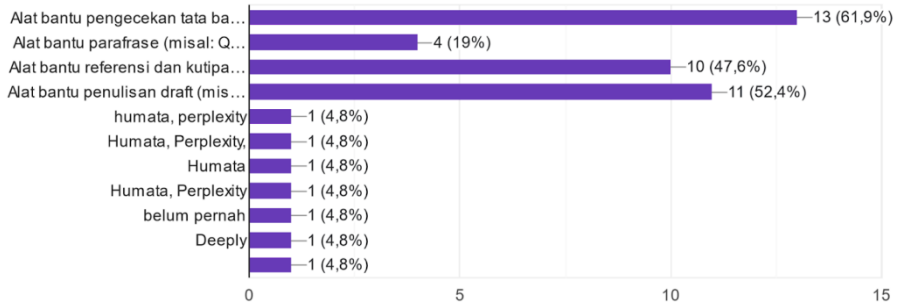
Based on the analysis of questionnaire responses, the first finding concerns respondents' knowledge of artificial intelligence (AI), its types, and its applications. The results indicate that respondents were generally familiar with AI and had experience using it. Of the 21 respondents, only one (4.8%) reported never having used AI to support their scientific writing, while 38.1% stated they rarely used it, 14.3% used it occasionally, 33.3% used it frequently, and 9.5% used it very frequently. These findings suggest that 95.2% of respondents have some level of familiarity with and use AI in their scientific writing activities (see Figure 1).

Figure 1.
Distribution of AI usage level in scientific writing at FKKMK UGM



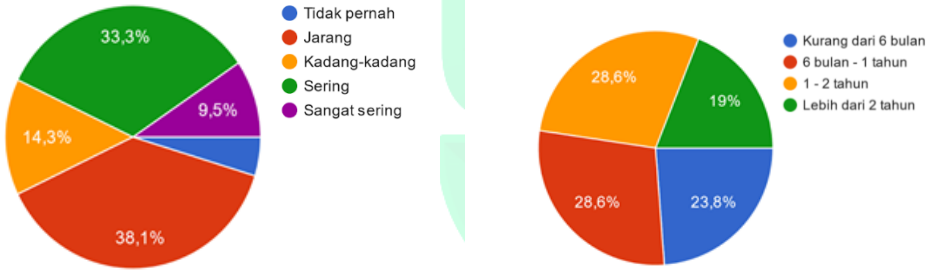
When asked about the types of AI tools used to support scientific writing and their perceived usefulness, respondents reported the highest usage for grammar-checking tools such as Grammarly (61.9%). ChatGPT was used by 52.4% of respondents as a tool for drafting academic texts. Reference and citation management tools, including Mendeley and EndNote, were used by 47.6% of respondents. For paraphrasing tasks, 19% of respondents reported using Quillbot. Additionally, a small number of respondents (4.8% each) reported using other AI tools such as Humata, Perplexity, and Deeply, although they did not specify the particular functions for which these tools were employed (see Figure 2)

Figure 2.
Respondents' use of AI tools and their purposes in scientific writing at FKKMK UGM



As part of another insight, the researchers asked respondents about the duration of AI use, their skill levels, and the perceived benefits of using AI in scientific writing. The results show that all respondents (100%) had used AI to support their writing. In terms of usage duration, 23.8% had used AI for less than six months, 28.6% for six months to one year, 28.6% for one to two years, and 19% for more than two years. Regarding skill level, 17 respondents (81%) reported having an average level of proficiency in using AI tools, while 4 respondents (19%) considered themselves to be at an advanced level. All respondents (100%) also agreed that AI is highly beneficial for scientific writing, offering various positive and constructive impacts.

Figure 3.
Insights on AI usage time, proficiency levels, and benefits in scientific writing at FKKMK UGM



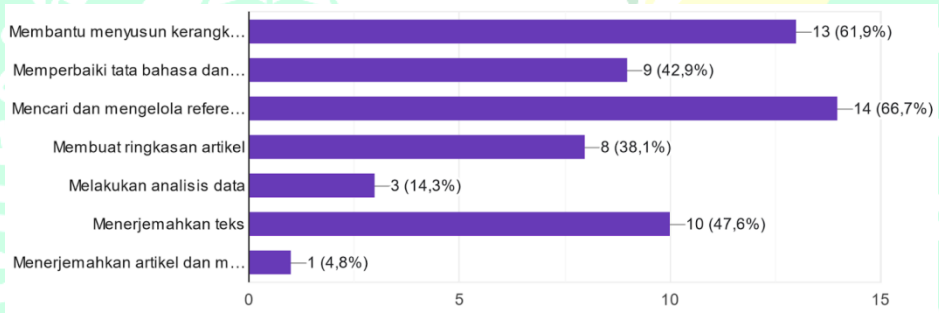
The first stage is the knowledge stage, which shows that respondents have knowledge related to the types of AI and its functions in scientific writing. Respondents, especially those at FKKMK UGM, already have a basic level of knowledge about AI. In fact, all respondents agreed that AI has positive benefits, especially in scientific writing. In addition to understanding its functions, respondents also possess skills ranging from average to advanced levels. According to Rogers' theory (2003), this indicates that the technology adoption process begins with knowledge before progressing to the attitude stage (persuasion).

Many previous studies have discussed strategies for utilizing AI to support scientific writing. Artificial Intelligence (AI) can facilitate the process of scientific writing, including data analysis and literature compilation. Technologies such as Natural Language Processing (NLP) are used to extract important information from a large body of literature, allowing researchers to focus on developing hypotheses and designing experiments. Platforms like Grammarly and Turnitin are also discussed as tools for grammar checking and plagiarism detection (Suryotrisongko, 2024).

Meanwhile, according to Abbas (2023), the use of AI can help universities improve the quality of education and learning by integrating AI more effectively into academic processes, enhancing oversight and regulation of AI use in thesis writing, and utilizing AI as a supportive tool without compromising academic ethics, particularly in the realm of scientific writing. Winarno (2023) highlights that AI offers valuable insights into strategies for supporting scientific writing, as well as the challenges researchers may encounter in its application. These insights can inform practical approaches to leveraging AI to improve research efficiency and the overall quality of academic output.

The AI utilization strategy at FKKMK UGM aligns with several of the perspectives outlined above. Based on the findings of this study, the use of AI in scientific writing is considered highly beneficial by members of the academic community. The reported benefits include the following: (1) searching for and managing references (66.7%), (2) assisting in structuring academic papers (61.9%), (3) translating text (47.6%), (4) improving grammar and spelling (42.9%), (5) generating article summaries (38.1%), (6) supporting data analysis (14.3%), and (7) translating and summarizing articles (4.8%).

Figure 4.
Strategies for AI utilization in scientific writing at FKKMK UGM



The existence of AI is believed to assist writers in conducting sentiment and content analysis in scientific writing, helping to identify appropriate language patterns and structures for scientific writing (Thesify, 2024). Additionally, AI can assist in scientific writing through machine learning and deep learning algorithms that can identify patterns and trends in academic data, thereby aiding in the development of strong arguments and accurate references (S. A. P. Santoso, 2024). Some AI can also offer widgets that help users process sentences, paragraphs, and writing structures to be more accurate and professional. Respondents can also help in creating outlines, changing writing styles, and integrating citations correctly (Jenni's, 2024).

In this study, researchers also explored how AI helps respondents improve the quality of scientific writing. Basically, AI can help improve the quality of scientific writing, as it can assist with sentence autocomplete, grammar correction, and journal article proofreading. Respondents can also provide real-time feedback on grammar, writing style, and clarity, improving the overall quality of the manuscript (T. I. Santoso & Prasetiyo, 2023). AI can facilitate the efficient search for relevant references, saving time and effort in literature reviews when processing sentences and paragraphs. Generative text models like Chat GPT can also help create titles that are engaging and relevant to the research topic. By leveraging deep learning technology, these models can handle various types of questions and provide contextual and relevant responses (Suminar, 2024).

According to the respondents in the study, in line with some of the opinions above, AI can assist respondents in scientific writing, including: 1). Saving time (66.7%), 2).

Facilitating reference management (19%), 3). Improving language quality (9.5%), and 4). Improving accuracy and precision (4.8%).

Figure 5.

The role of AI in supporting scientific writing at FKKMK UGM

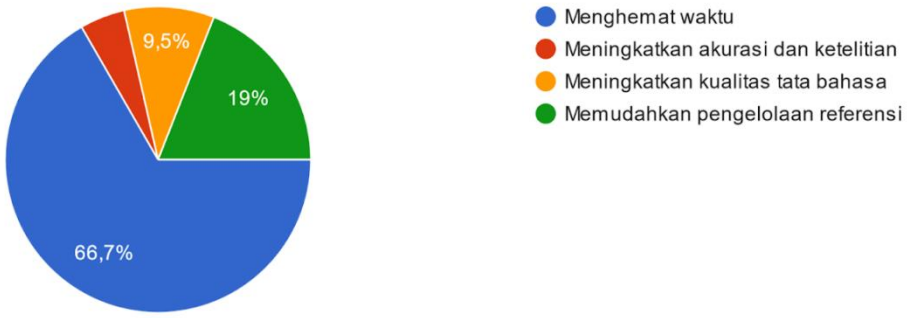


Figure 5 shows the attitude (persuasion) demonstrated by respondents. Respondents' attitudes toward the use of AI are positive. However, there are concerns about the use of AI, namely that it has the potential to blur the line between original work and technological assistance (Cotton et al., 2023). In line with this, if a work created using AI is checked for plagiarism using Turnitin, it cannot be detected as plagiarized, but Turnitin can detect text generated by AI (Turnitin, 2023). The long-term impact of this could raise concerns in the academic world, particularly regarding integrity. Therefore, as this phenomenon develops, many universities have begun to require a declaration of AI use in every scientific work produced by the academic community (Eaton, 2023; Cotton et al., 2023). In the context of UGM, the author recommends that the use of AI in academic writing be approached wisely. This means that each student/faculty member can utilize AI while considering various aspects, including integrity and ethical considerations. Furthermore, if possible, it should be honestly stated in the approval form or submission form if the writing was assisted by AI, within a reasonable percentage.

According to some researchers, the use of AI can raise ethical issues, including plagiarism and lack of accountability. Research shows that although AI can assist in generating content, the results produced need to be validated by human writers to ensure authenticity and academic integrity (Fauzana, 2023). In addition, the use of AI can also lead to errors in the interpretation of data or arguments presented, thereby reducing the quality of scientific writing (Khalifa & Albadawy, 2024). According to Shofiah et al. (2023), the working pattern of AI depends on the data used for training. If the data is not representative or contains bias, then the results produced by AI will also reflect that bias. This can affect the validity of the research and the conclusions drawn. Additionally, there is a concern among some people that the use of AI may reduce the creativity and originality of scientific writing, as authors may become overly reliant on the tool to generate ideas or content (Duong, 2024).

In this study, respondents were asked the question: "What are the main challenges you face in using AI for scientific writing?" Unlike findings from previous studies, the respondents in this research identified a distinct set of challenges. The responses revealed the following primary concerns: (1) the cost of AI services (52.4%), with many respondents expressing that subscription fees pose a burden to more effective and efficient AI usage; (2) limitations in AI's ability to understand scientific context (47.6%); (3) concerns regarding privacy and data security (28.6%); and (4) limitations in foreign language proficiency (14.3%).

To assess respondents' level of satisfaction with the use of artificial intelligence in scientific writing, the author posed the question: "How satisfied are you with the use of artificial intelligence in scientific writing?" The response options included: dissatisfied, not satisfied, satisfied, and very satisfied. The results showed that 14.3% of respondents selected "not satisfied," 76.2% indicated "satisfied," and 9.5% chose "very satisfied." Based on these responses, it can be concluded that the majority of respondents are generally satisfied with the use of AI as a tool to support their scientific writing.

Figure 6.

Respondents' level of satisfaction with the use of AI at FKKMK UGM

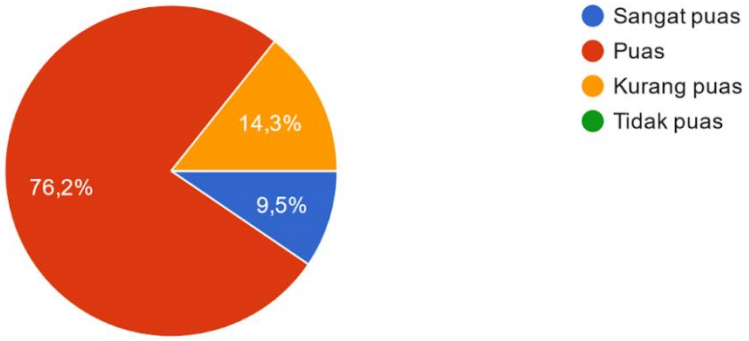
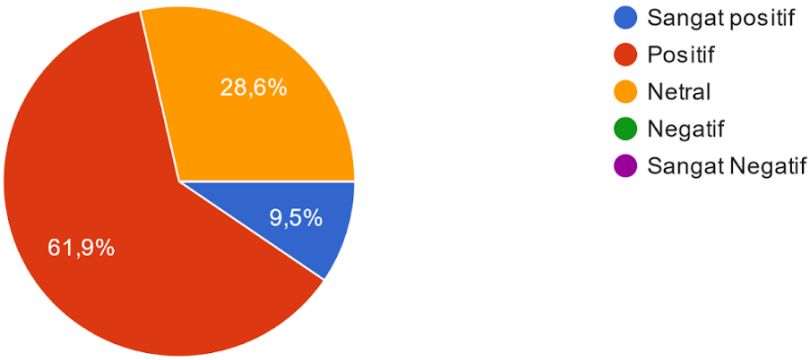


Figure 6 shows that at the decision stage (decision to use), respondents determined various reasons for utilizing AI. As previously explained, respondents decided to utilize AI primarily to save time, improve accuracy and precision, manage references, and enhance language quality. This aligns with the decision stage in Rogers' (2003) theory, which states that individuals make decisions regarding the adoption of innovations (in this case, the utilization of AI).

On the other hand, to find out how respondents perceive the use of AI in scientific writing, researchers asked the question, "What is your perception of the future use of AI in scientific writing?" 28.6% answered neutral, 61.9% answered positive, and 9.5% answered very positive.

Figure 7.

Respondents' perception of AI use at FKKMK UGM



In principle, the use of AI to support scientific writing is highly recommended, as there are many benefits that respondents can gain. However, according to (Abbas, 2023), effective

guidance is recommended for students who use AI effectively in academic writing, as well as collaboration between lecturers and students, so that it can be more beneficial. The implementation phase indicates that the majority of respondents use AI in the academic writing process, with varying intensities and types of applications available.

In this study, all respondents provided positive and constructive suggestions regarding the use of artificial intelligence (AI) to support scientific writing. Comments included the need for training sessions, focus group discussions, and other forms of guidance to ensure effective and ethical AI utilization. While the use of AI was highly recommended, respondents also emphasized the importance of addressing several key considerations before its widespread adoption. These insights significantly informed the study's recommendations. Notably, 100% of respondents stated that they support the use of AI tools in the scientific writing process at FKKMK UGM.

Figure 8.
Recommendations for the use of AI tools in scientific writing at FKKMK UGM

The results of this study are in line with previous findings showing that the use of AI in academic writing can improve the efficiency and quality of writing (Abbas, 2023). This positive trend can be explained by AI's ability to analyze data quickly and accurately, as well as provide relevant recommendations based on the writing context. However, the challenges faced also reflect a global phenomenon regarding dependence on technology. According to Tomin et al. (2022), excessive reliance on technological tools can reduce students' critical skills in analyzing information.

The confirmation stage shows that respondents recommend the use of AI in academic writing, but it is still necessary to pay attention to aspects of integrity, honesty, and ethics. This shows the need for a balance between the use of technology and the development of independent analytical skills. In the context of ethics, it is important for users to understand the limitations of AI use. Although the tool can help avoid plagiarism, a deep understanding of the sources used is still necessary (Lazega, 2021). At the confirmation stage, the author argues that although it provides various conveniences for individuals, reflection and assessment of individual decisions in utilizing AI, especially in academic writing, are also necessary. As explained earlier, the challenges and concerns related to academic integrity are issues that need to be addressed. The author proposes a written policy on the reasonable limits of AI utilization, particularly in academic writing at UGM. Additionally, there is a need for responsible awareness among individuals who utilize AI, as the conveniences gained from AI must be balanced with thorough and comprehensive analysis by the individual.

Therefore, the wise use of AI, while maintaining integrity, honesty, and ethical considerations, is highly recommended for the academic community at UGM.

Discussion of Research Findings. The main findings of this study indicate that most respondents have utilized artificial intelligence (AI) to support the scientific writing process. This reinforces the results of Ayem et al. (2024), who found that students use AI to improve learning efficiency. Moreover, Patimah et al. (2024) observed that AI adoption can significantly influence students' social behavior. Consistent with these findings, Niyu et al. (2024) reported that academics in Indonesia tend to fall into the categories of early adopters and early majority with respect to AI utilization. This study also reveals that respondents expect various benefits from using AI in scientific writing, including time efficiency, improved accuracy and precision, reference management, and enhanced language quality. These findings are in line with Abdurrahman et al. (2025), who highlighted the potential of AI to enhance adaptive learning, foster intrinsic motivation, and provide real-time feedback. Additionally, tools such as ChatGPT are increasingly regarded as effective aids in completing academic tasks (Rizki et al., 2024; Amadi & Hikmah, 2025).

Discussion of Other Interesting Findings. The use of artificial intelligence in scientific writing at FKKMK UGM has been shown to enhance both efficiency and the quality of writing. However, it also presents challenges, particularly concerning technological dependence and ethical issues. Therefore, the author believes a written policy issued by the Rector of UGM and relevant leadership is needed, specifically addressing the ethical use of AI tools within the university. Such a policy would serve to standardize perceptions and practices related to AI use, ensuring that the academic community upholds integrity and consistent ethical standards. Ultimately, this could positively impact the university's accreditation.

Research Limitations (Disclaimer). The limitation of this study lies in the sample used, which is only representative of students and lecturers at FKKMK UGM. Therefore, future research is encouraged to include a more diverse sample population, particularly to support broader generalization and to explore relevant research focuses more comprehensively

IV. CONCLUTION

The use of artificial intelligence (AI) in scientific writing at FKKMK UGM is generally categorized as effective. This is reflected through the five stages of innovation adoption as outlined in Rogers' Diffusion of Innovation theory. The first stage, knowledge, indicates that respondents are aware of various types of AI tools and their functions in supporting scientific writing. In the persuasion stage, respondents demonstrate a positive attitude toward AI utilization; however, concerns were raised regarding the potential for AI to obscure the boundary between original authorship and technological assistance. The decision stage reveals that respondents have actively chosen to adopt AI tools, primarily to save time, enhance accuracy and precision, manage references, and improve the quality of language in their writing. At the implementation stage, most respondents report using AI in their scientific writing processes, though the frequency and types of applications vary. Finally, in the confirmation stage, respondents recommend the continued use of AI in scientific writing but emphasize the importance of maintaining academic integrity, honesty, and ethical standards.

Future Work. Further research is recommended to investigate more specific strategies for AI utilization, employing alternative approaches and analytical perspectives beyond those used in this study.

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