

Does Artificial Intelligence (AI) Play Roles in Enhancing Academic Writing? Unravelling Lecturers' Voices in Indonesian Higher Education

Sri Wahyuningsih

Department of English Education, Institut Agama Islam Negeri Kudus, Indonesia

*Corresponding email: wahyuningsih@iainkudus.ac.id

Received: 29 April 2024

Accepted: 26 May 2024

Published: 06 June 2024

Abstract: Does Artificial Intelligence (AI) Play Roles in Enhancing Academic Writing? Unravelling Lecturers' Voices in Indonesian Higher Education. **Objectives:** The rapid advancement of technology has brought about effectiveness and flexibility in the field of education in the digital era. However, in the context of academic writing, the study of AI tools utilization from the perspectives of lecturers across diverse majors has not been explored yet. The present study explores the voices of lecturers on the roles of artificial intelligence (AI) in fostering academic writing. **Methods:** Anchoring in a qualitative design with a case study approach, data were gathered from semi-structured interviews with six lecturers at an Indonesian higher education. **Findings:** The findings revealed that some lecturers had positive responses toward the development of artificial intelligence particularly in fostering academic writing. In addition, artificial intelligence (AI) enhances academic writing by promoting efficiency and accuracy, developing consistency, detecting plagiarism in academic writing, and providing information and data to enhance academic writing. However, some challenges in using artificial intelligence for academic writing include the lack of transparency, critical thinking skills, and ethical considerations in using artificial intelligence tools. **Conclusion:** The study provides implications that the need for academicians especially lecturers to get up to date with technological advancements such as AI tools utilization in academic writing and use them wisely, the need to increase academic writing quality by enriching academic literacy and joining workshops and mentoring programs.

Keywords: academic writing; artificial intelligence; digital era; Indonesian higher education; lecturers' voices.

To cite this article:

Wahyuningsih, S. (2024). Does Artificial Intelligence (AI) Play Roles in Enhancing Academic Writing? Unravelling Lecturers' Voices in Indonesian Higher Education. *Jurnal Pendidikan Progresif*, 14(1), 489-503. doi: 10.23960/jpp.v14.i1.202436.

■ INTRODUCTION

Academic writing plays an essential role for academicians including teachers, students, and lecturers. For educators particularly lecturers, conducting research and publishing their academic work has been necessary for their career development. In line with this, it is also crucial to do academic writing as the final project including journal articles, thesis, and dissertation for students as a requirement to pass study. Therefore, both students and educators should master the

skills needed in academic writing. As reported by (Maamuu jav & Olson, 2019), some skills especially the ability to think critically and deliver ideas are badly needed in academic writing. In this sense, critical thinking skills function to analyze interpret, and produce texts that need better linguistic competence and language acquisition. In accomplishing academic writing, some processes need to be taken into account. These include pre-writing, planning (outline), writing, and revising drafts (Wahyuningsih, 2021). To shape

the writing process, writers are supposed to have meta-cognitive control skills and knowledge about materials, themes, and kinds of texts as the principle to manage the process of writing (Proske et al., 2012).

In addition, other aspects such as discourse and grammatical competencies are also needed by scholars in the process of academic writing. Discourse competence deals with the information of building a text cohesively and coherently and the way to incorporate various knowledge to create meaningful writing. Meanwhile, grammatical competence refers to grammatical knowledge and lexical aspects of the writing process (Wahyuningsih, 2018, 2020). In responding to these competencies, it could be deduced that academic writing is a complex activity that requires a sequence of processes including the competencies to accomplish meaningful writing.

Besides the above-mentioned competencies, technological support and pedagogical knowledge have had an impact on academic writing acquisition among academicians (Scott et al., 2018). This means that technology has a role in enhancing academic writing acquisition in the academic context. It is strengthened by Liou et al. (2012) that technological tools in education especially in the language field have been used in Asian countries. In the digital era, for instance, the rapid development of technology particularly artificial intelligence (AI) has given easy accessibility in the field of education. In academic writing, in particular, several artificial intelligence (AI) applications offer online learning platforms such as Google Translate, Quillbot, ChatGPT, Grammarly, plagiarism checker, reference management software, and others. These promote certain functions for academic writing like checking writing accuracy and providing feedback on academic writing.

Some previous studies in accordance with academic writing and technology utilization in education have been undertaken by some scholars. Salamonsen et al. (2010) report that a need to provide training such as workshops to develop skills in academic writing among nursing students having low English ability. Furthermore, Leibowitz et al. (1997) pinpointed that providing a writing center in multilingual diversity is one of the strategies to enhance students' academic writing. The results demonstrate that the Writing Centre has limited impacts on students in accessing academic fields due to some factors such as funding from institutions and curriculum development and policy. In line with the previous scholars, another strategy proposed by Adamson (2012) is to enhance academic writing among journal reviewers through mentoring particularly the ability to provide meaningful feedback to authors. In particular, the finding emphasizes that the mentoring program benefits new reviewers in building constructive feedback. In a more specific way, Boscolo et al. (2007) have a strategy to enhance students' academic writing through an intervention for undergraduate students by encouraging them to write texts revised by the teacher and determining the qualified and non-qualified writings. There is a development partially in students' writing after the intervention. Similarly, Fernsten & Reda (2011) elaborate that promoting self-awareness to students can be one of the strategies to overcome students' academic writing challenges. In relation to technology usage in academic writing, Bakla & Karaka^o (2022) assert that non-native English researchers have utilized more strategies through technology than native researchers in the process of academic writing. Finally, the tools of technology have positive impacts on improving students' academic writing (Ferdousi, 2022).

Referring to the above previous studies, studies in accordance with strategies and

technology used in enhancing academic writing have been conducted by some scholars. However, studies on exploring artificial intelligence (AI) applications in enhancing academic writing viewed from lecturers' voices have not been elaborated yet. The present study, therefore, explores lecturers' voices on the roles of artificial intelligence (AI) in fostering academic writing and the challenges. More importantly, the implication of the findings is discussed in this study.

METHOD

Participants

In accordance with the sample, this study employed a purposive sampling involving six lecturers consisting of 3 female lecturers (Lecturer 1, Lecturer 2, and Lecturer 3) and 3 male lecturers (Lecturer 4, Lecturer 5, and Lecturer

6) at an Indonesian higher education. They were classified as Lecturer 1, lecturer 2, lecturer 3, lecturer 4, lecturer 5, and lecturer 6. In addition, they were chosen due to their willingness to share their voices and experiences in using AI applications in academic writing and the existing connection with the author. To maintain integrity and availability, the participants' name was anonymized. The election is crucial since it provides meaningful data on how teacher educators experienced the learning community in academic writing and publishing. They were selected for the reasons of attainability and transparency of data. To maintain participants' confidentiality, the names of the participants were anonymized. For clarity, the table below illustrates the demographic attributes of five teacher educators.

Table 1. Demographic attributes of lecturers

Participant	Age	Sex	Educational Background	Teaching Experience	Teaching expertise
Lecturer 1	35	Female	Master Degree	8 years	<i>English Education</i>
Lecturer 2	32	Male	Master Degree	8 years	<i>Islamic Education</i>
Lecturer 3	43	Female	Master Degree	12 years	<i>Counselling</i>
Lecturer 4	32	Male	Master Degree	8 years	<i>Islamic Education</i>
Lecturer 5	34	Female	Master Degree	8 years	<i>Counselling</i>
Lecturer 6	32	Male	Master Degree	4 years	<i>Politics</i>

Research Design and Procedures

The study aims to explore the voices of lecturers toward the role of artificial intelligence (AI) applications in fostering academic writing and its implication for the academic field. It used a qualitative design with a case study approach. This is in accordance with the purpose of the study to explore lecturers' voices related to AI utilization in academic writing based on their own experiences. Moreover, the study promotes some implications. The study is anchored in a qualitative case study approach. As advocated by Creswell (2013), qualitative is utilized to enhance participants to express their experiences

and views related to the topic being studied. Moreover, it could foster me in embracing some crucial aspects including how understanding is built and how meaning is interpreted. Data for the study were gathered from May 28 to June 5, 2023. Regarding the data collection, I used a semi-structured interview to unravel the experiences, thoughts, and beliefs of lecturers from two Indonesian higher educations on the issue of AI in the academic field especially their voices about the roles of AI in fostering academic writing. They all were selected for the sake of accessibility for the data collection process. In line with research ethics, I first asked for

permission from the participants, gave them an obvious explanation of the research purposes, conducted a negotiation with the participants to discuss the schedule of interviews, and asked them to sign the consent form. In addition, I used documentation such as journals to enrich data related to the use of AI in enhancing academic writing.

Instruments

In relation to the instrument of the study, I used an interview guide containing some lists of questions related to the data of the research. These involved the main topics and questions associated with this study including the experiences of lecturers in utilizing AI in the process of academic writing, kinds of AI tools utilized by lecturers in the process of academic writing, voices of lecturers toward the roles of artificial intelligence (AI) in fostering academic writing, challenges in using AI for enhancing academic writing and the implications of the study in accordance with the role of academic writing. In particular, to keep the validity of the instrument, the lists of questions for interview guidelines were validated by an expert in the academic writing field including the use of technology such as AI in fostering academic writing in the higher education context. In addition, to keep trustworthiness, I used member checking. In this matter, each participant was allowed to have access to read the transcripts of interviews carefully to ensure the data accuracy and validity and to have a meaningful understanding of their experiences of using AI.

Data Analysis

In the process of data analysis, data from interviews were transcribed to ensure the process of reducing and coding the data. In addition, I read carefully the data from interviews to gain fruitful insight into the data. In the data analysis procedure, I made use of the steps proposed by

(Widodo, 2014). These include listening to recorded data several times, transcribing the interview data to obtain insightful data on the experiences and voices of the participants regarding the roles of AI in fostering academic writing, conducting data interpretation, and building communication to confirm the appropriateness of data with the participants' point of views, and getting credibility of data by provoking the participants' feedback. To verify the validity of the data, I utilized triangulation by aligning information from various sources. With regard to this study, I used triangulation of sources to verify their voices toward the role of AI in fostering academic writing in the context of higher education. In accordance with the process of triangulation of sources, I used several steps including identifying the purposes of the study especially dealing with the experiences of lecturers in using AI in the process of academic writing, selecting various data sources through semi-structured interviews and documentation, collecting data from the sources, analyzing the data by looking for themes and insights independently, comparing the findings from different sources, synthesizing findings by integrating some information to obtain a meaningful insight and validity and credibility of the findings and reporting results of triangulation by explaining how the various sources of data contribute to the findings.

■ RESULT AND DISCUSSION

The present study reported the lecturers' voices on the roles of artificial intelligence (AI) in fostering academic writing and the challenges experienced by them in utilizing AI in academic writing. For the first category, the lecturers' voices on the roles of AI in enhancing academic writing, had four themes including (1) efficiency and accuracy development in academic writing; (2) consistency development; (3) plagiarism detection; (4) information and resources

enrichment to enhance academic writing. Meanwhile, the second category, the challenges experienced by the lecturers in using AI in their academic writing process, had three themes including (1) the lack of transparency; (2) the need for ethical consideration; and (3) the lack of critical thinking skills. Referring to the themes, one meta-theme has emerged, exploration of the lecturers' experiences on utilizing AI in enhancing academic writing.

Lecturer's Voices Toward the Roles of AI in Fostering Academic Writing

This category elaborates on the voices of lecturers on the roles of AI in enhancing academic writing. The themes included in this category were elaborated below:

Theme 1. Efficiency and Accuracy Development in Academic Writing

The results of interviews demonstrated that AI tools can promote efficiency and accuracy for lecturers in the process of academic writing. For instance, the use of plagiarism checker such as Turnitin, can help them check the accuracy of their academic writing. They can obtain data related to similarity of the academic writing and revise the parts of similarity efficiently detected from many sources. This finding is strengthened by Levine & Pazdernik (2018) emphasizing that AI such as plagiarism checker benefits users in maintaining integrity in the academic field and prevents students from cheating on other's work. Surprisingly, in the context of Germany, the case of plagiarism in doctoral theses has been a responsibility of the German government concerning research associations to maintain integrity among academicians (Ertl, 2018). Likewise, AI tools are also beneficial for librarians in ensuring the academic integrity of works in the library (Germek, 2009).

AI tools promoting efficiency in academic writing use applications such as Quillbot and

reference management software including Mendeley and Zotero. Some participants reported that Quillbot is beneficial for them to paraphrase sentences. In addition, it helps them write sentences efficiently in the academic writing process to avoid plagiarism. Li (2015) emphasizes the issue of plagiarism which has become a recent topic in the global educational world. Thus, some efforts are badly needed including the use of paraphrasing through the AI tools utilization.

Another instance of an AI tool is the use of reference management software to help lecturers cite references efficiently based on the needed styles. Citing references manually leads to a tiring activity and needs more time to accomplish references. Thus, the finding of the study is in line with the previous studies reporting that reference management software promotes the academic writing process efficiently (Basak, 2014; Wahyuningsih & Afandi, 2022; Wahyuningsih, 2020). However, users should ensure the availability and credibility of metadata in reference management software to have references accurately. As elaborated by the participants through the following excerpts:

Lecturer 1:

I was assisted by the existence of AI tools. Some AI tools can enhance me in fostering academic writing. For instance, I can make use of Quillbot to paraphrase sentences quickly based on the need. It helps me accomplish my work efficiently. Besides, Google Translate helps me translate text especially from Indonesian to English or via verse. In terms of accuracy, AI tools such as Turnitin and Grammarly can promote accuracy in academic writing. Turnitin helps me to check plagiarism. By using it, I can check the similarity of my academic paper and ensure its accuracy. Likewise, Grammarly provides an opportunity to check grammar accuracy in academic writing. Thus, some AI tools help me accomplish better academic writing. Besides, I have recently been

familiar with ChatGpt, Jenny, and others. These can benefit us by providing the information and data we need.

Lecturer 2:

I used some AI tools including Google Translate, and reference management software like Mendeley, and Turnitin. These have functions to enhance academic writing activities. Google Translate promotes efficiency in translating texts. Since I'm not from the English department, I am assisted by the Google Translate tool and it allows me to work efficiently. In addition, Mendeley allows me to create references efficiently and accurately. More interestingly, Turnitin allows me to avoid plagiarism in the academic writing process.

Lecturer 3:

I have known the AI tools such as Turnitin and Mendeley since 2021. However, I had difficulty using them at first. By joining workshops and collaborating with my colleagues, I can make use of them and obtain efficiency in academic writing activities. The benefit of utilizing Turnitin is I can check the similarity of my academic papers and students' work. Importantly, I can avoid plagiarism in academic writing. Further, by utilizing Mendeley, I can create a bibliography efficiently and quickly in my papers. However, I should ensure the correct metadata to have accurate references such as the name of authors, type of journal, volume, issues, and publisher.

Referring to the above elaborations obtained from interviews and documentation including journals, efficiency, and accuracy play a pivotal part in academic writing. It is already known that writing needs processes and takes more time. Therefore, the existence of AI tools can help lecturers as academicians to accomplish their writing efficiently. For instance, they can make use of reference management software such as Mendeley and Zotero. These applications

benefit them by importing more data including journal articles and books from Google Scholar, saving some files, editing data, and promoting them to provide a standalone bibliography efficiently (Basak, 2014; Wahyuningsih, 2020).

Theme 2. Consistency Development

The findings of interviews revealed that AI tools can assist the participants in developing consistency in academic writing. The application of Grammarly, for instance, can assist lecturers in developing consistency in terms of grammar, structure, word choice, and organization. As strengthened by McKnight (2021) AI tools such as Grammarly can provide recommendations and feedback toward user's works particularly dealing with structure, organization, and word choice in academic writing. In more detail, AI provides efficiency to promote appraisal assignments discover susceptible issues, and maintain information (Abbas et al., 2020). The utilization of AI in academic writing is asserted by Bakla & Karaka^o (2022) in their study that in recent years some academicians have used AI tools such as Grammarly, Google Translate, and others to enhance academic writing activities. Likewise, more interestingly, Ferdousi (2022) strengthens that technology development including AI tools is important to incorporate into academic writing classes to trigger students' motivation.

Another AI tool that assists the participants in developing consistency during writing activities is the use of reference management software. It can help them create a standalone bibliography that they need in order ways including type of work, title, authors, name of journal or book, year, volume, issue, and pages efficiently (Basak, 2014; Bornmann & Haunschild, 2017). However, the participants are recommended to ensure the correctness and the availability of metadata in this application. As reported by the lecturers in the following excerpts:

Lecturer 4:

I used the AI tool of reference management software especially Mendeley to keep consistency in the process of academic writing. It allows me to choose the styles of references based on the styles we refer such as APA 7 edition style, Chicago manual, IEEE, and others. Interestingly, it assists me in creating references efficiently.

Lecturer 5:

Some IA tools assist me in developing consistency in academic writing. I utilized Grammarly, Quillbot, and Mendeley to develop consistency during writing activities. When I write journal articles in English, I use Grammarly to develop consistency in the structure and organization of the text. Quillbot is used to help me paraphrase sentences in the right order. Thus, AI tools are beneficial in fostering my academic writing.

Lecturer 6:

I have utilized AI tools for many years. They are so beneficial for me in enhancing my writing activities. In terms of developing consistency in writing, I make use of Grammarly to develop consistency in using vocabulary and grammar. Further, I use Quillbot to paraphrase texts coherently and Mendeley to promote consistency in style and formatting such as APA, MLA, Chicago, and IEEE. Assisted by AI tools, I can publish 6 articles in journals.

Referring to the above elaborations, to produce qualified academic writing, consistency plays a crucial role. Consistency covers not only the content of the text but also the structure. Writers especially lecturers should be able to make use of rules for consistency in the writing activities. For instance, they should be able to use correct capitalization, spelling, punctuation, and style of writing consistently. AI tools can benefit writers to maintain consistency in academic writing. Reference management software such as

Mendeley, for instance, assists the lecturers in promoting consistency in writing styles efficiently including the American Psychological Association (APA), Chicago Manual of Style, IEEE, and so on. Moreover, another tool such as Grammarly assists them to maintain consistency of grammar and organization in academic writing.

Theme 3. Plagiarism Detection in Academic Writing

In recent years the spread of information has led scholars to access data easily. Also, it makes students copy and paste data from the internet into their academic papers (McKeever, 2006). In response to this issue, the participants agree that AI tools such as plagiarism checkers are meaningful for them to enhance their academic writing. More importantly, they can check the similarity of students' work to build academic integrity. The findings of this study are in accordance with Levine & Pazdernik (2018) asserting that plagiarism should be avoided in the academic field particularly for students in higher education to promote honesty and integrity.

The findings also demonstrated that the participants can produce academic papers with the help of plagiarism checkers such as Turnitin. More interestingly, they can publish their work in reputable journals. This reflects that Turnitin plays a pivotal role for academicians in enhancing academic productivity. They should pass the process of screening in terms of similarity before submitting their papers to journals. In more detail, they can revise parts indicating more plagiarism. However, not all lecturers outside are aware of the importance of plagiarism checkers and they do not have access to check their work and students' work into plagiarism checkers caused by limited knowledge and willingness to get up to date with technology integration into academic writing. This is strengthened by Khathayut & Walker-Gleaves (2021) reporting that some academicians outside have limited knowledge and

lack awareness of plagiarism resulting in the need for support from individuals and institutions to tackle this problem. As emphasized by the lecturers in the following excerpts:

Lecturer 1:

In this digital era, plagiarism checker such as Turnitin promotes some benefits for checking plagiarism in academic writing, providing consistency by detecting the originality of papers and detecting sources used in academic writing including the internet, journals, books, and others. Surely, it helps me create qualified academic writing with a low percentage of similarity rate. Utilizing Turnitin, I helped publish some articles in national and international journals. Some Scopus-indexed journals require academic writing with low similarity no more than a 10 percent similarity rate. Interestingly, I can publish 6 to 8 articles each year in journals.

Lecturer 3:

I started using Turnitin in 2019 through an academic writing workshop. For me, it is beneficial for creating better academic writing since it can detect the similarities between papers. I usually check the similarity of my article before submitting it to the journal. Utilizing the Turnitin, I can revise parts that need revision. In addition, I have to make sure that my academic paper has low similarity. More importantly, I can check my students' work through Turnitin to develop academic integrity in academic writing.

Lecturer 6:

I am assisted by the existence of AI, especially plagiarism checkers such as Turnitin. It provides academic integrity in academic writing. Moreover, I can detect the similarity of my papers before publishing them in journals and revise certain parts to reduce the percentage of similarity. I usually ensure the similarity rate is not more than 15 %. Interestingly, I can publish 6 articles in a journal each year.

The findings asserted that qualified academic writers should avoid plagiarism. As reported by the participants, the existence of AI tools assists them in fostering academic writing, particularly in detecting plagiarism. They mostly utilized plagiarism checkers particularly Turnitin to detect similarities in academic papers. In addition, it can detect sources of similarity and provide feedback by highlighting parts of concerns and ensuring the originality of the paper.

Theme 4. Information and Resources Enrichment to Enhance Academic Writing

The findings of interviews revealed that the participants agree that AI tools benefit them in accessing information and data from numerous sources including the internet, journals, books, and others. For instance, ChatGPT, allows them to provide data they need from many fields. In this matter, they cannot just copy and paste information from AI. Indeed, they have to use AI wisely and avoid plagiarism. The benefit of AI has been emphasized by Loan et al., (2021) reporting that AI tools have provided data and information in numerous fields including health, education, management, economy, and so on. Similarly, Lu (2019) asserts that AI nowadays has become a helpful tool providing information and data used in many fields including industry. In the academic writing context, some AI tools can be used to access more information dealing with articles, journals, books, and so forth. Perplexity, for instance, is beneficial for providing answers and current data, particularly in accordance with academic papers. As elaborated through the following excerpts:

Lecturer 5:

Some AI tools have benefited me in obtaining resources, information, and data related to academic writing activities. For instance, Perplexity is beneficial for providing answers and current information especially related to academic papers. Besides, I used ChatGpt to get more

information related to current topics, to date information in the digital era. In this case, I tried to use ChatGpt wisely based on the need.

Lecturer 6:

I used ChatGpt for searching up-to-date information. For example, I used it for searching the political news, the election of the president, and anything related to my field, politics. In this matter, ChatGpt can be used for accessing data based on the need. Indeed, I used it wisely not for cheating other's works in academic writing.

Lecturer 1:

Some AI tools are useful for providing current information and data in the digital era. For instance, I utilized ChatGpt, Jenni, and others to search for up-to-date information concerning English language teaching and research. In this sense, I used them based on the needs not just copying on the machine results. Moreover, they assist me in updating my knowledge, especially in the language research area.

Referring to the findings, the rapid advancement of technology in the digital era has led scholars to access information from numerous sources. They could obtain data and resources in accordance with academic writing from the internet, particularly artificial intelligence tools. Based on the interviews, the lecturers reported that they utilized AI tools to access information and sources to enhance their academic writing process. The AI tools include Perplexity, ChatGpt, Jenni, and others.

Challenges in using AI for enhancing academic writing

This category elaborates on challenges experienced by lecturers in using AI in the process of academic writing. The themes included in this category were elaborated below:

Theme 1. The Lack of Transparency

Since AI is a system of machines, it lacks transparency in dealing with academic writing. As

asserted by Romiszowski, (1987) AI could be used for supporting teaching and learning activities although it has limitations such as a lack of critical thinking skills, collaborative learning, and transparency. ChatGpt, for instance, provides data needed by users since it is a machine system. However, it cannot provide data transparency, particularly in academic writing such as methodology, data collection and analysis, findings, and references.

Another aspect associated with the lack of transparency in academic writing is in terms of the difficulties in interpreting data. AI tools used in academic writing can be a challenging thing in data interpretation. Users may feel challenged about how AI can bring a conclusion and generalization without elaborating on the reasons for the research results. This is in light of a study reporting that numerous data provided by AI promotes difficulties in data generalization and interpretation (Abbas et al., 2020). In tackling these challenges, academicians should not just rely on AI utilization. Indeed, they need to increase the awareness skills of academic writing which does not exist in AI tools including transparency in academic writing to present openness and reliability of research. The following excerpts have evidenced it:

Lecturer 4:

Despite the effectiveness of AI, it has limitations such as the lack of transparency in academic writing. AI cannot provide the openness and clarity of research including methodology such as data collection, analysis, and findings. In addition, readers cannot evaluate the AI works including the content and references.

Lecturer 6:

In my opinion, one of the challenges of using AI in academic writing is the lack of transparency. For example, ChatGPT can answer the questions we order but it cannot provide transparency in research such as the ways of collecting, interpreting, and analyzing the data. Moreover, it

cannot provide accurate references. However, at least AI can give explanations related to the information we propose.

The findings of the study revealed that transparency deals with the clarity and understandability of the academic writing process. In addition, it covers meaningful information in line with research methods including research design, data collection, data analysis, and research findings promoting readers to comprehend and evaluate academic writing. Based on the interviews with the lecturers, they reported that one of the challenges of using AI in academic writing is the lack of transparency.

Theme2. The Need for Ethical Consideration

The results of the interviews revealed that one of the challenges of using AI in academic writing is the need for ethical consideration during the research process. Since AI is machine learning, it lacks ethical consideration. In the process of academic writing, researchers should maintain ethical principles particularly associated with humans as participants including informed consent, confidentiality, and integrity (Kaewkungwal & Adams, 2019; Laothavorn et al., 2019). In more detail, Widodo (2014) pinpointed that researchers should keep an ethical code during the research process including the methodology such as gathering data, analyzing data, and interpreting data. More importantly, they should inform the participants regarding the purpose, procedure, and things related to the research. In addition, they should keep the confidentiality of the participants by using an anonymous or initial name. As reported by the participants, AI tools have less emphasis on ethical consideration and they tend to focus on solving the problem and technical development. The following excerpts have evidenced it:

Lecturer 1:

Ethical consideration is one the crucial parts of academic writing particularly when the study

is related to humans as the participants. Unfortunately, AI tools cannot provide ethical consideration. Furthermore, they tend to problem solving and technical order for the users.

Lecturer 5:

I think AI tools have different characteristics in promoting academic writing in which they have less emphasis on ethical considerations such as maintaining the confidentiality of participants, avoiding exploitations, and others. In addition, they have less data presence and have challenges in technical aspects in responding to biases issues.

The above elaborations revealed the importance of considering academic writing that conducts ethical values. In addition, it puts appreciation on the prestige of participants involved in the study such as informed consent, confidentiality, integrity, avoidance of conflict of interest, and exploitation.

Theme 3. The Lack of Critical Thinking Skills

The participants reported that AI has limitations in terms of a lack of critical thinking skills among users. In addition, AI will lead to dependence or overreliance, especially for students in academic writing classes. This is not in line with the principle of academic writing promoting critical thinking skills such as presenting arguments, criticizing issues, and providing solutions and evaluation or feedback. This finding is emphasized by Liang et al., (2021) explaining that some limitations of AI tools cover the absence of critical and higher-order thinking skills and collaborative learning in academic writing. As Johnson et al. (2017) pinpointed collaborative learning in academic writing plays a crucial in promoting diverse perspectives. As reported by the lecturers in the excerpts below:

Lecturer 4:

I think one of the challenges of using AI tools is that they promote dependency among the

users. In other words, AI cannot promote critical thinking skills for the users, especially for students. AI is designed to solve the problem and answer the questions provoked by the users. Unfortunately, users cannot shape their critical thinking skills such as criticizing the findings of research, finding errors, providing arguments from different perspectives, and giving feedback.

Lecturer 6:

As I have experience in using AI tools in academic writing, they can answer and provide the data that I need. Despite the effectiveness of providing information, it leads to dependency for the users especially for students. Indeed, they will have no critical thinking skills if they just rely on AI tools. Academic writing needs critical thinking skills in which students are intended to criticize and provide arguments in order ways from various perspectives.

The above data emphasized that critical thinking refers to the ability to analyze, interpret, and evaluate data and arguments in order ways. Moreover, it deals with the ability to raise questions, identify errors, provoke various and wider points of view, and conclude well reasons. In light of the utilization of AI tools in academic writing, users cannot shape their critical thinking skills when they use AI.

Meta-Theme: Exploration of the Lecturers' Experiences on Utilizing AI in Enhancing Academic Writing

In this digital era, lecturers are nowadays demanded to adopt the technology development including the utilization of artificial intelligence (AI) in the process of academic writing. Based on the interviews, the lecturers as the participants of the study reported that they utilized several AI tools in enhancing academic writing. These cover Quillbot, Reference Management software such as Mendeley and Zotero,

Turnitin, Grammarly, ChatGPT, Perplexity, and others. These tools are meaningful for enhancing the process of academic writing activities among lecturers including promoting efficiency and accuracy in academic writing, developing consistency, detecting plagiarism in academic writing, and providing information and resources to enhance academic writing. The benefits of using AI tools in academic writing and education are strengthened by the study conducted by previous scholars. Dodigovic (2007) asserted that artificial intelligence (AI) tools are considerably effective in reducing errors such as grammatical errors. Next, Rolan et al., (2019) reported AI has a crucial role in digital recordkeeping in Australia. Furthermore, McKeever (2006) pinpointed that AI tools such as Turnitin play a pivotal role in detecting plagiarism and it helps writers produce qualified writing. In addition, in the context of learning, Tang et al., (2021) emphasized that AI tools facilitate the process of assessment and evaluation in the context of e-learning. Finally, AI tools have become an effective media used in many fields including in education, especially in academic writing (Lu, 2019).

Apart from the opportunities of AI tools in academic writing, AI tools have several challenges including the lack of transparency, the need for ethical consideration, and the lack of critical thinking skills. As reported by Vrontis et al., (2022), although the advancement of AI tools has developed so quickly, AI tools have effects on human resource management that will lead to the replacement of human existence on many levels. Therefore, it is suggested that we use AI tools wisely.

The findings of the present study promote some implications both for individuals and institutions including the need for academicians especially lecturers to get up to date with technological advancements such as AI tools

utilization in academic writing and use them wisely, lecturers need to increase their academic writing quality by enriching the academic literacy, joining workshop and mentoring. As strengthened by French (2019) and Divan et al., (2015) writing experiences and feedback play an essential role in shaping the writing quality. In addition, the implication for institutions is the need to provide support and enhancement for lecturers to take part in workshops and training in academic writing and AI tools to develop their academic integrity and writing productivity.

■ CONCLUSION

The present study concludes that lecturers reported in the interviews that AI tools have roles in fostering academic writing including promoting efficiency and accuracy in academic writing, developing consistency, detecting plagiarism in academic writing, and providing information and resources to enhance academic writing. However, AI tools have several challenges including the lack of transparency, the need for ethical consideration, and the lack of critical thinking skills. By conducting the study, readers can gain insightful information dealing with AI roles and challenges in academic writing. Moreover, the present study contributes especially as a reference dealing with the utilization of AI tools in enhancing the teaching and learning process, particularly in supporting academic writing productivity.

The study provides implications both for individuals and institutions including the need for academicians especially lecturers to get up to date with technology advancements such as AI tools utilization in academic writing and use them wisely, the need to increase academic writing quality by enriching academic literacy, joining workshops, and mentoring. Further, the implication for institutions is the need to provide support and enhancement for lecturers to take part in workshops and training in academic writing and AI tools to develop their academic integrity and

writing productivity. Bottom of Form The limitation of the study is that the author only recruited six lecturers in Islamic higher education in Indonesia. Therefore, it is recommended for future research to conduct the study with a similar topic viewed by numerous participants in the higher education context.

■ REFERENCES

- Abbas, M. A., Hammad, S., Hwang, G. J., Khan, S., & Gilani, S. M. M. (2020). An assistive environment for EAL academic writing using formulaic sequences classification. *Interactive Learning Environments*, 0(0), 1–15.
- Adamson, J. (2012). Mentoring academic journal reviewers: Brokering reviewing knowledge. *Innovations in Education and Teaching International*, 49(2), 223–232.
- Bakla, A., & Karaka^o, A. (2022). Technology and strategy use in academic writing: Native, native-like versus non-native speakers of English. *Iberica*, 2022(44), 285–314.
- Basak, S. K. (2014). A Comparison of Researcher's Reference Management Software: Refworks, Mendeley, and EndNote. *Journal of Economics and Behavioral Studies*, 6(7), 2220–6140.
- Bornmann, L., & Haunschild, R. (2017). Do bibliometrics and altmetrics correlate with the quality of papers/ ? A large-scale empirical study based on F1000Prime, altmetrics, and citation data. *STI 2017. Open Indicators: Innovation, Participation and Actor-Based STI Indicators*, 1–15.
- Boscolo, P., Arfé, B., & Quarisa, M. (2007). Improving the quality of students' academic writing: an intervention study. *Studies in Higher Education*, 32(4), 419–438.
- Creswell, J. W. (2013). *Qualitative inquiry and*

- research design: choosing among five approaches* (Issue 1). SAGE Publications, Inc.
- Divan, A., Bowman, M., & Seabourne, A. (2015). Reducing unintentional plagiarism amongst international students in the biological sciences: An embedded academic writing development program. *Journal of Further and Higher Education, 39*(3), 358–378.
- Dodigovic, M. (2007). Artificial intelligence and second language learning: An efficient approach to error remediation. *Language Awareness, 16*(2), 99–113.
- Ertl, H. (2018). Plagiarism in doctoral theses as ‘occupational risk’ of government ministers? The debate on good academic practice in German doctoral education in the light of high-profile plagiarism cases. *Oxford Review of Education, 44*(5), 616–632.
- Ferdousi, B. (2022). Acceptance of technology and academic writing: analyze in perspective of theoretical models. *Journal of Systemics, Cybernetics and Informatics, 20*(5), 94–117.
- Fernsten, L. A., & Reda, M. (2011). Helping students meet the challenges of academic writing. *Teaching in Higher Education, 16*(2), 171–182.
- French, A. (2019). Academic writing as identity-work in higher education/ : forming a ‘ professional writing in higher education habitus ’ ‘ professional writing in higher education habitus ’. *Studies in Higher Education, 0*(0), 1–13.
- Germek, G. P. (2009). Imagine no possessions: Librarians, the net-generation student, and the imminent victory of plagiarism. *College and Undergraduate Libraries, 16*(4), 338–357.
- Johnson, L., Roitman, S., Morgan, A., & MacLeod, J. (2017). Challenging the productivity mantra: academic writing with spirit in place. *Higher Education Research and Development, 36*(6), 1181–1193.
- Kaewkungwal, J., & Adams, P. (2019). Ethical consideration of the research proposal and the informed-consent process: An online survey of researchers and ethics committee members in Thailand. *Accountability in Research, 26*(3), 176–197.
- Khathayut, P., & Walker-Gleaves, C. (2021). Academic faculty conceptualization and understanding of plagiarism—a Thai university exploratory study. *Journal of Further and Higher Education, 45*(4), 558–572.
- Laothavorn, J., Wongwai, P., Prakash Dumre, S., Kongjam, P., Na-Bangchang, K., & Karbwang, J. (2019). Ethical approval and informed consent reporting in ASEAN journals: a systematic review. *Current Medical Research and Opinion, 35*(12), 2179–2186.
- Leibowitz, B., Goodman, K., Hannon, P., & Parkerson, A. (1997). The role of a writing centre in increasing access to academic discourse in a multilingual university. *Teaching in Higher Education, 2*(1), 5–19.
- Levine, J., & Pazdernik, V. (2018). Evaluation of a four-prong anti-plagiarism program and the incidence of plagiarism: a five-year retrospective study. *Assessment and Evaluation in Higher Education, 43*(7), 1094–1105.
- Li, Y. (2015). Academic staff’s perspectives upon student plagiarism: A case study at a university in hong kong. *Asia Pacific Journal of Education, 35*(1), 14–26.
- Liang, J. C., Hwang, G. J., Chen, M. R. A., & Darmawansah, D. (2021). Roles and research foci of artificial intelligence in language education: an integrated

- bibliographic analysis and systematic review approach. *Interactive Learning Environments*, 0(0), 1–27.
- Liou, H. C., Yang, P. C., & Chang, J. S. (2012). Language supports for journal abstract writing across disciplines. *Journal of Computer Assisted Learning*, 28(4), 322–335.
- Loan, F. A., Bashir, B., & Nasreen, N. (2021). Applied artificial intelligence/ : A bibliometric study of an International Journal. *COLLNET Journal of Scientometrics and Information Management*, 15(1), 27–45.
- Lu, Y. (2019). Artificial intelligence: a survey on evolution, models, applications and future trends. *Journal of Management Analytics*, 6(1), 1–29.
- Maamujav, U., & Olson, C. B. (2019). Meeting the linguistic needs of adolescent multilingual writers for academic writing. *The TESOL Encyclopedia of English Language Teaching*, 1–7.
- McKeever, L. (2006). Online plagiarism detection services-saviour or scourge? *Assessment and Evaluation in Higher Education*, 31(2), 155–165.
- McKnight, L. (2021). Electric sheep? humans, robots, artificial intelligence, and the future of writing. *Changing English: Studies in Culture and Education*, 28(4), 442–455.
- Proske, A., Narciss, S., & McNamara, D. S. (2012). Computer-based scaffolding to facilitate students' development of expertise in academic writing. *Journal of Research in Reading*, 35(2), 136–152.
- Rolan, G., Humphries, G., Jeffrey, L., Samaras, E., Antsoukova, T., & Stuart, K. (2019). More human than human? Artificial intelligence in the archive. *Archives and Manuscripts*, 47(2), 179–203.
- Romiszowski, A. J. (1987). Artificial Intelligence and Expert Systems in Education: Potential Promise or Threat to Teachers? *Educational Media International*, 24(2), 96–104.
- Salamonson, Y., Koch, J., Weaver, R., Everett, B., & Jackson, D. (2010). Embedded academic writing support for nursing students with English as a second language. *Journal of Advanced Nursing*, 66(2), 413–421.
- Scott, D., Burns, A., Danyluk, P., & Ulmer-Krol, S. (2018). Evaluating the effectiveness of academic writing interventions in a community-based b.ed. program. *International Journal of E-Learning & Distance Education / Revue Internationale Du E-Learning et La Formation À Distance*, 33(2), 1–21.
- Tang, K. Y., Chang, C. Y., & Hwang, G. J. (2021). Trends in artificial intelligence-supported e-learning: a systematic review and co-citation network analysis (1998–2019). *Interactive Learning Environments*, 0(0), 1–19.
- Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies, and human resource management: a systematic review. *International Journal of Human Resource Management*, 33(6), 1237–1266.
- Wahyuningsih, S. (2021). *The Handbook of Writing for Academic Purposes*. Jakad Media Publishing.
- Wahyuningsih, S. (2018). Empowering Academic Writing Skills in Millennial Era/ : The Role of English Program for Bidikmisi Students. *The 2nd National Telcecon*, 108–114.
- Wahyuningsih, S. (2020). The Importance of Reference Management Software in Academic Writing: The Case of EFL Learners. *2nd International Conference on Linguistics (IC-Ling) Arabic &*

English 'Current Issues on Linguistics, Literature, Translation, and Language Teaching', July, 206–211.

Wahyuningsih, S., & Afandi, M. (2022). Incorporating English skills in blended learning during the COVID-19 pandemic: A narrative inquiry. *Elsya/ : Journal of English Language Studies*, 4(3), 227–239.

Widodo, H. P. (2014). Methodological considerations in interview data transcription. *Journal of Innovation in English Language Teaching and Research*, 3(1), 101–109.