HOW ARTIFICIAL INTELLIGENCE (AI) SUPPORTS UNDERGRADUATE STUDENTS' ACADEMIC WRITING: EVIDENCE FROM INDONESIA

Sri Wahyuningsih

Institut Agama Islam Negeri Kudus wahyuningsih@iainkudus.ac.id

Abstract: Academic writing plays a crucial role in academics including undergraduate students. In addition, the development of technology provides effectiveness for them in the process of academic writing. The present study unravels undergraduate students' voices on how artificial intelligence (AI) supports their academic writing including kinds of AI applications mostly used by them in enhancing academic writing and challenges in using AI. Anchoring in a qualitative research method, the data of this study were gathered from in-depth interviews with five students at an Indonesian higher education. The findings of the study revealed that AI applications are used to support students' academic writing. Some AI applications they use include translation tools such as Google Translate, paraphrasing tools such as Quillbot, grammar and spelling checkers such as Grammarly, plagiarism checkers such as Turnitin, and reference management software such as Mendeley and Zotero. Furthermore, they reported that AI could enhance their academic writing by providing better organization, efficiency, consistency, and accuracy. However, critical thinking skills cannot be developed by AI applications. Thus, the finding of the study offers an implication that students can utilize these AI applications to support their work and they should actively participate in the process of academic writing.

Key words: Artificial Intelligence Applications, Academic Writing, Digital Era, Undergraduate Students

INTRODUCTION

Academic writing has played a crucial role in the academic context including students in higher education. They need better academic writing skills to accomplish their final project such as thesis and journal articles. Maamuujav & Olson (2019) pinpoint that skills of critical thinking play an essential role in academic writing. Besides, in the process of academic writing, some activities need to be considered. These cover pre-writing, planning (outline), writing, and revising drafts (Wahyuningsih, 2021). More importantly, to foster the writing process, writers are enhanced to know the kinds of texts as the foundation to regulate the writing process (Proske et al., 2012).

Furthermore, other things including grammatical and discourse competencies are crucial in accomplishing academic writing. Grammatical competence deals with knowledge of grammar and lexical areas in writing. Meanwhile, discourse competence refers to knowledge of producing text in appropriate ways to produce meaningful writing (Wahyuningsih, 2018, 2020). Apart from these competencies, pedagogical and technological supports play an important role in the writing process for academics (Scott et al., 2018). This means that technology could enhance the academic writing process. As emphasized by Liou et al. (2012), technological means in education particularly in the language context have been undertaken in diverse countries.

The rapid development of technology has led to contributions to educational settings including the existence of artificial intelligence (AI). AI first existed in line with the advancement of the computer after World War 11 (Riddick, 1990). As time goes on, AI has developed producing some sophisticated programs including GPT which can be accessed online and free such as managing words into sentences, sentences into writing, and so on (McKnight, 2021). Further, to enhance e-learning, AI could promote effectiveness in the process of teaching and learning (Tang et al., 2021). Surprisingly, AI could help activities dealing with human thinking including overcoming problems and deciding something (Rolan et al., 2019).

In the context of academic writing, one of the technological developments is the existence of artificial intelligence (AI) such as Grammarly, Turnitin, ChatGpt, and so on. These offer certain functions for academic writing such as checking writing accuracy and giving feedback in writing activities. Dodigovic (2007) investigates the utilization of artificial intelligence in the process of remediation in academic writing. Further, he emphasizes that some applications of AI are beneficial for reducing errors in the writing process. In the context of librarian, the skills of academic writing are mostly improved in various disciplinary areas to fulfill the assessment (Wilkes et al., 2015). Moreover, in the context of higher education, students need to increase confidence and utilize innovative approaches to foster their academic writing (French, 2019). These elaborations denote that AI has colored the academic field, particularly in academic writing.

Numerous studies dealing with artificial intelligence (AI) in the academic field have been undertaken by previous scholars. Loan et al., (2021) investigate trends of publication and citations in the international journal "Applied Artificial Intelligence" through bibliometric analysis. The result shows that the journal shows better development in writing productivity and worse improvement in citations. The study of research productivity has also been conducted by Nygaard (2017) reporting that academic literacy could be utilized to explore the results of research productivity. In terms of academic writing, Bakla & Karakaş (2022) pinpoint that nonnative English writers have employed more strategies using technology than native writers in the academic writing field. It is in line with the study conducted by Ferdousi (2022) that technology tools have benefits in developing students' academic writing. In terms of recordkeeping, Abbas et al. (2019) investigate the role of AI in recordkeeping work in Australia. Moreover, to keep the work's originality, He (2019) highlights the need for rights and procedures of digital signature for managing content generated by AI.

The elaborations demonstrate that studies in line with technology utilization in the academic writing field have been highlighted by previous scholars. However, studies on uncovering artificial intelligence (AI) applications in supporting academic writing viewed from students' voices in the higher education context have not been explored yet. Thus, the present study aims to uncover students' voices in Indonesian higher education on the utilization of artificial intelligence (AI) in supporting academic writing and the challenges.

RESEARCH METHOD

The present study aims to uncover students' voices on how artificial intelligence (AI) supports their academic writing and the challenges of using AI. It employed a qualitative design with a case study approach. Dealing with the sample, this study used a purposive sampling covering five students comprising 2 male students (S1 and S2) and 3 female students (S3, S4, and S5) at an Indonesian higher education. They were selected for the reasons of their openness

and willingness to uncover their voices related to the utilization of artificial intelligence (AI) in supporting their academic writing. Furthermore, the names of the participants were anonymized to keep confidentiality. Their age is around 19 to 22 years old.

Concerning educational background, the participants are students majoring in the English education department at an Indonesian higher education. In conjunction with the data collection, I employed semi-structured interviews to uncover students' beliefs and experiences in AI application utilization. The data were taken from July 31 to August 4, 2023. I also considered research ethics during the data collection by asking for permission from the students and providing a detailed explanation of the study's purposes.

During the interview process, I used an interview guide comprising several questions lists in line with the data needed in the study as an instrument of the study. In more detail, the questions list concerning AI utilization in academic writing and challenges were reviewed by some experts in writing courses to obtain validation so that the instrument was valid and ready to use.

In the data analysis process, I transcribed data from interviews to make sure the data reduction and coding. I also read thoroughly the data to obtain meaningful insight. Meanwhile, in the procedure of data analysis, I used some activities advocated by (Widodo, 2014) covering listening to data from interviews as much as possible, transcribing the data of interviews to gain meaningful data on students' voices in AI application utilization in supporting academic writing and the challenges, having an interpretation of data, creating interaction to check the data accuracy with the students' perspectives, and having data credibility by asking the students' feedback and input. To gain data reliability, I employed triangulation, combining information from multiple sources. In this study, I used triangulation to confirm perspectives on the role of AI in enhancing academic writing and the challenges. Following the triangulation process, I undertook several steps including defining the study's objectives, particularly exploring students' voices in using AI to enhance academic writing, selecting diverse data sources through semi-structured interviews and documentation, gathering and analyzing data to identify themes and insights independently, comparing findings across different sources, synthesizing information to derive meaningful insights and ensure validity and credibility, and finally presenting the results of triangulation by illustrating how various data sources contribute to the findings.

RESULTS AND DISCUSSION

The following results explore voices of EFL students toward the utilization of Artificial Intelligence in supporting academic writing.

STUDENTS' VOICES TOWARD THE UTILIZATION OF AI IN SUPPORTING ACADEMIC WRITING

Some students reported that AI tools have benefits for enhancing their academic writing process including checking plagiarism in academic writing, presenting information and resources to enhance the academic writing process, providing accuracy and efficiency, and Improving consistency.

Checking plagiarism in academic writing

In the academic context, academics are fostered to have better academic writing by avoiding plagiarism. The term plagiarism can be interpreted as copying one's work and utilizing it without any correct citations (Fatemi & Saito, 2020; Khathayut & Walker-Gleaves, 2021). In relation to the problem of plagiarism, one of the shortcomings experienced by universities related to plagiarism is the lack of commitment and consistency in responding to it among academics (Khathayut & Walker-Gleaves, 2021). Some applications of artificial intelligence function to help students in checking plagiarism rates. In addition, some students reported that they used applications such as Turnitin to check the similarity of their academic writing so that they could improve the quality of their papers. It has been strengthened by the students in the following excerpts:

Student 1:

In my opinion, some applications of AI can help me check plagiarism in the process of academic writing. I usually use Turnitin to check the percentage of plagiarism in my academic papers. By using Turnitin, I can ensure the accuracy of my paper. I can reduce the percentage of similarity before submitting the paper to a journal or conference.

Student 2:

Turnitin is one of the AI applications promoting accuracy in the content of academic writing by detecting the percentage of similarity. I always use Turnitin as a part of my academic writing process. It helps me check the similarity of the paper so that I can reduce the percentage of similarity. In addition, I could know the sources showing the similarity including journals, books, websites, and so on. By utilizing Turnitin, I can ensure the quality of my paper to avoid plagiarism before submitting it to conferences or journals.

Student 3:

I think applications of AI such as Turnitin can promote benefits for me as a student. Further, it can help ensure factual accuracy and proper citation, preventing plagiarism and errors. I often struggle to do my assignments and I am not sure of what I am doing wrong and how to fix it. With the help of AI particularly Turnitin, I could get feedback on similarities of my writing and encourage me to make corrections and improvisations of my academic writing.

Student 4:

I have used some applications of AI to support my academic writing. For instance, I use Turnitin to know the percentage of similarity in my academic writing. it helps me to get feedback regarding the sources of similarity from many sources like the internet, journals, books, and others. More importantly, I can reduce the similarity percentage to produce qualified academic writing.

Referring to the above elaborations, it can be deduced that some AI tools function to check plagiarism in academic writing. All participants agreed that AI tools help them detect similarity percentages during the process of academic writing. Interestingly, they can ensure the quality of their academic paper such as thesis and journal articles. As highlighted by Sudirman et al., (2020) and Li (2015) plagiarism can be detected with the help of technology including AI tools.

It is strengthened by Bakla & Karakaş (2022) asserting that some EFL students have problems with plagiarism and these can be reduced by making use of strategies of academic writing and AI tools to foster the process of academic writing. Besides, another strategy to respond to the problem of plagiarism is by promoting academic writing training and feedback towards students' writing (Divan et al., 2015). In addition, EFL students need to develop their academic writing skills using appropriate phrases and strengthening theoretical frameworks.

Presenting information and resources to enhance the academic writing process

Information and resources are crucial aspects of the process of academic writing. students need to navigate credible references and information from several sources including applications of AI. The results of interviews with EFL students revealed that students are encouraged to find out some information from applications of AI. They could search for anything they wanted to ask about certain topics. As asserted by the students in the following excerpts:

Student 2:

In my opinion, the role of AI is beneficial in assisting me in the process of academic writing, especially in searching any information and data. For instance, I use perplexity to find information and references related to my research topic. It helps me a lot when I need information related to my topics of writing.

Student 4:

I use some applications of AI to find information, data, and references from many sources. For example, I use ChatGpt to search for information that I did not know before, find the meaning of certain terms, and so on. Besides, I also use perplexity to find some references in line with the topics of my study.

Student 5:

Some applications of AI are beneficial to assist me in finding out some information and references. I can find some information and references through ChatGpt, perplexity, and so on. As we know, writing academic papers needs more information, data, and related references, especially from journals.

The results of interviews with the students showed that information and data play a pivotal role in enhancing the process of academic writing. They should make use of valid and reliable data to produce qualified writing, especially in writing thesis and journal articles. The existence of AI tools has provided users particularly students in obtaining some information easily. Moreover, AI tools can provide various content fast (He, 2019). On the other hand, the development of the internet has offered people to dishonesty of academics (Levine & Pazdernik, 2018). Hence, students are not allowed to misconduct in terms of plagiarizing one's work. To respond to these challenges, it is needed to provide qualified supervision of the thesis for students to promote academic integrity (Ertl, 2018). Further, Diamond (2019) proposed tutorials to avoid plagiarism in the academic field.

Providing accuracy and efficiency

The academic writing process needs accuracy and efficiency. Some applications of AI could present accuracy and efficiency during the process of writing. The application of Grammarly, for instance, could help students maintain the accuracy in the structure of writing and make corrections in writing mistakes. Other applications such as reference management software 'Zotero' and 'Mendeley' could provide efficiency in the process of citation in academic writing. Interestingly, they will not spend more time creating a bibliography manually. As evidenced by the following excerpts:

Student 1:

I utilize some AI tools to foster accuracy and efficiency in the process of academic writing. QuillBot, for instance, could promote the efficiency in paraphrasing. In this matter, it helps me paraphrase sentences and minimize plagiarism percentage. Furthermore, I use Google Translate and Deep Translator to help me translate Indonesian texts into English. It saves time for me in writing academic papers.

Student 3:

AI applications, especially in academic writing, help me reform and differentiate the learning process by considering the character of each individual to increase its effectiveness. The use of AI is also able to encourage me to learn further foreign languages independently. In addition, AI can correct and encourage students in the learning process, especially in academic writing.

Student 5:

I adopted Grammarly in the writing activities to maintain accuracy and efficiency in the structure of academic writing. It can detect mistyping and errors in grammar, and provide corrections. With the help of AI tools especially Grammarly, I can write academic papers efficiently and accurately.

Referring to the above elaborations, accuracy, and efficiency are needed in the process of academic writing. some AI tools function to provide accuracy and efficiency for writing academic papers. Turnitin, for instance, can detect the accuracy of similarity rates to avoid plagiarism in academic writing. As advocated by Levine & Pazdernik (2018) AI tools such as Turnitin can function to prevent students from plagiarism. Moreover, they promote benefits for librarians to ensure the integrity of academic work (Germek, 2009).

In line with efficiency, some AI tools such as reference management software particularly 'Mendeley' and 'Zotero' could promote efficiency in citing references, storing documents, and having a bibliography based on the styles preferred by the students. The process of citation references manually takes time. Therefore, using reference management software could be an alternative to save time in citing references and bibliography. This is strengthened by some scholars reporting that reference management software can promote efficiency in the process of citations (Basak, 2014; Wahyuningsih, 2020).

Improving consistency

Academic writing needs consistency in terms of the content of text and structure. In this sense, the content of the text should reflect on the issue or the topics being discussed.

Meanwhile, the consistency of structure means the use of grammar, capitalization, punctuation, and others should be consistent. Regarding it, some applications of AI could help students promote consistency in their academic writing activities. Reference management software such as Mendeley and Zotero could be used to keep consistency in citing references and creating a bibliography. In this matter, students can choose the style of writing including APA, Chicago, Turabian, and so on. It is proven by the students in the following excerpts:

Student 2:

Consistency is needed in academic writing. AI tools such as reference management software "Mendeley" and "Zotero" play roles in maintaining consistency in academic writing. It can help me cite references based on the styles I prefer such as Turnitin, APA, Turabian, and others. Moreover, it can create a bibliography automatically and save references easily.

Student 4:

Grammarly benefits me in promoting consistency in writing academic papers. It helps me check the accuracy of structure, punctuation, and capitalization. Moreover, it can correct when I have mistyping and errors in academic writing. Finally, some AI tools are helpful for me in fostering my academic writing. By using it, I can foster myself to write papers in participate in seminars and workshops.

The above descriptions depict that consistency plays a crucial role in academic writing. Some AI tools such as Grammarly can provide consistency in structure, capitalization, and word choice. Moreover, it can detect errors in writing and make corrections. It is strengthened by McKnight (2021) that Grammarly can help users build consistency in the writing process. In addition, Ferdousi (2022) highlights the use of some AI tools in enhancing academic writing including Grammarly, Focus Writer, and so on. Consistency also exists in the process of citing references in which users can choose the styles preferred using reference management software (Basak, 2014; Tramullas et al., 2015; Wahyuningsih, 2020).

CHALLENGES OF AI FOR STUDENTS IN ACADEMIC WRITING

Besides promoting benefits in fostering academic writing, AI tools have challenges including they cannot promote critical thinking skills, they lack transparency, and they need ethical consideration in academic writing. These challenges are elaborated in detail below.

Lack of critical thinking skills

Writing needs critical thinking skills to shape arguments and ideas in the process of academic writing. Some AI tools promote flexibility and efficiency. On the other hand, they cannot promote critical thinking skills for students. As reported by the students in the following excerpts:

Student 3:

AI tools can promote efficiency in writing. on the other hand, they can also create a dependency that leads to laziness. Therefore, it is important to consider the impact of AI and use it wisely.

Student 4:

In the context of education, we should not race to technology that produces instant results, because it can affect human thinking itself. In addition, many things may arise from the overuse of ChatGPT. For example, the effect on the brain is very significant, because the use of AI too often can result in students becoming lazy to think and want quick instant results. Further, students cannot shape their critical thinking skills.

The findings of the study reveal that apart from the flexibility in using AI tools, students reported that they could not shape their critical thinking skills such as shaping arguments, criticizing topics, and presenting solutions when they just relied on using AI tools. This is strengthened by Liang et al., (2021) elaborating that AI applications have limitations, such as not promoting students' critical and higher-order thinking skills. Besides, Johnson et al. (2017) asserted that AI applications cannot promote collaborative learning in academic writing classes.

Lack of transparency

The academic writing process needs transparency to ensure the validity and credibility of research results. This covers the process of designing the study, collecting data, and analyzing data in academic writing. As reported by students in the following excerpts:

Student 2:

When using AI tools, we cannot see the process of transparency in academic writing. Therefore, we must be able to utilize it properly. We must research and proofread the truth and accuracy of the text generated by AI. Research, observation, interviews, and documentation must also be done in academic writing. That way, we can create academic writing correctly and in order.

Student 5:

I think one of the challenges in using AI applications is the lack of transparency so that users cannot generalize and interpret data. It is also difficult knowing the process of research including data collection and analysis procedures.

The descriptions show that students cannot access the process of transparency in academic writing when using AI applications including ChatGpt, Jenny, and so on. Indeed, they just received the results of the information they searched for without knowing the process in the research process as they met in the academic writing process manually. Besides, students have difficulties interpreting data due to the lack of transparency of AI tools. As advocated by Abbas et al. (2020) one of the challenges in using AI tools is the limitation in generalizing and interpreting data due to the lack of transparency. In line with this limitation, students are encouraged to improve their academic writing skills, especially in terms of transparency of research to provide data reliability.

Lack of ethical consideration in academic writing

Ethical consideration plays a crucial role in the process of academic writing. It involves aspects of informed consent, academic integrity, prevention of exploitation, and others. As highlighted by some participants AI tools cannot take into account ethical values as human abilities during the process of research. It is proven through the following excerpts:

Student 1:

In my opinion, although many benefits can be taken from using AI in academic writing, it is still important to develop writing skills with human abilities and consider criticism and suggestions from colleagues and lecturers. AI should only be used as a tool to improve the quality of writing, not as a substitute for human skills and intelligence in academic writing courses.

Student 4:

The use of AI can violate the ethics of academic writing because it presents the work of others or the work of AI as one's own. This can damage the originality and intellectual integrity of the work. AI may generate text unrelated to the topic at hand that may not meet the standards of academic writing. The use of AI in academic writing also has other adverse effects, such as reputational damage, loss of credibility, and institutional sanctions.

The above elaborations reveal that ethical consideration is needed in the academic writing process. Indeed, ethical agreement and informed consent play a crucial role in enhancing the process of publication and dissemination of academic papers (Laothavorn et al., 2019). More importantly, researchers should provide a clear explanation regarding the methodology of research including the ethical considerations to encourage research validity. Unfortunately, this process does not exist in AI tools. Therefore, users of AI keep considering ethical principles in research that cannot be replaced by AI tools. In this matter, users can utilize some AI tools to facilitate the process of academic writing without neglecting the aspect of ethical consideration (Liang et al., 2021).

CONCLUSION

As reported by the students in the interviews, AI applications can encourage them in academic writing including checking plagiarism, providing information and resources, providing accuracy and efficiency, and presenting consistency in academic writing, apart from the flexibility and efficiency, AI tools have challenges such as they cannot shape students' critical thinking skills, they lack transparency, and they lack ethical principles in the research process. The present study recruited five students as participants of the study, it is suggested that future studies to undertake the study related to the topic recruiting diverse participants and discussing wider perspectives. The study offers an implication of the need for students to upgrade their academic writing skills and make use of AI tools wisely to encourage the writing process.

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. https://doi.org/10.1080/10494820.2020.1789670

- Abbas, M. A., Hammad, S., Hwang, G. J., Khan, S., Gilani, S. M. M., Rolan, G., Humphries, G., Jeffrey, L., Samaras, E., Antsoupova, T., Stuart, K., Wardhono, V. W., Dodigovic, M., He, T., Liang, J. C., Hwang, G. J., Chen, M. R. A., Darmawansah, D., McKnight, L., ... Bermejo, P. S. (2019). An assistive environment for EAL academic writing using formulaic sequences classification. *Interactive Learning Environments*, 0(0), 1–15. https://doi.org/10.1080/10494820.2020.1789670
- Bakla, A., & Karakaş, A. (2022). Technology and strategy use in academic writing: Native, native-like versus non-native speakers of English. *Iberica*, 2022(44), 285–314. https://doi.org/10.17398/2340-2784.44.285
- 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. http://openscholar.dut.ac.za/bitstream/10321/2202/1/Basak JEBS Vol6No7 2014.pdf
- Diamond, K. (2019). Rejecting the criminal narrative: Designing a plagiarism avoidance tutorial. *Journal of Electronic Resources Librarianship*, *31*(4), 232–240. https://doi.org/10.1080/1941126X.2019.1669962
- Divan, A., Bowman, M., & Seabourne, A. (2015). Reducing unintentional plagiarism amongst international students in the biological sciences: An embedded academic writing development programme. *Journal of Further and Higher Education*, 39(3), 358–378. https://doi.org/10.1080/0309877X.2013.858674
- Dodigovic, M. (2007). Artificial intelligence and second language learning: An efficient approach to error remediation. *Language Awareness*, 16(2), 99–113. https://doi.org/10.2167/la416.0
- 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. https://doi.org/10.1080/03054985.2018.1491834
- Fatemi, G., & Saito, E. (2020). Unintentional plagiarism and academic integrity: The challenges and needs of postgraduate international students in Australia. *Journal of Further and Higher Education*, 44(10), 1305–1319. https://doi.org/10.1080/0309877X.2019.1683521
- 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. https://doi.org/10.54808/jsci.20.05.94
- 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.

- https://doi.org/10.1080/03075079.2019.1572735
- 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. https://doi.org/10.1080/10691310903356000
- He, T. (2019). The sentimental fools and the fictitious authors: rethinking the copyright issues of AI-generated contents in China. *Asia Pacific Law Review*, 27(2), 218–238. https://doi.org/10.1080/10192557.2019.1703520
- 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. https://doi.org/10.1080/07294360.2017.1300140
- Khathayut, P., & Walker-Gleaves, C. (2021). Academic faculty conceptualisation and understanding of plagiarism—a Thai university exploratory study. *Journal of Further and Higher Education*, 45(4), 558–572. https://doi.org/10.1080/0309877X.2020.1795093
- 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. https://doi.org/10.1080/03007995.2019.1647505
- 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. https://doi.org/10.1080/02602938.2018.1434127
- 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. https://doi.org/10.1080/02188791.2013.835710
- 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. https://doi.org/10.1080/10494820.2021.1958348
- 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. https://doi.org/10.1111/j.1365-2729.2011.00446.x
- 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. https://doi.org/10.1080/09737766.2021.1938742
- Maamuujav, 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. https://doi.org/10.1002/9781118784235.eelt0983
- 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. https://doi.org/10.1080/1358684X.2021.1941768
- Nygaard, L. P. (2017). Publishing and perishing: an academic literacies framework for investigating research productivity. *Studies in Higher Education*, 42(3), 519–532. https://doi.org/10.1080/03075079.2015.1058351
- 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. https://doi.org/10.1111/j.1467-9817.2010.01450.x
- Riddick, J. F. (1990). Reference librarians and serial publications in the age of artificial intelligence. *Reference Librarian*, *12*(27-28), 281–287. https://doi.org/10.1300/J120v12n27_18
- Rolan, G., Humphries, G., Jeffrey, L., Samaras, E., Antsoupova, T., & Stuart, K. (2019). More human than human? Artificial intelligence in the archive. *Archives and Manuscripts*, 47(2), 179–203. https://doi.org/10.1080/01576895.2018.1502088
- 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).
- Sudirman, A., Gemilang, A. V., & Male, H. (2020). Incorporating academic writing phrases into EFL Students' research proposals. *International Journal of Learning, Teaching and Educational Research*, 19(7), 35–54. https://doi.org/10.26803/ijlter.19.7.3
- 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. https://doi.org/10.1080/10494820.2021.1875001
- Tramullas, J., Sánchez-Casabón, A. I., & Garrido-Picazo, P. (2015). Studies and analysis of reference management software: A literature review. *El Profesional de La Información*, 24(5), 680. https://doi.org/10.3145/epi.2015.sep.17
- 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 Telegon*, 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.

- Widodo, H. P. (2014). Methodological considerations in interview data transcription. *Journal of Innovation in English Language Teaching and Research*, 3(1), 101–109. https://bit.ly/40XYdil
- Wilkes, J., Godwin, J., & Gurney, L. J. (2015). Developing Information Literacy and Academic Writing Skills Through the Collaborative Design of an Assessment Task for First Year Engineering Students. *Australian Academic and Research Libraries*, 46(3), 164–175. https://doi.org/10.1080/00048623.2015.1062260