

Academic Staff Perspectives on the Impact of Artificial Intelligence on Pharmaceutical Sciences Research and Writing: A Qualitative Study.

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Abstract

Artificial Intelligence (AI) offers significant potential in pharmaceutical research, particularly in accelerating drug discovery and optimizing clinical trials. However, the potential for bias in AI algorithms necessitates careful validation to ensure accuracy and reliability. The current study aimed to explore the academic staff's perspectives on the impact of AI on academic writing. This qualitative study incorporated in-person interviews with academic faculty members. The interviews were conducted in a semi-structured manner, using a predetermined interview guide consisting of open-ended questions. The interviews were done in person with the participants from May to November 2023. The data was analysed using thematic analysis. Ten academics aged 41 to 59 years participated in this study. The majority had assistant professor degrees. Most of the participants did not trust the ability of AI to write an accurate scientific article because it can provide inaccurate results and/or improper citations. Regarding the concerns about the usage of AI in academic writing, most participants had negative perceptions, and they believed that AI would diminish students' writing skills. Most participants reported the impossibility of AI being the sole author of scientific articles; instead, it can just support humans in academic writing. Students could use AI to obtain scientific information, get some research ideas, improve writing by reducing grammatical errors, and save students time in writing. To get benefits from AI in academic writing, The faculty members agreed on the necessity of issuing legislation about the usage of AI by the Ministry of Higher Education or the University. Additionally, all agreed on the necessity of conducting workshops to teach staff about AI. Finally, we can conclude that AI could potentially play a beneficial role in academic writing. However, most academic faculty express concerns about their students relying only on these tools, which may result in dependency and a decline in writing proficiency. It is crucial to develop regulations and conduct workshops to educate staff about AI and its utilization by the Ministry of Higher Education or the University.

Keywords: Artificial intelligence, Academic staff, perspectives, writing skills, research writing.

Introduction

A current definition of Artificial intelligence (AI) is "computing systems that are able to engage in human-like processes such as learning, adapting, synthesizing, self-correction and the use of data for complex processing tasks"⁽¹⁾. Artificial intelligence is one of the most significant and revolutionary technologies of our time, and it has applications in almost every sector and industry⁽²⁾. The scientific community is interested in using generative AI in academic research writing. After ChatGPT's initial free research release on November 30, 2022, academic researchers have focused especially on AI-powered tools like ChatGPT. Researchers use these AI-powered tools more frequently to help them at different phases of the academic research writing process⁽³⁾. ChatGPT is a language generation model created by OpenAI. It is built on the GPT (generative pre-training transformer) architecture, which leverages deep learning to create human-like text⁽⁴⁾.

Special approaches and strategies are needed for academic writing to be original and legitimate during the arrangement process. The researchers must observe and use a lot of references⁽⁵⁾. Artificial intelligence applications in academic writing fall into two main categories: those that support writers throughout the writing process and those that are used to evaluate and assess the quality and validity of written work⁽²⁾. The fast advancement and widespread utilization of AI systems capable of producing text for various purposes are expected to have noteworthy and extensive consequences across various sectors⁽⁶⁾. These tools can create material on any subject, offer pertinent citations, and do tasks like summarizing, translating, and paraphrasing text⁽⁷⁾. These qualities benefit academic writing, and many researchers are starting to use AI tools as assistants when writing papers⁽⁸⁾.

Artificial intelligence brings valuable advantages to biomedical research and academic writing. Artificial intelligence-driven platforms can produce easily readable, stylistic, informative, and reproducible contents, with proper medical writing style, structure, and format in such an unnoticeable fashion that the paper containing it seems compatible with human creation⁽⁹⁾.

Despite the benefits of AI-based writing assistance tools, concerns have been raised regarding overreliance on these tools and their potential impact on writing skills. It is worth emphasizing the importance of balancing leveraging AI for assistance and preserving the development of students' writing capabilities. Additionally, ethical considerations have been investigated in the context of AI-based writing tools. Ensuring data privacy, security, and the responsible use of these tools remains crucial to maintaining academic integrity and protecting students' work⁽¹⁰⁾. Also, researchers need to develop their own critical thinking skills to evaluate the reliability and quality of AI-generated text and avoid over-reliance on automated programs⁽¹¹⁾. The convenience provided by AI writing tools may inadvertently foster dependency, with researchers relying excessively on these tools for corrections without a comprehensive understanding of their errors⁽¹²⁾.

Therefore, academics must be aware of AI's potential to facilitate scientific writing. In addition, it is essential to instruct them in using this technology, as it will help them save time and effort while writing their articles⁽¹³⁾. Also, academics must be aware of their students' misuse of AI technology⁽¹⁴⁾. Accordingly, the current study aimed to explore the academic staff's perspectives on the impact of AI on academic writing.

Methods

The current study was conducted with a qualitative study design. Individual face-to-face interviews with academic faculty members comprised the investigation. A predetermined interview guide comprised of semi-structured interviews with open-ended and follow-up questions (Table 1). The interview guide was developed by the principal investigator of the study and underwent thorough discussion with other researchers prior to its validation by the scientific and ethical committee of the Department of Clinical Pharmacy- College of Pharmacy- University of Baghdad. The faculty members were interviewed in person between May and November of 2023. Every interview was recorded audibly after taking a permission from the participants. The interview guide was designed to delve deeply into faculty members' perspectives regarding their postgraduate students' utilization, benefits, and drawbacks of artificial intelligence (AI) in academic writing.

Setting

The study included academic faculty members in the College of Pharmacy -University of Baghdad. The first researcher interviewed the participants in person within the college buildings. The interviews lasted between 25 and 40 minutes.

Inclusion criteria: any academic staff member with a scientific degree of lecturer doctor or higher who knows the subject of AI. A minimum of two academic years of prior experience supervising postgraduate students is required of the participant.

Exclusion criteria: any academic staff members who refuse to participate or accept to record the interview. Additionally, any member of the academic staff who has not previously supervised a minimum of two postgraduate students.

Participants recruitment

The study used a purposeful sampling method. First, the researcher explained the study objective to the potential academic member. The researcher continued to conduct interviews with participants until reaching the saturation point. The interviews were audio-recorded after obtaining verbal consent from the participants. To overcome any language barriers, the participants were free to answer the English questions in the guide in either Arabic or English.

Ethical approval

The research proposal received approval from the Scientific and Ethical Committee at the College of Pharmacy, University of Baghdad. Prior to commencing the interview, verbal consent was acquired. In order to preserve the participants' confidentiality, the interview did not necessitate the inclusion of their names. The writers employed pseudonyms for the participants in the interview transcription. The participants were not given any incentives.

Thematic (Data) analysis

The present study adhered to the thematic analysis approach, predicated on themes, subthemes, and participant quotations. One author transcribed the interview recordings into English, and another author used the transcript to discern recurring themes and subthemes. Illustrative quotations were chosen to provide support for each subtheme. The research team adhered to Braun and Clarke's (2006) six stages for thematic analysis. These steps include reviewing the comments (answers) carefully, generating codes, searching for themes, assessing themes, defining and labeling themes, and finally writing the findings⁽¹⁵⁾.

Table 1. The interview guide

No.	Main Questions	Follow-up questions
1	Where have you heard or read about using AI, such as ChatGBT, in academic writing? (Prompt: social media sites, Internet sites, academic talk)	When? (Prompt: during this year, for example, or long time ago)
2	What was your impression about it?	What is your opinion about the quality of writing and the scientific validity)
3	What is your opinion about the ability of AI sites to write a complete scientific article?	Do you think that these sites can write scientifically accepted research articles?
4	Do you think that these sites will replace the role of humans in academic writing?	
5	As an academic, do you accept that your undergraduate or postgraduate students use these sites?	Why? Will you be able to recognize if they have used these sites? How?
6	Do you think that these sites will improve or worsen the student's writing skills?	How?
7	Do you prefer that the sites that detect plagiarism detect any part written by AI?	Why?
10	Do you think there is a need to issue university or ministerial legislation related to this topic (AI)?	What do you think it is the most important points to be included in this legislation?
11	Do you think that there is a need to conduct awareness activities for the university teaching staff related to this topic?	What do you think are the most important points to include in such activities?
12	Could you tell us if you have any cautions or concerns regarding the use of AI in academic writing?	
13	Do you have any further comments?	

Results

Ten academics participated in this study. There were five males and five females. Their age ranged from 41 to 59 years. Most participants had assistant professor degrees, and only one was a

professor. The duration of supervising postgraduate students by study participants ranged from 1 to 19 years. Most participants heard about AI programs from colleagues, family members, or social media. Details about study participants are shown in Table 1.

Table 1. The characteristics of the participating participants

Participant number	Gender	Age	Duration as a supervisor (years)	Academic degree	Source of information about AI
Participant 1	Male	42	3	Assistant Professor	Brother
Participant 2	Female	59	19	Professor	TV
Participant 3	Female	46	2	Assistant professor	Brother
Participant 4	Male	47	6	Assistant Professor	Social media
Participant 5	Female	41	1	Assistant Professor	Workshops in college
Participant 6	Male	46	3	Assistant Professor	Social media
Participant 7	Female	42	5	Assistant Professor	Colleague
Participant 8	Male	43	3	Lecturer Doctor	Colleague
Participant 9	Male	43	5	Lecturer Doctor	YouTube
Participant 10	Female	50	5	Assistant Professor	Colleague

In this study, three main themes were generated: Academics' perceptions about AI, Academics' attitudes towards AI, and the Academics'

recommendations to benefit from AI in academic writing. Study themes and subthemes are shown in Table 2.

Table 2. Study themes and subthemes

Theme	Subtheme
Academics' perceptions about AI	Quality of writing by AI
	The effect of AI on students writing skills
	Concerns about the usage of AI
	The effect of AI on the role of humans in writing articles
Academics' attitudes towards the use of AI	Acceptance of using AI by students
	Detection of works written by AI
Academics' recommendations to get benefits from AI in academic writing	Legislations on the usage of AI
	Conducting workshops

Academics' perceptions about AI

Regarding AI's ability to write a scientific article, two participants were highly impressed by AI and considered it able to write a lecture or perfect scientific article. On the other hand, eight participants did not trust the ability of AI to write an accurate scientific article because it can provide inaccurate results and/or improper citations. Therefore, four participants reported that a human should revise articles written by AI before being published.

"It can be used by lecturers to prepare lectures and tests. In addition, it can provide personal virtual lessons and some notes to students." P7

"It assists students in enhancing their language skills, but there is a risk of completely relying on it and only copying and pasting of AI-generated text." P5

"It will facilitate tasks for students and save time; the quality of writing by AI is so good, especially when we make few additions or omissions in some of the written parts" P9.

Regarding the effect of AI on students' writing skills, six participants had negative views about AI by considering it as a factor diminishing students' writing skills. Three participants considered AI a useful tool in improving student's writing skills, especially by reducing grammatical errors and saving time. The last participants considered AI to be good for students with good writing skills and bad for those with limited writing skills.

"It would worsen the student's writing skills because the student simply copies and pastes the text without actually reading it." P3

"It depends on the students. If they already have good writing skills, it will help them improve. But if their writing skills are not strong to begin with, it might make things worse." P5

"It will improve the writing skills like a robot supervisor." P9

Regarding the concerns about the usage of AI in academic writing, most participants (90%) had negative perceptions, and seven of them reported a reason for their concerns, such as misuse of AI (n=2) and reducing the ability of students to learn writing

skills (n=5). Only one participant had no concerns about the usage of AI.

"I do not have any concern; on the contrary, it has many positive roles when it adds information, correcting grammar, paraphrasing, and checking plagiarism." P9

"The fear is that the student will resort to using tools that operate with artificial intelligence to help him formulate academic essays without relying on his own effort, which increases the possibility of weakening the student's abilities and skills and his dependence on the tools, as well as the possibility of academic dishonesty." P7

"In my opinion, using AI without considering the content is a problem and can lead to misuse." P1

Regarding the effect of AI on the role of humans in writing articles, three participants considered AI to have the potential to replace humans in academic writing. On the other hand, seven participants reported the impossibility of AI being the sole author of scientific articles; instead, it can just be a support for humans in academic writing.

"It is not possible to replace the role of the human being in the academic field. It may be replaced in other places, but education and the academic aspect have no substitute other than the human being himself." P7

AI can be beneficial in certain aspects, such as introduction and methods of suction, but it should be independent of data collection and result discussion. P9

Yes, a gradual reduction in human roles may replace them in the future. P8

Academics' attitudes towards the use of AI

Most (n=8) study participants agreed on the usage of AI by their students. The main reasons for their positive attitude toward the usage of AI include facilitating obtaining scientific information (n=3), getting some ideas for research (n=2), improving writing by reducing grammatical errors (n=2), and saving students' time in writing (n=1). On the other hand, two participants reported that they do not encourage the usage of AI because it will reduce the student's writing skills (n=1), creativity, and ability to think (n=1).

"While I agree that using AI to acquire a preliminary idea is acceptable, it is unrealistic to rely solely on

AI for writing. Students should edit and augment the information obtained from AI with their own references. P4

Yes, I agree that my students use AI, but under my supervision. It saves time and provides many things that we may not be able to offer them". P10

"No, I do not agree with the use of AI by my students because it will threaten the learning aspect. The student will resort to getting everything he wants easily without putting in effort and thinking on his part, and this will lead to a threat to the scientific aspect and investing in the student's abilities in thinking and creativity". P7

In questioning about the ability to detect the signal of AI on the student's work, six participants reported they could detect it either through the style of writing and absence of grammatical errors, by checking the accuracy of cited references, or by using specific plagiarism programs. The last 4 participants reported that they could not detect whether the work was done by AI or humans. All participants prefer to find and use an application that can detect the impact of AI on writing.

"As English may not be the students' native language and they may encounter some language difficulties, it may be possible to identify if they have used ChatGPT by examining the grammar in the text if written perfectly. However, it can still be challenging to determine whether they have used ChatGPT. I prefer to double-check my students' work using a program to detect the impact of AI". P1

"I have just been able to check if AI wrote the article. So, I prefer using any website to detect that". P5

"Determining whether AI has generated a student's writing can be challenging. However, it is possible to revisit the references that the student has cited to detect that. I support using a program to detect the source of writing". P3.

Academics' recommendations to get benefits from AI in academic writing

To get benefits from AI in academic writing, 9 participants agreed on the necessity of issuing legislation about the usage of AI by the Ministry of Higher Education or the University. In this legislation, 6 participants reported that these legislations should be punitive for students relying solely on AI to write their manuscripts. Meanwhile, 3 participants pointed out that the legislation should limit dependence on AI in any written manuscript.

"We must act because if we do not, we approve the plagiarism. We need to establish punishments for students using ChatGPT without citing the resource and claiming that their work, in such cases, should be given a failing grade". P6

"I prefer that only 5% or 10% use AI in articles. The most important point to be included in this legislation is that the use of AI must be at most 10%". P9

On the other hand, all participants agreed on the necessity of conducting workshops to teach staff about AI. These workshops should provide information about the effective use of AI in conducting research (n=6), the benefits of AI (n=2), the drawbacks of AI (n=1), and programs that can detect if the work has been done by the student or AI (n=2).

"Artificial intelligence is inevitable, and its progress cannot be hindered. Workshops are needed to clarify the appropriate utilization of AI and to maximize the benefits derived from it". P4

"Certainly, organizing awareness activities regarding AI for university teaching staff is important. Additionally, I emphasize a crucial aspect of AI: its negative implications". P3

"Certainly, the staff should be familiar with ChatGBT, how to use it, and how to distinguish between articles written by ChatGBT or students". P8

Discussion

Academic writing is an essential part of higher education for both teachers and students. The emergence of AI-based writing tools and their integration into higher education has presented potential transformations in academic writing, yet it has also introduced its own challenges⁽¹⁶⁾. This study has explored the impact of AI on academic writing from the perspective of the academic staff.

Most of the study participants held more conservative perceptions about AI-based writing tools. There was a view that these tools were able to generate lectures and scientific articles with improved quality within a timely manner with a similar perspective regarding improving the students' writing skills. However, there was also a negative perception about the ability of these tools to generate accurate scientific articles; particularly that regarding the accuracy of results and proper citation. In addition, there were concerns regarding students being completely reliant on such tools; hindering them from improving their own writing skills. The participants viewed the AI-based writing tools as supportive in the writing process and not replacing the human role completely.

In addition, most participants indicated the use of AI-based writing tools by their students and held positive attitude toward that. This attitude was explained by the ability of these tools to enhance obtaining the required scientific information, reducing grammatical errors, and saving time. On the other hand, other participants discouraged the use of these tools as they may reduce the writing ability of the students, their creativity, and ability of critical thinking. Moreover, some participants indicated their ability to detect the use of AI-based writing tools by their students, whereas others indicated they could not. This has led the participants to recommend issuing legislations that

can regulate the use of AI-based writing tools, and the conduction of workshops to raise awareness about pros and cons of these tools.

Findings of the current study came in alignment with previous literature that highlights the benefits and limitations imposed by introducing AI to scientific research and academic writing⁽¹⁰⁾.

For scientific research, AI was viewed as a promising helpful tool for the research process as well as academic writing. It was shown that AI-based tools can help to generate research ideas, conduct literature reviews, and assist in analyzing massive data, hence; they can save time for other research aspects which require more human input such as study designs^(17,18). In addition, AI can assist in academic writing of research articles by organizing content and improving language, particularly for non-native language speakers. This can enhance communication of research results and speed the publication process^(13,19,20). However, there are also limitations for the use of AI in scientific research and academic writing which may include generating superficial or inaccurate content as well as the ethical issues of bias and plagiarism⁽²¹⁻²³⁾. Also, the problem of inaccurate citation or insufficient use of references was also reported with the use of AI as well as the risk of generating misinformation or falsified research^(19,24).

Regarding the influence of AI on students' academic writing, similar results were obtained from university teachers and students. Marzuki *et al.* explored the perceptions of English as a Foreign Language university teachers about the influence of AI writing tools on their students' academic writing⁽²⁵⁾. The participants highlighted the potential benefits of AI writing tools in generating ideas and stimulating students' creativity. Also, they thought that these tools can enhance students' writing language and vocabulary as well as fostering organization of writing. However, the participants also highlighted their concerns about students' overreliance on these tools which could ultimately hinder their capabilities of critical thinking and developing their own writing skills⁽²⁵⁾.

These results came in alignment with findings of Malik *et al.* study which explored the perceptions of university students about AI writing tools use in academic writing⁽¹¹⁾. The students acknowledged the benefits of these tools in checking grammar, detecting plagiarism, translating language, hence; enhancing students' writing skills and self-efficacy. Nevertheless, students have also registered their concerns regarding the potential drawbacks of AI writing tools on creativity and critical thinking and the potential of unethical practices. The study emphasized the significant role that AI can have in supporting academic writing provided that it is integrated with human authors to preserve human creativity and critical thinking⁽¹¹⁾.

The current study also had some limitations; despite reaching saturation, we included a modest sample size due to the limited number of faculty members utilizing AI programs. Furthermore, the study is restricted to only two major institutions. Furthermore, the interviews were conducted in Arabic, as that is the native language of all interviewees. This linguistic choice may potentially impact the precision of the quotes.

Conclusions

The study highlights the potential beneficial role of AI-based writing tools in enhancing academic writing. Yet, it raises concerns regarding overreliance on these tools which can impede human creativity and critical thinking, as well as the ethical issues associated with its use. Developing guidelines for the use of AI tools in academic writing is essential, in addition to conducting workshops to raise awareness about the benefits and drawbacks of these tools on academic writing.

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Ethics Statements

The Scientific and Ethical Committee of the College of Pharmacy at the University of Baghdad gave ethical approval. Moreover, verbal consent was obtained from each participant.

Author Contribution

The authors confirm contribution to the paper as follows: study conception and design: 1st Author, ; data collection: All authors; analysis and interpretation of results: 4th Authors; draft manuscript 1st Author. All authors reviewed the results and approved the final version of the manuscript.

References

1. Crompton H, Burke D. Artificial intelligence in higher education: the state of the field. *Int J Educ Technol High Educ.* 2023 Apr 24;20(1):22. DOI:10.1186/s41239-023-00392-8.
2. Golan R, Reddy R, Muthigi A, Ramasamy R. Artificial intelligence in academic writing: a paradigm-shifting technological advance. *Vol. 20, Nature Reviews Urology. Nature Research;* 2023. p. 327–8.
3. Tang A, Li K, Kwok KO, Cao L, Luong S, Tam W. The importance of transparency: Declaring the use of generative artificial intelligence (AI) in academic writing. *J Nurs Scholarsh.* 2023 Oct 31; DOI:10.1111/jnu.12938.
4. Doyal AS, Sender D, Nanda M, Serrano RA. Chat GPT and Artificial Intelligence in Medical Writing: Concerns and Ethical Considerations. *Cureus.* 2023 Aug 10;15(8):1–5. DOI:10.7759/cureus.43292.

5. Utami SPT, Andayani A, Winarni R, Sumarwati S. Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students perceive? *Contemp Educ Technol*. 2023 Jun 19;15(4):ep450.
6. Wu T, He S, Liu J, Sun S, Liu K, Han Q-L, et al. A Brief Overview of ChatGPT: The History, Status Quo and Potential Future Development. *IEEE/CAA J Autom Sin*. 2023 May 1;10(5):1122–36. DOI:10.1109/JAS.2023.123618.
7. Ray PP. ChatGPT: A comprehensive review on background, applications, key challenges, bias, ethics, limitations and future scope. *Internet Things Cyber-Physical Syst*. 2023 Jan 1;3:121–54. DOI:10.1016/j.iotcps.2023.04.003.
8. Curtis N. To ChatGPT or not to ChatGPT? The Impact of Artificial Intelligence on Academic Publishing. Vol. 42, *Pediatric Infectious Disease Journal*. Lippincott Williams and Wilkins; 2023. p. 275.
9. Fingerhut A, Winter DC. Artificial intelligence and medical writing: where are we going? *Br J Surg*. 2023 Jul 17;110(8):883–4. DOI:10.1093/bjs/znad169.
10. Raheem BR, Anjum F, Ghafar ZN. Exploring the Profound Impact of Artificial Intelligence Applications (Quillbot, Grammarly and ChatGPT) on English Academic Writing: A Systematic Review. *Int J Integr Res*. 2023;1(10):599. DOI:10.59890/ijir.v1i10.366.
11. Malik AR, Pratiwi Y, Andajani K, Numertayasa IW, Suharti S, Darwis A, et al. Exploring Artificial Intelligence in Academic Essay: Higher Education Student's Perspective. *Int J Educ Res Open*. 2023 Dec 1;5:10029–6. DOI:10.1016/j.ijedro.2023.100296.
12. Bernard Fontanilla J, Hyacinth Bautista K, Lactao M, Andrea Villacorte M, Santos R. Educators' Perspectives on the Impact of Artificial Intelligence on Writing Competence. *Int J Multidiscip Res Publ Perspect Impact Artif Intell Writ Competence*. 2023;6(6):29–34.
13. Khabib S. Introducing artificial intelligence (AI)-based digital writing assistants for teachers in writing scientific articles. *Teach English as a Foreign Lang J*. 2022;1(2):114–24.
14. Luan H, Geczy P, Lai H, Gobert J, Yang SJH, Ogata H, et al. Challenges and Future Directions of Big Data and Artificial Intelligence in Education. *Front Psychol*. 2020 Oct 19;11:1–11. DOI:10.3389/fpsyg.2020.580820.
15. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101.
16. Dergaa I, Chamari K, Zmijewski P, Saad H Ben. From human writing to artificial intelligence generated text: examining the prospects and potential threats of ChatGPT in academic writing. *Biol Sport*. 2023;40(2):615–22. DOI:10.5114/BIOLOSPORT.2023.125623.
17. Aydın Ö, Karaarslan E. OpenAI ChatGPT Generated Literature Review: Digital Twin in Healthcare. *SSRN Electron J*. 2022 Dec 21;E(2022):22–31. DOI:10.2139/ssrn.4308687.
18. Sanmarchi F, Bucci A, Nuzzolese AG, Carullo G, Toscano F, Nante N, et al. A step-by-step researcher's guide to the use of an AI-based transformer in epidemiology: an exploratory analysis of ChatGPT using the STROBE checklist for observational studies. *J Public Health (Bangkok)*. 2023 May 26;1–36. DOI:10.1007/s10389-023-01936-y.
19. Chen T-J. ChatGPT and other artificial intelligence applications speed up scientific writing. *J Chinese Med Assoc*. 2023 Apr 14;86(4):351–3. DOI:10.1097/JCMA.0000000000000900.
20. Liu C, Hou J, Tu YF, Wang Y, Hwang GJ. Incorporating a reflective thinking promoting mechanism into artificial intelligence-supported English writing environments. *Interact Learn Environ*. 2023 Dec 1;31(9):5614–32. DOI:10.1080/10494820.2021.2012812.
21. Marchandot B, Matsushita K, Carmona A, Trimaille A, Morel O. ChatGPT: the next frontier in academic writing for cardiologists or a Pandora's box of ethical dilemmas. *Bäck M, editor. Eur Hear J Open*. 2023 Mar 2;3(2):1–3. DOI:10.1093/ehjopen/oead007.
22. Mohammed SI, Jasim AL, Al-Jumaily AA, Mikhael EM, Ali FZ. Perceptions of Senior Pharmacy Students Towards the Impact of Artificial Intelligence on University Education and Scientific Writing: A Qualitative Study. *Al-Rafidain Journal of Medical Sciences (ISSN 2789-3219)*. 2024 Feb 21;6(1):142–6.
23. Cotton DRE, Cotton PA, Shipway JR. Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innov Educ Teach Int*. 2023 Mar 13;1–12. DOI: 10.1080/14703297.2023.2190148.
24. Chen T-J. ChatGPT and other artificial intelligence applications speed up scientific writing. *J Chinese Med Assoc*. 2023 Apr 14;86(4):351–3. DOI:10.1097/JCMA.0000000000000900.
25. Shen Y, Heacock L, Elias J, Hentel KD, Reig B, Shih G, et al. ChatGPT and Other Large Language Models Are Double-edged Swords. *Radiology*. 2023 Apr 1;307(2). DOI: 10.1148/radiol.230163.
26. Marzuki, Widiati U, Rusdin D, Darwin, Indrawati I. The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Educ*. 2023 Dec 11;10(2). DOI: 10.1080/2331186X.2023.2236469.

27. Malik AR, Pratiwi Y, Andajani K, Numertayasa IW, Suharti S, Darwis A, et al. Exploring Artificial Intelligence in Academic Essay:

Higher Education Student's Perspective. Int J Educ Res Open. 2023 Dec 1;5:100296. DOI:10.1016/j.ijedro.2023.100296.

وجهات نظر أعضاء هيئة التدريس حول تأثير الذكاء الاصطناعي على الكتابة الأكاديمية: دراسة نوعية

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الخلاصة

تقدم برامج الذكاء الاصطناعي (AI) فوائد كبيرة للبحوث الطبية والكتابة الأكاديمية. ومع ذلك، أثار استخدام أدوات مساعدة الكتابة التي تعمل بالذكاء الاصطناعي مخاوف بشأن الاعتماد المفرط على هذه الأدوات وتأثيرها المحتمل على كفاءة الكتابة. هدفت الدراسة الحالية إلى استكشاف آراء أعضاء هيئة التدريس الأكاديمي حول تأثير الذكاء الاصطناعي على الكتابة الأكاديمية. شملت هذه الدراسة النوعية مقابلات شخصية مع أعضاء هيئة التدريس الأكاديمي. تم إجراء المقابلات بطريقة شبه منظمة باستخدام دليل مقابلة محدد يتكون من أسئلة مفتوحة. تم إجراء المقابلات شخصياً مع المشاركين من أيار إلى تشرين الثاني ٢٠٢٣. تم تحليل البيانات باستخدام التحليل النمائي. شارك في هذه الدراسة عشرة أكاديميين تتراوح أعمارهم بين ٤١ و ٥٩ عامًا. كان معظمهم حاصلين على درجة أستاذ مساعد. لم يثق معظم المشاركين في قدرة الذكاء الاصطناعي على كتابة مقال علمي دقيق لأنه يمكن أن يوفر نتائج غير دقيقة و / أو اقتباسات غير صحيحة. بالنسبة للمخاوف المتعلقة باستخدام الذكاء الاصطناعي في الكتابة الأكاديمية، كان لدى معظم المشاركين انطباعات سلبية ، واعتقدوا أن الذكاء الاصطناعي سيقبل من مهارات الكتابة للطلاب. ذكر معظم المشاركين استحالة إمكانية أن يكون الذكاء الاصطناعي المؤلف الوحيد للمقالات العلمية ؛ بدلاً من ذلك ، يمكن أن يدعم البشر في الكتابة الأكاديمية. يمكن للطلاب استخدام هذه المواقع للحصول على معلومات علمية ، والحصول على بعض الأفكار البحثية ، وتحسين الكتابة عن طريق تقليل الأخطاء النحوية ، وتوفير وقت الطلاب في الكتابة. للاستفادة من هذه المواقع في الكتابة الأكاديمية ، اتفق أعضاء هيئة التدريس على ضرورة إصدار تشريعات بشأن استخدامها من قبل وزارة التعليم العالي أو الجامعة. بالإضافة إلى ذلك ، اتفق الجميع على ضرورة إجراء ورش عمل لتعليم الموظفين حولها. وأخيراً ، يمكننا الاستنتاج بأن الذكاء الاصطناعي يمكن أن يلعب دوراً مفيداً في الكتابة الأكاديمية. ومع ذلك ، يعبر معظم هيئة التدريس الأكاديمي عن قلقهم بشأن اعتماد طلابهم على هذه الأدوات فقط ، مما قد يؤدي إلى الاعتمادية وانخفاض كفاءة الكتابة. من الضروري وضع لوائح وإجراء ورش عمل لتعليم الموظفين حول الذكاء الاصطناعي واستخدامه من قبل وزارة التعليم العالي أو الجامعة. الكلمات المفتاحية: الذكاء الاصطناعي ، هيئة التدريس الأكاديمي ، وجهات النظر ، مهارات الكتابة ، الكتابة البحثية.