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Teachers' reflections on academic dishonesty in EFL students' writings in the era of artificial intelligence

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Abstract

This research study examines teachers' perceptions of academic dishonesty in the writings of EFL students in the context of AI. The study involved 67 teachers who provided their perspectives through questionnaires and interviews. The findings indicate a mixed perception among teachers regarding the benefits of AI technologies for students, with some acknowledging advantages while others expressed concerns about its impact on academic integrity. Teachers unanimously agreed on the negative influence of AI on students' commitment to academic honesty, perceiving it as enabling dishonesty and hindering skill development. The study highlights the role of teachers in detecting AI-generated assignments and emphasizes the need for addressing ethical implications. Strategies identified include problem-solving activities, plagiarism detection tools, and integration of AI in teaching practices. While some teachers acknowledged challenges in detecting AI-related academic dishonesty, the study underscores the importance of comprehensive training and support for teachers to utilize AI effectively while preserving academic integrity. The study concludes by calling for institutions and policymakers to prioritize ethical considerations and develop guidelines for the responsible use of AI in education.

Introduction

Artificial intelligence (AI) is called a "double-edged sword" (Shah, 2023, p. 1) and "a friend yet a foe" (Lim et al., 2023, p. 3). There are both possibilities and problems for educators and students in this age of AI. A troubling rise in instances of academic dishonesty in student papers is one of the most important difficulties that instructors confront today. Students are becoming more innovative in their techniques of duplicating others' work as AI progresses. The issue of academic integrity, and the need for teachers to protect it, is at an all-time high (Kleebayoon & Wiwanitkit, 2023; Lim et al., 2023).

Academic dishonesty is defined as any kind of cheating or unethical behavior in the classroom that breaches fairness and honesty principles (Sevimel-Sahin, 2023, p. 308). AI's advancement has provided students with a wealth of tools for creating realistic-looking homework with little effort. Some of the AI-powered tools that have made academic misconduct simpler than ever for today's students include essay generators, online essay mills, and custom writing services (Crawford et al., 2023).
Teachers have an important role in helping students avoid and address academic dishonesty in their work. Their ability to detect plagiarism or cheating is important to upholding the educational system's standards and authenticity. However, the advancement of powerful AI tools has made it more difficult for academics to consistently uncover incidents of academic dishonesty. Teachers may struggle to distinguish between genuine effort and fraud as a consequence of learners' capacity to adapt AI-generated content to seem as if it was their original work (Farrokhnia et al., 2023; Sullivan et al., 2023).

Furthermore, academic writing is now seen differently as a result of the widespread use of AI technologies in education. Students could be tempted to use these tools as shortcuts to getting good scores or doing assignments on time, which would diminish the value of critical thinking, research abilities, and creativity. The long-term impacts on students' learning and their capacity to acquire critical intellectual and analytical abilities that are crucial to their personal and professional development raise questions in this regard (Rudolph et al., 2023a; Sison et al., 2023).

In addition, it is impossible to ignore the ethical ramifications of AI in education. While AI technologies can improve educational opportunities and speed up academic development, they also have the potential to undermine the ideals of authenticity and integrity that are at the core of education. As teachers attempt to find a balance between using technology for instructional objectives and respecting the norms of academic integrity, they must wrestle with the moral quandaries raised by AI (Creely et al., 2023; Singer et al., 2023).

Teachers must alter their teaching techniques and evaluation methodologies to counteract academic dishonesty in this age of AI. To successfully identify and prevent academic dishonesty, educators should remain up to date on the newest AI technology and approaches. Additionally, they need to build a classroom climate that emphasizes ethical conduct and teaches students about the penalties for academic dishonesty (Chan & Lee, 2023; Koraishi, 2023).

As AI continues to transform the educational environment, instructors confront the problem of tackling academic dishonesty in student writing. The introduction of AI technology has compromised the ideals of academic integrity, making it easier for students to participate in plagiarism and other sorts of cheating. However, instructors may maintain integrity by remaining educated, advocating ethical behavior in the classroom, and conducting proactive interventions (Adiguzel et al., 2023; Kooli, 2023).

The significance of this research lies in studying instructors' views on academic dishonesty in student writing in the AI age. With the fast progress of AI technology, academic misbehavior has grown more sophisticated, providing new hurdles for educators. By analyzing instructors' viewpoints and experiences surrounding this topic, the research intends to add to the current literature on academic integrity. It seeks to give recommendations for educators, educational institutions, and policymakers on how to encourage ethical standards and protect the quality of academic writing in the era of AI.

Literature review

Academic misconduct, encompassing acts of plagiarism and cheating, has long been a pressing concern within educational institutions. However, the emergence of artificial intelligence (AI) technologies has brought forth a transformed landscape of academic dishonesty, presenting novel challenges for educators. In 2023, a substantial number of scholarly articles (e.g. Bishop, 2023; Chan & Hu, 2023; Chan & Tsi, 2023; Chen, 2023; Cotton et al., 2023; Dergaa et al., 2023; Fitria, 2023; Huang & Tan, 2023; Khalil & Er, 2023; Limna et al., 2023; Manley, 2023; Möller, 2023; Perkins, 2023; Rudolph et al., 2023a; Shen et al., 2023; Zhou et al., 2023) have been published, delving into the application of AI, specifically ChatGPT, in aiding students with their writing endeavors. This surge of scholarly contributions underlines the significance and relevance of the subject matter under scrutiny.

The proliferation of AI-powered tools has considerably widened the array of opportunities for students to engage in academic dishonesty. As Manley (2023) asserts, the accessibility of essay mills, paraphrasing software, and other AI-driven resources has facilitated plagiarism and the creation of ostensibly original content by students. Consequently, educators confront the arduous task of identifying and addressing instances of academic misconduct that are growing increasingly sophisticated and evasive.

Teachers often find themselves at the forefront of detecting occurrences of academic dishonesty in students' written work. However, the advent of AI technologies has rendered this responsibility progressively intricate. Cotton et al. (2023) shed light on the challenges faced by teachers in discerning authentic work and content generated with the assistance of AI tools. The utilization of advanced algorithms and natural language processing capabilities inherent in AI tools

poses difficulties for educators in identifying instances of plagiarism.

The prevalence of AI tools in education holds implications for pedagogy and students' learning outcomes. An excessive reliance on AI-generated content may impede the cultivation of critical thinking and research skills among students. AI might be perceived by students as a shortcut to academic success, circumventing the requisite intellectual engagement fundamental to authentic learning. Educators must contemplate the potential long-term consequences of AI-driven academic dishonesty on students' academic growth (Chan & Hu, 2023; Chan & Tsi, 2023).

The ethical ramifications of AI in education should not be overlooked. Authors such as Perkins (2023) emphasize the imperative for educators to grapple with the moral dilemmas associated with AI-powered academic dishonesty. While AI technologies offer opportunities for enhanced learning experiences, they can also undermine the principles of integrity and authenticity within the educational realm. Educators must navigate these ethical considerations and ensure responsible and ethical utilization of AI in the learning process.

In addressing academic dishonesty within the AI era, educators assume a vital role in promoting academic integrity. By implementing strategies that foster a culture of honesty and ethical behavior, educators can actively discourage students from engaging in dishonest practices. Zhang et al. (2023) suggest that integrating educational interventions, such as instructing proper citation and referencing techniques, can facilitate students' understanding of the value of original work and the consequences of plagiarism.

Effectively combating academic dishonesty in the AI era necessitates support from educational institutions and policymakers. Opportunities for professional development can equip educators with the knowledge and skills required to identify instances of AI-driven academic misconduct. Furthermore, educational institutions should establish robust academic integrity policies that explicitly address the use of AI tools and the consequences of academic misconduct (Möller, 2023; Perkins, 2023).

In a review article, Rudolph et al. (2023a) explored the applications of ChatGPT and its association with higher education in general and, specifically, assessment, teaching and learning. Following an explanation of ChatGPT's functionality and a summary of its advantages and disadvantages, they concentrated on the technology's implications for higher education and talked about the future of instruction, evaluation, and learning in the context of AI chatbots like ChatGPT. They reviewed applications that are directed towards students, teachers, and systems, as well as possibilities and dangers, and they placed ChatGPT within the framework of current artificial intelligence in education research. They offered advice for students, professors, and higher education institutions in their article's conclusion.

Abdullayeva and Musayeva (2023) investigated how ChatGPT can affect learners' writing abilities. The article provided instances of how ChatGPT has been utilized in education and highlighted the advantages and possible disadvantages of utilizing it to improve students' writing abilities. These instances involve the AI writing teacher M-Write from the University of Michigan as well as AI-powered writing tools such as Grammarly and Hemingway Editor. They concluded that ChatGPT had the potential to change how writing is taught.

In related research, Mohamed (2023) investigated faculty members' perspectives on the possibility of ChatGPT to improve English as a foreign language (EFL) instruction. As the main strategy for gathering data for the research, in-depth interviews with faculty members were conducted. The findings of the interviews showed that the faculty members' views on ChatGPT's effectiveness were divided. While some academics praised ChatGPT for delivering quick and correct answers to a broad variety of queries, others voiced the concern that it would impede students' growth in research and critical thinking abilities and perhaps promote prejudices or false information.

Furthermore, Dergaa et al. (2023) investigated the possible advantages and challenges of natural language processing (NLP) technologies such as ChatGPT in research publications and academic writing, emphasized the ethical considerations present when employing these instruments, and looked at the effect that they might have on the authenticity and credibility of academic work. This research involves a literature evaluation of relevant academic publications published in peer-reviewed journals indexed in the first quartile of Scopus. The search utilized terms such as "natural language processing", "academic writing", "AI-generated text", and "ChatGPT". The evaluation was performed utilizing a quasi-qualitative technique, which involves reading and critically analyzing the sources and finding relevant data to support the study objectives. The study concluded that ChatGPT and other NLP technologies have the potential to boost academic writing and research efficiency. Nevertheless, its utilization raises questions regarding its influence on the authenticity and legitimacy of academic work.

Finally, in Limna et al.'s (2023) empirical study, the perspectives of educators and students on the usage of ChatGPT in education are investigated. These researchers utilized a qualitative research strategy, employing in-depth interviews to acquire data. A purposive sample strategy was used to pick ten instructors and 15 students from various institutions in Thailand. The data obtained were assessed employing content analysis and NVivo. The results indicated that instructors and students usually had a favorable impression of utilizing ChatGPT in education. The chatbot was considered a beneficial tool for delivering fast feedback, addressing queries, and offering assistance to students. Notwithstanding, the data highlighted some issues with the usage of ChatGPT in teaching, including concerns about the accuracy of the information provided by the chatbot and the potential for losing personal interaction with teachers.

Despite the growing recognition of the challenges posed by academic dishonesty in students' writings in the era of AI, there is a notable gap in the literature regarding teachers' reflections on this issue. While existing research has touched upon the changing landscape of academic dishonesty,

detection methods, and its impact on pedagogy, there is limited exploration of teachers' personal experiences, perspectives, and strategies in addressing AI-driven academic misconduct. Understanding the unique insights and reflections of teachers can provide valuable information for developing effective interventions, policies, and support systems that specifically cater to their needs in combating academic dishonesty in the AI era. Bridging this gap in the literature will contribute to a more comprehensive understanding of the issue and facilitate the implementation of targeted approaches to maintain academic integrity. Therefore, this investigation seeks to answer the following research questions:

1. How do teachers perceive the use of AI by their students for academic purposes?

2. How do teachers reflect upon the impact of AI on the prevalence of and commitment to academic dishonesty in students' writings?

3. What strategies and approaches do teachers employ to address and deter AI-driven academic dishonesty, and how do they reflect on the effectiveness of these interventions in maintaining academic integrity?

Methodology

Participants

Participants in the study were 67 teachers from different universities across Iraqi Kurdistan. There are more than 30 universities in Iraqi Kurdistan, of which more than half are private. Although availability sampling was used to recruit participants, it was attempted to find a similar number of participants from state and private universities and from both genders. Teachers were teaching EFL students at different levels. They had various academic backgrounds and teaching experiences and were of both genders. Table 1 illustrates the demographic information of these participants.

Table 1. Demographic information of teachers.

N	Teaching experience (average)	University		Gender		Age (average)
		State	Private	Female	Male	
67	8	35	32	30	37	34

Research design

This research triangulated the data collection tools by using a semi-structured interview and a questionnaire. Both questionnaires and interview questions were approved by the ethical committee of the researcher's university. The interviews were conducted both online (for those who were from faraway cities) and face-to-face (for those who were near the researcher) in the English language. The main themes of the interviews were research questions. The questionnaire was designed by the researcher. Its reliability was checked by Cronbach`s alpha, and it was 0.87, which is a good result. It was sent to the participants online via Google Docs. The participants submit their responses to the questionnaire anonymously. The process of collecting data started at the beginning of May 2023 and lasted about three weeks. The questionnaire consisted of three sections. There were six questions in the first section that asked about the general perceptions of teachers toward the use of generative AI technologies such as ChatGPT and Google Bard. The second section included three questions asking about teachers' reflections on the impact of AI on academic dishonesty in students' writings. There were three questions in the last section, which asked about detecting such academic dishonesty.

Data analysis

The responses to the questionnaires were collected from Google Docs. For analyzing the questionnaires, SPSS 25 was used. Of the 67 teachers who responded to the questionnaires, only 23 agreed to participate in interviews. Participants were 14 males and 9 females from both state and private universities. Their average age was 33, and their average teaching experience was seven years. Each interview lasted about 20–25 minutes, and they were audio-recorded with the participants` verbal permission. The recorded data were transcribed, and thematic analysis was used to evaluate the data.

Results

Questionnaire

The questionnaire employed a five-point Likert scale spanning from 'strongly disagree' (1) to 'strongly agree' (5) to measure participants' responses. The results of the responses to the questionnaires are illustrated in three sections. The first six questions show the perceptions of participants about students' use of AI.

According to the responses, teachers overall had positive attitudes toward AI technologies, including ChatGPT and Google Bard. Participants mentioned that they all used these technologies and believed that they were useful. They mostly noted that AI was a great and available resource for students (strongly agree and agree = 79%), and they were aware that their students used it for academic purposes (strongly agree and agree = 83%). In contrast, only some of them believed that AI might make the students better writers (strongly agree and agree = 45%) and that it could threaten their academic performance (strongly agree and agree = 82%). For Item 6, apart from 27% strongly agreeing or agreeing that they would incorporate AI into their teaching approaches in the future, 22% held a neutral position, which seems to be interesting in the questionnaire.

As could be observed from items 7–9, teachers without doubt all agreed (strongly agree and agree) on the negative impact of AI on the academic integrity of their students. They believed that AI made academic dishonesty more accessible and tempting for students and had a negative effect on the development of general and transferrable skills. Therefore, institutions and policymakers should urgently pay attention to the ethical implications of AI-powered academic

Table 2. Teachers' perceptions on the use of AI.

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Perceptions on the use of AI					
1. I personally use AI technologies such as ChatGPT and Google Bard, and I believe they are useful for me.	45 (67%)	22 (33%)	0 (0%)	0 (0%)	0 (0%)
2. I believe generative AI technologies like ChatGPT and Google Bard are great resources for students, given they are accessible 24/7.	21 (31%)	32 (48%)	0 (0%)	6 (9%)	8 (12%)
3. I am aware of using AI technologies such as ChatGPT and Google Bard by my students for academic purposes.	45 (67%)	11 (16%)	2 (4%)	9 (13%)	0 (0%)
4. I believe AI technologies like ChatGPT and Google Bard can help students become better writers.	24 (36%)	6 (9%)	6 (9%)	23 (34%)	8 (12%)
5. I believe AI technologies such as ChatGPT can endanger students' overall academic performance.	38 (57%)	17 (25%)	8 (12%)	4 (6%)	0 (0%)
6. I anticipate incorporating AI technologies such as ChatGPT and Google Bard into my teaching approaches in the future.	6 (9%)	12 (18%)	15 (22%)	18 (27%)	16 (24%)

Table 3. Teachers' reflection about the use of AI.

	Reflection				
7. AI has made academic dishonesty more accessible and tempting for students.	39 (58%)	28 (42%)	0 (0%)	0 (0%)	0 (0%)
8. AI will negatively impact my students' development of general or transferrable skills such as collaboration, problem-solving, and leadership qualities.	39 (58%)	28 (42%)	0 (0%)	0 (0%)	0 (0%)
9. The ethical implications of AI-powered academic dishonesty require urgent attention from educational institutions and policymakers.	39 (58%)	28 (42%)	0 (0%)	0 (0%)	0 (0%)

Table 4. Teachers' detection of AI-generated writing.

	Detection				
10. Teachers can already accurately identify a student's usage of generative AI technologies to complete an assignment.	2 (3%)	0 (0%)	5 (7%)	34 (51%)	26 (39%)
11. Teachers encounter challenges in identifying instances of AI-enabled academic dishonesty in students' writings.	26 (39%)	34 (51%)	5 (7%)	0 (0%)	2 (3%)
12. Currently, plagiarism detectors, such as Turnitin and Ithenticate can fully detect the writings of AI technologies, including ChatGPT and Google Bard.	4 (6%)	6 (9%)	19 (28%)	26 (39%)	12 (18%)

dishonesty.

The last three items of the questionnaire asked about teachers' detection of AI-generated writing. Nearly all (strongly disagree and disagree = 90%) of the participants admitted that they cannot detect the use of AI-generated writings in assignments, and the same number claimed that they faced challenges in identifying such writings. Finally, only a few percent (strongly agree and agree = 15%) of them believed that they could detect AI-generated writings via plagiarism detection tools such as Turnitin and Ithenticate.

Interviews

In order to gain a deep understanding of the responses, the main sections of the questionnaire were the primary questions in the interview, while several sub-questions were asked. Unlike questionnaires, responses in interviews were clearer and more reasonable. Based on the questions, the following themes are classified as teachers' perceptions toward the use of AI technologies, their reflections on the impact of these technologies on students' academic dishonesty, and detecting this academic dishonesty.

Teachers' perceptions toward the use of AI technologies

Unlike questionnaires, in interviews, teachers mostly acknowledged that AI is beneficial for students. However, there were a few teachers who believed that AI poses certain challenges and risks for students that need to be carefully addressed or even avoided.

> In my opinion, AI is not only useful but also necessary for students; they can learn a lot from it if they don't abuse it (Teacher 21).

> For sure, AI technologies like ChatGPT are beneficial for all students (Teacher 3).

> AI does not help students because they simply copy and paste; they don`t try to learn from it (Teacher 15).

The impact of AI on the commitment to academic dishonesty

All teachers agreed that factors including easy accessibility to AI and the failure and negligence of teachers in detecting AI-generated assignments led to students' commitment to academic dishonesty.

> ChatGPT, Google Bard, and other AI technologies are always available, easily seducing students to commit plagiarism (Teacher 19).

> Since AI-generated assignments cannot be detected easily, most of the students use these technologies for their assignments (Teacher 16).

> Some teachers do not pay attention to students' assignments, which have been generated by AI; this leads to more academic dishonesty (Teacher 7).

Strategies to deter AI-driven academic dishonesty

Teachers expressed divergent opinions and presented a variety of strategies to effectively tackle and identify instances of academic dishonesty arising from AI implementation. These strategies encompassed incorporating problem-solving, critical-thinking activities, real-life and personal examples, encouraging students to express their own ideas, using plagiarism checker software such as Turnitin, using AI to write the assignment and comparing with students' writings, incorporating AI in teaching, and writing the first draft in the classroom. However, there were a few teachers who believed that detecting academic dishonesty was challenging.

> There are some strategies, such as giving students assignments that require problem-solving and critical thinking, including their ideas, and providing real and personal examples (Teacher 11).
>
> Recently, Turnitin software can detect AI writing, though partially (Teacher 4).
>
> Teachers should make themselves familiar with AI technologies and can give their own assignments to ChatGPT or Bard, and then they can find out if their students did the same thing (Teacher 8).
>
> We should tell our students that we are aware of such technologies, and even we should incorporate using these technologies in our teaching practice and motivate our students to use them not just to copy from them but to learn from them (Teacher 17).
>
> I usually ask my students to do brainstorming on the topic in class and write the first draft and then complete it at home; for the next session, I compare the draft of brainstorming with the final draft that they do at home. It reduces academic dishonesty (Teacher 14).
>
> It's not always easy to identify academic dishonesty in students' writings because I'm aware that some students use AI to write assignments and then paraphrase them with paraphrasing tools (Teacher 12).

Discussion

The primary aim of this study was to investigate the perceptions of teachers regarding academic dishonesty in the writings of English as a Foreign Language (EFL) students in the context of AI. Employing both questionnaires and interviews, the research sought to elucidate the responses to the key research inquiries.

According to the findings of the survey, a portion of teachers expressed a belief in the advantageous nature of AI technologies for their students, acknowledging their utilization by the students. With the exception of a minority of teachers, these assertions were further validated during the interviews. This outcome aligns with previous studies conducted by Limna (2023) and Mohamed (2023), where participants described these technologies as either a "friend" or a "foe" (Lim et al., 2023, p. 3).

The second part of the questionnaire investigated the impact of using AI to be academically dishonest. Unquestionably, teachers unanimously concurred regarding the adverse influence of AI on the academic integrity of their students. They held the belief that AI had amplified the accessibility and allure of academic dishonesty for students, impeding the cultivation of fundamental general and transferable skills. Consequently, it is imperative for institutions and policymakers to promptly address the ethical implications arising from AI-driven academic dishonesty. Furthermore, the interviews brought to light that the failure of teachers to identify AI-generated assignments is another contributing factor to students engaging in academic dishonesty. These findings agree with various studies (Chan & Hu, 2023; Chan & Tsi, 2023; Dergaa et al., 2023; Manley, 2023), where the collective concern regarding the prevalence of academic dishonesty was evident. Nevertheless, this viewpoint diverges from the perspective that labels AI as a "double-edged sword" (Shah, 2023), as despite certain challenges associated with AI implementation, the study participants, as well as other studies, overwhelmingly acknowledged the numerous advantages that AI offers to students.

The final section of the questionnaire and interview inquired about approaches to address and detect cases of academic dishonesty stemming from AI adoption. These strategies encompassed the integration of problem-solving and critical-thinking exercises, utilizing real-life and personal illustrations, promoting student expression of original ideas, employing plagiarism detection tools like Turnitin, utilizing AI to generate assignments for comparison with students' work, incorporating AI in teaching practices, and engaging in classroom-based initial drafting. Nonetheless, a minority of teachers acknowledged the difficulties associated with detecting instances of academic dishonesty. These findings align closely with the findings of Cotton et al. (2023), who propose strategies including educating students on plagiarism, mandating the submission of initial and final drafts, employing plagiarism detection software, and monitoring and regulating students' utilization of AI. Furthermore, the findings exhibit partial concurrence with the research conducted by Pickell and Doak (2023), who refer to the process of identifying AI-generated writings through plagiarism detection tools as an "endless cat-and-mouse game." This perspective is rooted in the notion that as AI continues to advance, plagiarism detection tools strive to adapt and identify such writings through evolving methods.

Conclusion and recommendations

This research gives useful insights into the perspectives of instructors about academic dishonesty in the writings of EFL students in the setting of artificial intelligence (AI). The results reveal that instructors possess an understanding

of the potential benefits connected with AI technology while simultaneously expressing worry over its deleterious consequences for academic integrity. This research underlines the relevance of institutions and legislators addressing the ethical considerations associated with AI-driven academic dishonesty as well as giving aid to instructors in recognizing and avoiding such occurrences.

The solutions presented in this work, including the integration of problem-solving activities and the deployment of plagiarism detection tools, provide realistic ways for efficiently addressing AI-related academic dishonesty. Nonetheless, it is vital to recognize the limitations inherent in this research, such as the comparably small sample size and the lack of student opinions. Subsequent research attempts should strive to enlarge the participant cohort, integrate the opinions of students, and assess the usefulness of the outlined solutions in minimizing AI-driven academic dishonesty.

Overall, this research contributes to the existing body of literature concerning academic dishonesty in the era of artificial intelligence, offering valuable insights for educators, institutions, and policymakers in the advancement of academic integrity and the responsible utilization of AI technologies within the realm of education.

This research on teachers' reflections on academic dishonesty in EFL students' writings in the era of AI has several limitations that need to be considered. The study's participant pool consisted of only 67 teachers, which may not provide a comprehensive representation of the broader population of educators. The perspectives and insights of other teachers who were not part of the study may have been overlooked, potentially limiting the generalizability of the findings.

Another limitation is the exclusion of students' perceptions from the research. By solely focusing on the reflections and viewpoints of teachers, the study overlooks the valuable insights and experiences of the students themselves. Incorporating the perceptions of students could have enriched the analysis and provided a more holistic perspective on the issue of academic dishonesty. These limitations highlight the need for careful interpretation of the study's results and should guide future research endeavors aiming to further investigate teachers' reflections on academic dishonesty in EFL students' writings in the era of artificial intelligence.

The findings of this study have several implications for practice and further research. Firstly, the recognition of teachers' perceptions regarding the advantages of AI technologies highlights the need for incorporating these tools effectively into the educational process. Educators should be provided with training and support to harness the potential benefits of AI while also addressing concerns related to academic dishonesty. This implication aligns with the findings of multiple scholarly investigations conducted by Cotton et al. (2023), Rasul et al. (2023), and Rudolph et al. (2023b).

Secondly, the unanimous agreement among teachers on the negative impact of AI on academic integrity emphasizes the urgency of addressing this issue. Institutions and policymakers should prioritize developing ethical guidelines and policies that promote responsible and ethical use of AI technologies in education. This aligns with the scholarly perspective presented by Chan (2023).

Moreover, the recognition of teachers' responsibility in identifying AI-generated assignments as a contributing factor to academic dishonesty emphasizes the significance of enhancing teachers' awareness and proficiency in identifying and addressing instances of plagiarism facilitated by AI. It is crucial to develop professional development initiatives and resources aimed at equipping teachers with the requisite skills and knowledge to effectively identify and prevent academic dishonesty stemming from AI. This is consistent with the implications derived from the study conducted by Rudolph et al. (2023b).

Additionally, the research identifies a number of techniques, such as the incorporation of problem-solving and critical-thinking activities, utilization of plagiarism detection tools, and integration of AI in teaching practices, which offer practical approaches to tackling and mitigating AI-related academic dishonesty. Educators and educational institutions could explore using these tactics, customizing them to their individual settings and needs.

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