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Exploring Libyan PhD Students' Awareness and Use (AI) Based Conversational Agents and Speech Technologies to Improve Academic Writing

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Abstract

Academic writing is a key skill for doctoral students, which at the same time presents great challenges particularly to those for which English is a foreign language. The rapid growth of Artificial Intelligence (AI) in the form of conversational agents and speech based writing assistants brings forth new chances to help students overcome these issues. This study looks at Libyan PhD students' awareness of patterns of use of and thoughts on AI tools, which include ChatGPT, Gemini, and Copilot in the area of academic writing. The current study used a mixed methods approach, which included a questionnaire of both closed and open ended questions to determine participants' familiarization with these technologies, how and how often they use them, what they think of their performance and also what problems they face. The study found that although awareness of AI writing tools relatively high among Libyan PhD students, actual usage remains limited.

Keywords: Academic writing Libyan PhD students Artificial Intelligence Conversational Agents Writing Assistants ChatGPT.

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استكشاف وعي واستخدام طلاب الدكتوراه الليبيين للأنظمة الذكية للمحادثة وتقنيات الكلام المعتمدة على الذكاء الاصطناعي لتحسين الكتابة الأكاديمية

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الملخص

تُعد الكتابة الأكاديمية مهارة أساسية لطلبة الدكتوراه، إلا أنها غالبًا ما تمثل تحديًا كبيرًا، خاصةً لمن لا تعتبر اللغة الإنجليزية لغتهم الأم. يوفر التطور السريع في تقنيات الذكاء الاصطناعي، مثل الوكلاء الحوارين ومساعدي الكتابة المعتمدين على الصوت، فرصًا جديدة لدعم الطلبة في التغلب على هذه الصعوبات. تهدف هذه الدراسة إلى استكشاف مدى وعي طلاب الدكتوراه الليبيين باستخدام تقنيات الذكاء الاصطناعي مثل ChatGPT و Gemini و Copilot، وأنماط استخدامهم لهذه الأدوات، وانطباعاتهم حول فعاليتها في الكتابة الأكاديمية. استخدمت الدراسة منهجًا مختلطًا يجمع بين الاستبيانات والأسئلة المفتوحة لتقييم مستوى المعرفة بالتقنيات، وتكرار استخدام الأدوات، والأغراض المرجوة، والانطباعات حول مدى فاعليتها، والتحديات التي يواجهها الطلبة. أظهرت النتائج أن وعي الطلاب بهذه الأدوات مرتفع نسبيًا، بينما يختلف مستوى الاستخدام الفعلي، مع اعتماد معظم الطلبة عليها في صياغة المسودات، والتحرير، وتوضيح الأفكار المعقدة. كما اعتبر المشاركون أن هذه الأدوات مفيدة في تحسين الترابط، والوضوح، وتنظيم الحجج، مع وجود بعض المعوقات مثل محدودية المهارات التقنية والشكوك حول الموثوقية. توصلت الدراسة إلى أن تقنيات الذكاء الاصطناعي تمتلك إمكانيات كبيرة لدعم الكتابة الأكاديمية، لكن دمجها الفعال يتطلب توجيهًا، وتدريبًا، وتكييفًا سياقيًا مناسبًا.

الكلمات المفتاحية: الكتابة الأكاديمية، طلاب الدكتوراه الليبيون، الذكاء الاصطناعي، الأنظمة الذكية للمحادثة، مساعدات الكتابة شات جي بي تي.

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Introduction

Writing academically is a key component of doctoral study as it forms the core domain for sharing knowledge and developing ideas, arguing positions and participating in scholarly debates. Academic writing is a cornerstone of doctoral research as it provides the primary stage for communicating knowledge, constructing arguments and contributing to scholarly communities. However, PhD students face significant challenges in mastering academic writing, particularly in Libya where English is a foreign language. With the fast advancement of Artificial Intelligence (AI) new opportunities have emerged for supporting students through conversational agents and speech technologies. These tools starting from intelligent writing assistants to automated feedback systems are increasingly recognized as valuable resources for enhancing clarity, coherence and accuracy in academic writing.

The recent progress of AI has opened up new possibilities for helping students to solve such problems. Promising examples are the conversational agents (e.g., ChatGPT and others) and speech technologies that integrate NLP, machine learning and knowledge representation to help users create, revise and refine text. Russell and Norvig (2020) noted that "natural language understanding is a central goal of AI, since language is the main vehicle for sharing information." This view emphasis the connection between AI's focus on language and the essential role of academic writing in higher education. Similarly, Poole and Mackworth (2023) make clear that written language could be seen as a symbolic system for knowledge representation; all systems must learn to map between symbols and meanings in order to accomplish tasks such as reading or writing. The latter sentiment resonates with the challenges faced by a PhD student who has to learn how to transform theoretical research ideas into a written product that is correct and understandable. "Winston (1992) also claims that "writing is a knowledge representation issue, AI attempts to understand how ideas might be organized.

http://www.doi.org/10.62341/anas9514

Statement of the problem

Although involved for long periods in university study, PhD candidates still face serious issues when writing academically. A frequent problem is forming - then keeping - a core argument across sections. Ideas may also lack smooth flow or structured development from one point to the next. Another barrier involves selecting correct, widely accepted phrasing in English. Meeting expected standards of scholarly tone adds further strain. Because of these ongoing hurdles, learners struggle to create work that's lucid, rigorous and suitable for publication

Aim of the study

This study aims to, Investigate Libyan PhD students' awareness of conversational agents and speech technologies for academic writing. Explore the extent to which Libyan PhD students use these technologies in their academic writing practices. Examine students' perceptions of the usefulness and challenges of using conversational agents and speech technologies in academic writing.

Questions of the Study

1. What is the level of awareness among Libyan PhD students regarding conversational agents and speech technologies for academic writing?
2. To what extent do Libyan PhD students use conversational agents and speech technologies in their academic writing practices?
3. What are Libyan PhD students' perceptions of the benefits and challenges of using conversational agents and speech technologies for academic writing?
4. How can AI-based technologies be better integrated into doctoral writing support in Libyan higher education?

Significance of the Study

There are several reasons why this study is important. To begin with, it adds to the small body of research on using AI support tools in writing in an Arab or Libyan context. Secondly, the findings of will be of help to universities, supervisors and those in Libyan Government. In this way, they can use this understanding as a basis for shaping their activities from training programs to resources to

http://www.doi.org/10.62341/anas9514

better suit young PhD students realize the potential of AI technology in academic writing.

Literature Review

The promise of recent years has shown that integrating Artificial Intelligence (AI) techniques and tools like Conversational Agents (CAs) or even Speech Technologies (STT) can help improve writing skills However, the adoption and impact of such technologies among Libyan PhD students remain underexplored. The current study, therefore, provides an overview of academic writing difficulties as they are commonly encountered in the present day. It also includes specific application scenarios of AI technology to educational software development and, finally, focuses on doctoral education in EFL context for exploring the awareness and uses of AI tools among Libyan PhD students.

Academic Writing Challenges for Doctoral Students

Academic writing is where doctoral students often have trouble. They are liable to encounter structural, coherence, grammar or even disciplinary problems in any piece of academic work. But things get worse still for EFL students. They've got language barriers, time constraints and support from a very high level to cope with the issues of their doctoral studies.

The Role of AI in Academic Writing

AI technologies, especially Conversational Agents such as ChatGPT, become more and more utilized to support academic writing. These tools help create content, improve the quality of language, and may even give feedback on writing. Russell and Norvig (2020) write that AI systems can simulate human-like interactions, give users hands-on help. Poole and Mackworth (2023) further that the potential of AI agents to add decision-making processes can also be used for writing tasks. Winston (1992) explains the origin theory of Congo. This illustrates its potential as a computerized child. to process and analyze large datasets, a feature beneficial for academic writing support.

Previous studies indicate that AI tools enhance prose quality by improving grammar, vocabulary, and strengthening overall

http://www.doi.org/10.62341/anas9514

coherence. In one experiment, conducted by Liu et al. (2024), students using AI writing assistants were markedly more proficient than control groups in their written expression. Yet worries about relying too heavily on AI, moral concerns and the diminishment of critical thinking ability have all been voiced repeatedly from early on.

Conversational Agents and Speech Technologies in Education

Conversational Agents and Speech Technologies have been explored for their potential to assist students in academic tasks. These technologies can provide real-time feedback, assist in brainstorming sessions, and help students organize their thoughts. In the context of EFL education, CAs can aid in language learning by offering conversational practice and immediate corrections. Poole and Mackworth (2023) discuss the integration of AI technologies in educational settings, noting their ability to adapt to individual learning needs and provide personalized support. Winston (1992) also touches upon the application of AI in education, highlighting its role in enhancing learning experiences through interactive tools.

The Libyan Educational Context

Libyan higher education sector in encounters distinctive challenges such as limited access to up-to-date resources, infrastructural constraints and varying levels of technological adoption. These factors can influence the adoption and effective use of AI tools among PhD students. Moreover, cultural perceptions of AI and its role in education may affect students' willingness to incorporate with such technologies.

Understanding the specific needs and challenges faced by Libyan PhD students is important for evaluate the possible benefits and obstacles to AI tool integration in academic writing.

Related Studies

AI in Higher Education In recent years, Libyans' interest has been especially keen with respect to the integration of AI- supported tools and conversational agents into the higher education context particularly in English language learning and academic writing. Hamed and Senussi (2024) have done a study Among University of Benghazi to explore the students' knowledge using and attitudes for ChatGPT. They reported that most students were aware of the tool

http://www.doi.org/10.62341/anas9514

but its employment for academic purposes was sporadic, underlining the necessity of a more structured embedding of Al tools into higher education contexts.

likewise, Elsherif (2025) investigated Libyan EFL student-teachers' perceptions of Grammarly as an Al-powered automated writing checker at the University of Tripoli. The study found that participants appreciated Grammarly for investigating errors and providing corrective feedback even though there is worry about over-reliance on AI and the possible effect on originality were also noted- These findings underscore the dual role of AI in enhancing academic performance while raising questions about preserving students' independent critical thinking and creativity.

Other studies have explored the broader impact of AI on language learning and academic skill development. Research conducted in the AI Asala Journal (2025) emphasized the importance of balancing the use of AI tools in ESL contexts, highlighting both their benefits and potential risks, including over-dependence and reduced development of essential 21st-century skills. Almashrgy and Albarki (2024) investigated the attitudes of Libyan EFL teachers toward AI applications, finding that while AI tools were generally perceived as beneficial for language learning ,educators expressed worries about students' overreliance and the possible decrease in critical thinking.

In addition to that; Abolkasim and Hasan (2024) examined the possibility of integrating ChatGPT into university-level education in Libya. The result of their study reported that, there is a strong interest among students yet obstacles such as limited training and inadequate infrastructure were identified as obstacles to effective usages. A complementary study (ResearchGate, 2024) assessed the effectiveness of AI-assisted learning compared to traditional methods and found that students using AI tools demonstrated improved learning outcomes, particularly in tasks requiring writing and comprehension skills.

Commonly; the literature indicates that Libyan students are increasingly incorporating AI-based tools into their academic context, yet effective integration requires structured guidance and ethical considerations. These findings provide a solid contextual foundation for exploring PhD students' awareness, use and

http://www.doi.org/10.62341/anas9514

perceptions of conversational agents and speech technologies to improve academic writing.

In spite of the growing interest in AI-based tools in higher education, research in Libya has largely focused on undergraduate students or student-teachers, particularly within English as a Foreign Language (EFL) contexts. Studies by Elsherif (2025) and the AI Asala Journal (2025) have explored the use of Grammarly and ChatGPT-pointed out students' perceptions, benefits and challenges in academic writing. However, these studies provide limited insights into the experiences of PhD students whose academic and research demands differ significantly from those of undergraduates.

Another underexplored area is the impact of AI on students' creativity, critical thinking and ethical use of technology. Although previous studies mention benefits few have investigated how excessive dependence on AI might reduce originality or how students mange obstacles such as, limited access to reliable references and institutional support.

Finally; there is a lack of research that situates AI usage within the specific context of Libyan higher education, considering factors such as local infrastructure , training opportunities and university policies. regarding these gaps is importance for understanding how PhD students engage with AI tools ,how these tools enhance their academic writing and what strategies can be implemented to improve benefits while reducing possibility challenges.

To sum up; This study investigates to fill these gaps by focusing on Libyan PhD students and exploring their awareness, usage and perceptions of both conversational agents and speech technologies. By combining quantitative and qualitative insights, the current study provides a comprehensive understanding of AI integration in academic writing offering practical implications for students, educators and institutions in Libya.

Although, literature of the current study provides insights into the benefits and challenges of AIin academic writing, there is a lack of research focusing on the awareness and utilization of Conversational Agents and Speech Technologies among Libyan PhD students.

http://www.doi.org/10.62341/anas9514

By addressing these aspects, our study intends to provide a comprehensive understanding of the role of AI in enhancing academic writing among EFL doctoral students in Libya.

Methodology

Research Design

This study employed a mixed quantitative and qualitative descriptive research design to investigate Libyan PhD students' awareness and use of conversational agents and speech technologies to improve academic writing. The questionnaire method was selected because it allows for efficient collection of standardized information from several participants and facilitates statistical analysis of trends, perceptions, and usage patterns.

Participants

The study include twelve PhD students registered at various Libyan universities, with the majority specializing in the field of Applied Linguistics.

Instrument

The primary data collection instrument was a structured questionnaire divided into four sections: Background Information of PhD students. PhD students' Awareness and Use of AI Tools. Perceptions and Challenges. tools. Usage of Presentation Tools: Questions on tools used for preparing academic presentations .

Data Collection Procedure

The questionnaire was distributed online to 12 PhD students through a Google Forms link shared through What's App groups. Participants were provided with instructions and consent forms to ensure ethical compliance. The PhD responses were collected after two weeks.Data Analysis Quantitative Analysis: Answers were coded and data analyzed using descriptive statistics on frequencies, percentages, and cross-tabulations. This method contributed to a description of patterns in AI tool awareness, usage and perceived usefulness.

Findings

The study investigated PhD students' awareness, usage, and perceptions of A I-based writing assistants and presentation tools. Both quantitative and qualitative data were collected through an online questionnaire distributed via a Google Forms link shared

http://www.doi.org/10.62341/anas9514

through Whets-App groups. The questionnaire responses were coded and analyzed using descriptive statistics, including frequencies and percentages, to identify patterns in AI tools awareness, usage and perceived effectiveness among Libyan PhD students. Key findings include;

Demographics of Participants

The current study involved 12 PhD students from various Libyan universities. Participants ages ranged from 33 to 60 years with a concentration in the late 40s (25%). The majority were female (75%) and most were enrolled in Applied Linguistics (41%). Concerning academic progression 41% were in the second year 33% in the final year and the remaining (25%) in other stages. Half of the participants (50%) had previously taken a PhD-level academic writing course ,while the other half had not. These demographic characteristics indicate a varies sample in terms of experience and academic maturity in addition to providing a strong base for exploring AI tool usage in academic writing.

Awareness and Use of Conversational Agents and Speech Technologies

A significant majority of participants (83%) were aware of AI-based writing assistants such as Chat-GPT, Gemini and Copilot while only (16%) reported being unaware of these technologies.

Tables 1. Awareness of AI-based Writing Assistants

Response	Frequency	Percentage
Yes	10	83%
No	2	16%

Regarding usage patterns, ChatGPT and Gemini emerged as the most frequently used tools, each by (83%) of respondents, followed by Gimini (41%), Copilot (33%), DeepSeek (25%), SciSpace (16%) and other AI tools (41%).

Table 2:Tools Used in Academic Work (multiple responses)

Tool	Frequency	Percentage
ChatGPT	10	83%
Gemini	5	41%
Meta AI	3	25%
Copilot	4	33%
DeepSeek	3	25%

http://www.doi.org/10.62341/anas9514

Tool	Frequency	Percentage
SciSpace	2	16%
Other	5	41%

Purposes of using AI tools

The primary purposes for using these tools included brainstorming ideas (66%) drafting (8%), improving grammar/style (33%), revising (33%), understanding texts (66%), paraphrasing (50%) and translating (41%).

Table 3: Purposes of Use (multiple responses)

Purpose	Frequency	Percentage
Brainstorming ideas	8	66 %
Drafting	1	8 %
Improving grammar/style	4	33 %
Revising	4	33 %
Understanding text	8	66 %
Paraphrasing	6	50%
Translating	5	41%
Other	0	0%

Practicing Language Skills with AI tools

In terms of language skills practiced, writing was the most important skill with all participants (100%) reporting its use. Reading was practiced by(50%) speaking by (33%) and listening by only (8%) of respondents

Table 4: Practicing Language Skills with AI tools

Skill	Frequency	Percentage
Reading	6	50%
Writing	12	100%
Listening	1	8%
Speaking	4	33%

The Role of AI Tools in Improving Academic Writing

Among the 12 participants, 11 (91%) indicated that AI tools positively contribute to the improvement of academic writing , while one (8%) stated that AI tools do not help.

Table 5: Perceptions of AI tools in Enhancing Academic Writing

http://www.doi.org/10.62341/anas9514

Response	Frequency	Percentage
Yes	11	91%
No	1	8%

Perceived Effectiveness of AI Tools in Enhancing Writing Tasks

The questionnaire also examined perceived effectiveness of AI tools in supporting writing tasks. For coherence, three participants reported that tools are very effective, eight as effective and one as somewhat effective. Similar patterns were observed for clarity (very effective: three effective: eight somewhat effective: 1) and structure (very effective: four effective: seven somewhat effective: 1).

Table 6: Perceived Effectiveness of AI Tools in Enhancing Writing Tasks

Aspect	Very Effective	Effective	Somewhat effective	No effective
Coherence	3	8	1	0
Clarity	3	8	1	0
Structure	4	7	1	0

Participants' Use of AI Tools for Presentations

Table 7 shows how participants applied AI tools when making presentations. While Gamma AI Slide Maker and PowerPoint ranked highest - each chosen by nine people, or 75% - other options saw lower adoption. In contrast, Google Slides and Prezi were selected just twice, accounting for 16%. Canva appeared in five cases, equaling 42%. One individual, representing 8% mentioned alternative software; however, nobody stated they avoided AI entirely. The data indicates a tendency toward well-known, easily available presentation systems.

Table 7: Participants' Use of AI Tools for Presentations

Total	Frequency	Percentage
Gamma AI slide maker	9	75%
Prezi	2	16%
Google Slides	2	16%
PowerPoint	9	75%
Canva	5	42%
Other	1	8%
Non	0	0%

Qualitative Data Analysis

http://www.doi.org/10.62341/anas9514

The open-ended responses were analyzed thematically, providing varies key insights concerning the use of AI tools in academic work .

Challenges Faced (summarized from responses)

- Lack of training or resources.
- Risk of plagiarism.
- Tools reduce personal creativity.
- Accuracy and reliability of information.
- No challenges reported by some participants.

Additional AI Tools used by PhD Students

Beyond popular AI writing assistants, students mentioned using Perplexity AI, AI-powered PowerPoint makers, Google Translate, plagiarism checkers and Poe. This suggests a diverse approach to leveraging technology for academic tasks.

Participants'' Perceived Benefits

Despite these challenges most participants (91%) found AI tools helpful for generating ideas, improving text comprehension and supporting drafting and paraphrasing. In general, AI tools were recognized as effective aids in enhancing academic writing when used thoughtfully.

Discussion

Awareness of Conversational Agents and Speech Technologies

The data showed us a high level of awareness among participants concerning AI writing tools. As it shown in table 1 (83%)reported being aware of tools such as ChatGPT- Gemini and Copilot: whereas (16%) had no prior awareness. This finding emphasis that AI technologies are reaching doctoral students in Libya but not equally. Comparatively, similar studies in other EFL contexts (Gao et al., 2023; Kasneci et al., 2023) report rising awareness of AI writing assistants among graduate students, confirming that Libyan PhD students are aligned with global trends. The findings indicate that Libyan PhD students are increasingly aware of and actively using AI-based writing assistants and speech technologies to support academic writing. Awareness is high (83%) yet actual usage varies, with ChatGPT being the dominant tool. This aligns with

http://www.doi.org/10.62341/anas9514

global trends showing ChatGPT as the most accessible and user-friendly AI writing assistant (Kasneci et al., 2023) see table 1.

Usage of tools

Participants reported actively using AI tools for various purposes. ChatGPT (83%) and Gemini (83%) were the most frequently used followed by Copilot (41%). DeepSeek (25%) and SciSpace (25%). Primary uses included brainstorming ideas (66%) drafting texts (66%) understanding texts (33%) paraphrasing (33%) and translating content (33%) (see table 2).

Purpose of Use: Students mainly use AI for brainstorming and drafting, demonstrating that AI is perceived as a tool to enhance productivity and idea generation rather than replace critical thinking. The high engagement in writing skills (100%) reflects the centrality of writing in PhD research and supports findings by Paltridge (2020) regarding challenges faced by doctoral students in EFL contexts (see table 3).

In terms of language skills, the results presented in table 4 indicate that writing was the most practiced skill (100%) followed by reading (50%) and speaking (33%). Participants also integrated AI into presentation preparation with Gamma AI Slide Maker and PowerPoint used by (75%) of students, indicating that AI supports both written and visual academic outputs. These results align with previous findings (Li & Hasegawa-Johnson, 2021; Shadiev& Yang, 2020) that AI and speech technologies can enhance multiple aspects of academic work, particularly writing and comprehension.

The Role of AI Tools in Improving Academic Writing Among PhD Students

The findings in table 5 indicate that most participants see AI tools as useful for improving academic writing - this matters especially for master's and doctoral students who must write long, research-based papers. Since 91% said AI helps strengthen their writing, educators consider these tools helpful in tackling typical issues in high-level academic work, such as structuring arguments, using appropriate terminology, maintaining flow, or reducing grammar errors

http://www.doi.org/10.62341/anas9514

Perceived Effectiveness:

The findings indicate that individuals mostly see AI tools as helpful for academic writing. According to Table 6, a majority marked these tools as highly useful or somewhat useful when it comes to coherence, clarity, and organization. In terms of flow and understanding, three people chose very useful while eight picked useful. When looking at structure, the ratings were a bit stronger - four selected very useful, seven said useful. Not one participant labeled AI support as unhelpful in any area.

These results suggest Libyan PhD students view AI tools favorably, seeing them as helpful in core aspects of writing tasks.

Use of Presentation Tools

As it shown in table 7 The data indicate Gamma AI Slide Maker and PowerPoint were top choices, with 75% usage each - this points to a tendency toward intuitive interfaces and clear visual output. While Prezi saw only 16% adoption, Canva was selected by 42%, which may reflect lower exposure or harder access. Taken together, these patterns suggest users lean on familiar software that's straightforward to navigate.

Qualitative Insights

Analysis of open-ended responses Through analysis of the common themes that emerged from data, several repeated themes were identified:

Challenges and Barriers

Despite the benefits, participants reported several challenges. Lack of training and concerns about plagiarism emphasized the need for structured guidance in AI tool integration. Some PhD students' perception of reduced creativity echoes ethical and cognitive concerns identified in Zhai (2023) and Gao et al. (2023). Institutions may need to provide training and establish policies to ensure AI supports learning without compromising originality or critical thinking.

These findings resonate with studies in other contexts, which emphasize the importance of guidance and ethical considerations when integrating AI into academic writing (Zhai, 2023; Gao et al., 2023) .

http://www.doi.org/10.62341/anas9514

Implications for Practice

1. Academic Writing Support: Universities should integrate AI tool training into doctoral programs, emphasizing ethical use and best practices.
2. Technology Integration: Faculty can encourage the use of AI for idea generation, paraphrasing and drafting while maintaining rigorous academic standards.
3. Policy Development: Institutions should develop guidelines to balance AI use, academic integrity and creativity in research writing.

The study's results align with international findings indicating that AI tools improve efficiency and comprehension but require supervision to mitigate risks (Gao et al., 2023; Li & Hasegawa-Johnson, 2021; Shadiev& Yang, 2020). Unique to the Libyan context is the combination of EFL challenges and limited formal training in AI-assisted academic writing, suggesting the need for context-specific interventions.

To sum up, the results demonstrate that Libyan PhD students are aware of and actively using AI technologies to support academic writing. While these tools enhance writing productivity, comprehension, and presentation preparation, challenges remain in training, ethical usage, and preserving originality.

Other Tools Used: In addition to the main AI writing assistants, PhD students participated in one or more other types of AI Writing Assistants. Such as Realtime web search, AI-powered PowerPoint makers, Google Translate, plagiarism checks and Poe as an indirectness towards technology.

Recognized advantages : in spite of challenges, the majority (91%) found AI tools helpful for generating ideas, understanding texts, supporting drafting and paraphrasing, emphasizing their practical value in academic workflows.

The results recommended that PhD students are actively incorporating AI-based tools into their academic work. While tools like Chat-GPT and Gemini are widely used and generally perceived as effective, participants recognize limitations, including the risk of over-reliance and decreased originality. The combination of quantitative and qualitative data emphasized that, when applied carefully, AI tools can enhance both the efficiency and quality of

http://www.doi.org/10.62341/anas9514

academic writing and presentations. Training and clear guidelines are suggested to maximize benefits while preserving academic integrity and personal creativity.

Conclusion

Libyan doctoral candidates show a fair level of familiarity with AI-powered writing and slide tools. Despite common reliance on platforms such as ChatGPT or Gamma AI for idea generation, initial drafts, and visual layouts, results vary in quality. Although these technologies can improve flow, readability, and organization, issues around precision, user preparation, and original expression persist. For meaningful adoption, learners need mentorship, responsible practices, along with tailored assistance.

Recommendations

Training sessions: Host interactive workshops focusing on responsible AI usage in writing tasks - also covering presentation design through practical exercises instead of lectures.

Effective methods with recommendations: Create straightforward rules to include artificial intelligence while preserving independent analysis or creativity - using structured approaches that maintain student engagement through active learning processes.

Reliable materials should be available; this helps learners verify AI-produced information using credible sources instead of relying solely on automated outputs.

Feedback plus evaluation: build spaces where learners can discuss their experiences while consistently checking how well AI tools work.

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