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Investigating institutional support and PhD students' perspectives on AI integration in scholarly research: Insights from the Moroccan context

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Abstract

The use of Artificial Intelligence (AI) is rapidly increasing across various fields, including academia. AI tools are becoming more popular among researchers, scientists, and students, helping with tasks like generating text, conducting literature reviews, summarizing, analyzing data, and more. Existing literature highlights how these tools enhance the accuracy and efficiency of the research process. However, ensuring innovation and quality in academic research requires an understanding of how researchers perceive and utilize AI in conducting research, as well as the level of institutional support provided. This study focuses on gaining insights into the perspectives of PhD students regarding the use of AI in their research, and examining the extent of support offered by Moroccan universities in training students to use AI tools appropriately, responsibly and ethically. For doing this, a quantitative approach was employed, using a structured online survey with a Likert scale. The study examined PhD students in the English department in various Moroccan universities using a structured online survey. Results show that most of PhD students use Free AI tools in their research activities. They use AI while conducing research for tasks such as suggesting topics, finding relevant sources, grammar checking, paraphrasing and summarizing. The study also explored that ChatGPT, Grammarly, QuillBot, Zotero and Mendeley are the most commonly used AI tools by PhD students. The participants also declared that AI improves the efficiency and productivity of their research. Most importantly, it was revealed that there is an obvious lack of institutional support regarding the AI integration in scientific research. This research will provide evidence-

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based recommendations for enhancing research quality and innovation and ensuring that future researchers are equipped with the necessary tools and knowledge to conduct research.

Keywords: artificial intelligence, scholarly research, research efficiency, innovation

1. Introduction

The advancement in technology and computer science in recent years has led to emergence of highly sophisticated technological tools designed to assist humans in tasks that require mental efforts and are time-consuming. These tools are known as Artificial Intelligence (AI). In the last few years, several human activities have been significantly optimized by these technologies, including healthcare, marketing, manufacturing, journalism and mostly the scientific research (Boubker et al., 2024). The spread of AI usage in these fields, especially in scholarly research, has sparked tremendous inquiries, debates and narratives (Wagner, 2022). The role AI plays in augmenting research, its potential benefits and drawbacks were among the main concerns and focus of researchers in the past years.

The incorporation of AI-powered tools has considerably revolutionized the manner students and researchers approach the academic and scholarly research (Danler et al., 2024). With the increasing reliance on AI tools to simplify the research process, understanding how researchers perceive the utilization of AI tools in research is critical in building up a solid background to ensure the research integrity and its applicability. The reliance on AI as far as the academic research is concerned can be attributed to two essential factors. First, AI tools are accessible and easy to use. And second, they are useful and beneficial in achieving certain tasks and goals (Ekundayo et al., 2024).

AI tools like ChatGPT and other similar Chatbots have gained a lot of attention from researchers. Since the emergence of ChatGPT, a lot of studies have been conducted to highlight its applicability and usefulness in academic writings. Though there were some studies like Guleria, et al. (2023) that shed light one some of its shortcomings, ChatGPT is apparently equipped to assist researchers in different research-related tasks such as drafting papers, summarizing, literature reviews, finding relevant studies and the like (Hutson, 2022). Similarly, there are other AI devices that could save the researcher's time and improve the research accuracy and effectiveness (Boubker et al., 2024), as well as enhancing the students' research skills needed for the academic success.

Moreover, currying out academic research is one of the key assignments PhD students are supposed to do throughout the PhD journey. This work requires certain research-related specific skills, qualities and ethical scholarship (Malik et al., 2023). Not only this, it also demands time and effort. Yet, Artificial intelligence (AI) has demonstrated higher potentials to make this task-carrying out empirical studies- easier and less time consuming. The AI use can considerably enhance the accuracy and efficiency of the research process, by speeding up the research stages, including identifying gaps, generating research questions and hypothesis, conducting the literature reviews, data collection and analysis and so forth (Kanbach et al., 2023). However, the AI adoption in scholarly research without a straightforward academic guidance could highly impact the academic integrity and research quality.

For ensuring innovation and quality in research today, and in the light of the rapid spread of AI tools and their easiness and usefulness, it is worth understanding researchers' views and perspectives on AI integration in the research journey. Not only this, but it is also worth understanding the extent to which the academia is involved in, and concerned with, this issue. Thus, this research aims to address a critical gap in the literature by investigating PhD students' perspectives on AI integration in the research process, the types of AI tools they use, their purposes and objectives for using them, and the benefits and challenges associated with these tools in scholarly research. Additionally, and most importantly, the study seeks to fill a significant gap in the existing literature by providing data-driven evidence on the role of academia in shaping or influencing the integration and use of AI tools in research. This is highly required as the Moroccan higher education institutions are still in early stages of articulating clear frameworks for AI integration in research. Thus, this contextual gap makes it inappropriate to directly generalize findings from Western context to Moroccan doctoral education. The present study also offers recommendations for university policymakers, stakeholders and supervisors to combat mediocrity and uphold integrity in the context of AI adoption in scientific research in higher education.

1.1. The Rationale

This study attempts to investigate how PhD students in Moroccan universities perceive the integration of AI-powered tools in the academic research process and the level of support provided by the institutional policymakers. Gaining insights into the extent to which PhD students utilize AI in their research process, the types of tools they use and stages at which they apply them is significant for developing targeted training programs, improving the accessibility of AI

resources, and enhancing research efficiency and quality. Therefore, the results of the present study will inform higher education authorities, policymakers and supervisors about the PhD students' perspectives on integrating AI in scholarly research and its impact on research skills, accuracy, proficiency and productivity. Not only this, the study will also offer recommendations for taking actions to overcome the obstacles researchers face in incorporating AI in research tasks.

1.2. The Objectives of the Study

In today's academic journey, conducting a research has become easier and less time-consuming. Thanks to the highly sophisticated AI-based tools, the research-related tasks have been optimized. Starting with the identification of gaps up to the publication of the paper, various AI tools can be utilized to enhance the accuracy and elevate the efficiency. In the context of PhD program in Morocco, students are supposed to accomplish various tasks, such as conducting research, publishing papers and participating in conferences. Thus, the incorporation of AI in this process is largely indispensable, thanks to the benefits supported by research-based evidence. In this respect, this study aims to achieve the following objectives:

1) To examine the PhD students' perspectives on the use of AI tools in enhancing their research skills and productivity.

2) To investigate how PhD students perceive the level of institutional support for AI integration in scholarly research at Moroccan university.

1.3. Research Questions

Providing PhD students with clear rules and effective guidance for ethical and responsible use of AI in the academic research journey is a step forward to enhance and maintain the research quality, integrity and productivity. This is grounded on two basics: 1) AI tools are popularly used by PhD students worldwide nowadays; and 2) Artificial Intelligence (AI) is supposed to coiled and overlap with academic writing realm for the sake of innovation, writing proficiency, research acumen and critical thinking (Malik et al., 2023). Therefore, this study endeavors to answer two key questions:

RQ1: what are the PhD students' perspectives on the use of AI tools in enhancing their research skills and productivity?

RQ2: how do PhD students perceive the level of institutional support for AI integration in scholarly research at Moroccan university?

1.4. Research Hypotheses

Several Previous studies have investigated the impact of the use of AI-based tools on the research process. These studies highlighted the potential advantages of AI to facilitate and optimize the research tasks. Guhan et al. (2023), noted that AI is significant in saving time and improving the effectiveness and productivity regarding the academic writing. Similarly, Malik et al. (2023) examined the students' awareness of the AI use. It was figured out that students used AI for numerous tasks and were aware of its significance. Ekundayo et al. (2024) also noted the potentiality of AI to contribute to the research quality. In the Moroccan context, Boubker et al. (2024) examined the impact of ChatGPT on PhD student achievement. This study showed a favorable influence of ChatGPT on PhD students as it assists in the simplification of the research tasks

Based on these outcomes, we can hypothesize the following:

- **H1:** PhD students perceive AI tools as beneficial for enhancing their research skills and productivity.
- **H2:** PhD students believe that IA tools positively contribute to improving the quality and efficiency of their research.

Alongside with these stated assets of AI to elevate the research-related tasks, there was a strong emphasis on the necessity of the institutional interference to provide ethical guidelines and to state clear rules regarding the implementation of AI in the research process. In this respect, Ekundayo et al (2024), for example, mentioned that academic institutions should develop clear ethical guidelines and standards for the utilization of AI in research. In parallel, Boubker et al. (2024), strongly recommended that administrators and supervisors in higher education should play an active role to encourage PhD students to use AI in academic research with mindfulness and thoughtful application. On the other hand, Guleria et al. (2023) explored ethical issues and accuracy challenges with the use of ChatGPT in academic writings. With taking these outcomes into consideration, we can hypothesize the following:

- **H1:** PhD students perceive the level of institutional support for AI integration in scholarly research at Moroccan universities as insufficient.
- **H2:** There is a relationship between perceived institutional support and the extent to which PhD students integrate AI tools in their research.

The following section scrutinizes what the existing literature covers regarding the AI integration in academic research. This helps in gaining understanding of students' perspectives regarding AI integration in various contexts. This is followed by a theoretical framework. Then, the methodology section will describe the research approach and design utilized for investigating students' perspectives and institutional support regarding the AI incorporation in research. This section will also highlight the instrument employed for collecting data. Next, the participants' responses will be presented in form of graphs and charts for a systematic and statistical analysis. The results will also be discussed in comparison with previous findings in various contexts for the sake of drawing conclusions regarding this study. Finally, the conclusion will summarize key insights, suggest recommendations for overcoming challenges and responsible use of AI, and suggest emerging ideas for future research.

2. Literature review

2.1. Defining Artificial Intelligence (AI)

Artificial Intelligence (AI) has been the concern of several scholars and researchers in the past few years. Generally, various AI definitions exist in the literature body and all of them align with the same concepts: the human-like ability, solving complex problems and performing complex tasks. For example, as mentioned in Lamrabet et al. (2024) and. Artificial intelligence (AI) is characterized by its ability to solve complex problems and perform complex tasks using human-like reasoning, such as speech and visuals recognition, processing natural language, decision making and translation. The term artificial intelligence was coined by John McCarthy in 1956 during a Dartmouth conference organized by Marvin Minsky and John McCarthy (Lamrabet et al., 2024). Moreover, Ekundayo et al. (2024) mentioned that AI refers to the use of computer algorithms and statistical model to process, analyze and interpret data in research and teaching.

2.2. AI in Academic research

Nowadays, various Artificial Intelligence (AI) tools are being used to optimize the students' research activities. Students can rely on AI tools for several purposes, such as text generation, analyzing and interpreting data, literature review, editing, and other things (Danler et al., 2024) In recent years, research has been profoundly concerned with the AI integration in scholarly research to investigate how it is used, its benefits and challenges, and how ethical issues are targeted.

According to Golan et al. (2023), Artificial intelligence (AI) can be used in academic writing in two dimensions. First one is that AI can be used as an *assistant*, which means those tools that support the researcher in the writing process of research. And second, AI can be used as an *assessor*, which refers to those tools that *assess* the quality and validity of the research via providing feedback.

2.3. The Benefits of AI in Research

Artificial Intelligence (AI) has significantly and apparently transformed the way students and researchers conduct scientific research (Danler et al., 2024). In today's research landscape, AI can be used in conducting studies without necessarily breaking the academic rules (Oliinyk et al., 2024). PhD students can benefit from Artificial Intelligence (AI) in different research areas with ensuring the research quality and academic integrity. It can be used in their research activities to speed up the process of finding the needed information, to quickly summarize and interpret the results, outline the research and more (Oliinyk et al.,2024).

Boubker et al. (2024) highlighted the potential benefits of AI use in academic writing by stressing that it can considerably leverage the accuracy and proficiency of the research process. AI use can optimize various stages of the research journey, including research outset, generating questions and hypotheses, collecting and analyzing data as well as the literature review by helping students quickly find relevant sources and previously-conducted studies (Boubker et al., 2024).

Today, various AI tools can be utilized in different scientific research stages. Students may rely on ChatGPT, for instance, to come up with original ideas, suggest different phrases patterns, and offer immediate feedback (Yazid & Dzulfikri, 2024). Moreover, Guhan et al. (2023) mentioned two main tools that can be used for writing assistance, which are Grammarly and Quillbot. The former can help in reviewing spelling, grammar checking, correcting punctuation errors and so on. Whereas, the later, Quillbot, is a paraphrasing tool and can significantly help in rewriting texts in a more elevated and academic language. On the other hand, pinpointed other AI tools that can be used for scientific writing, such as ConnectedPapers, ResearchRabbit, Scholarcy, Elicit, Trinka and Scite.

2.4. Challenges of AI adoption in Academic Research

Overall, and since the appearance of technology, the issue of challenges and downsides has always been present in the scientific research. Qasem (2023) found out that ChatGPT, which is

one of the most commonly used AI tools around the world nowadays, is significant and helpful if it is used wisely and ethically at the scientific and academic context. Based on this we can obviously conclude that the *ethical concern* is one of the main challenges of AI adoption in scientific research (Ahmed et al., 2023). In the same vein, Danler et al. (2024) mentioned the temporal limitation in the data sourcing related to the use of ChatGPT. Also, the content provided by ChatGPT was reported as inaccurate and hold no authenticity (Guleria et al., 2023). Ekundayo et al. (2024) added the concern of transparency and interpretability of AI- generated results.

Additionally, Moukhliss et al. (2024) listed various challenges related to the adoption of AI in higher education, like luck of training, fear of plagiarism, students laziness luck of making efforts, killing students' creativity and innovation and high costs of some AI tools. Such challenges should not be ignored when it comes the AI adoption in academic research.

2.5. Institutional support of IA integration

AI plays a significant role in helping students and academicians in developing better content, illustrations, grammar, writing styles and skills (Guhan et al., 2023). This objective cannot be properly reached without the academic support and guidance. It is highly advisable that academic institutions raise students' awareness of the shortcomings and limitations of some AI tools like ChatGPT and others, and make them understand potential difficulties that they may encounter while using AI writing assistance (Yazid & Dzulfikri, 2024). Many researchers emphasized the challenge related to the violation of ethics and academic integrity (Oliinyk et al., 2024). Thus, this necessitates the creation of straightforward rules and ethical guidelines for a responsible and creative adoption of AI in academic research.

Furthermore, going back to the obstacles mentioned above and that were listed by Moukhliss et al. (2024), given the widespread use of AI tools among students and researchers, it is essential for academic institutions to offer training courses that address plagiarism concerns, ethical issues and fostering students' creativity and innovation. Not only this, universities should also provide researchers with free access to those AI tools with high cost. Such institutional support could highly improve the incorporation of AI in scholarly research.

2.6. Institutional support of IA integration

Nowadays, the vast majority of PhD students use AI tools at some points in the research journey (Guhan et al., 2023). However, the way they perceive the AI integration in the research landscape is fundamental for understanding the extent to which it is adopted, and whether or

not it impacts the research efficiency and the effectiveness. Research shows a favorable trend in the perception on AI and its utilization (Lamrabet et al., 2024). One of the major perspectives on the AI adoption in research is its ability to save time by improving the **efficiency** and increasing the productivity (Guhan et al., 2023). It is also perceived as useful for its potential to significantly improve the research output (Boubker et al. 2024). Moreover, employing AI technology in academic writing is seen as fundamental for improving the writing abilities and enhancing the writing skills (Malik et al., 2023). Overall, the PhD students' perspectives highlight the key role of AI integration in enhancing research efficiency and increasing the research outcomes.

3. Materials and Methods

To investigate PhD students' perspectives on Artificial Intelligence (AI) adoption in scholarly research and the level of support provided by higher education institutions, we employed a quantitative approach. This approach captures insights into the extent to which PhD students use AI in their research, the types of AI tools they utilize, their views regarding the benefits and challenges of AI integration and the level of institutional support available. The adoption of such approach is based on its use of numerical data, such as frequencies and percentages, which makes the results easier to interpret and analyze (Creswell & Creswell, 2018).

The study opts for a survey design because it uses a structured survey instrument for gathering information, quantitative data, which is then analyzed and described to better understanding the beliefs, perspectives, opinions and attitudes of the participants (Creswell & Creswell, 2018; Apuke, 2017; Sukamolson, 2007; Fischer et al., 2023). This design is suitable for this study as it helps to gain deep insights into how PhD students perceive AI adoption in scholarly research and the role of institutional support, providing a comprehensive understanding of the factors influencing their views and challenges they encounter.

3.1. Participants

A sample of 74 PhD students from the English department across various fields of study at different Moroccan universities was selected to participate in this study. This sample was selected using a non-random purposive sampling method in order to gather rich and detailed insights from PhD students from various disciplines as far as the utilization of IA tools in academic research is concerned. The participants were reached through multiple digital

channels, including email, WhatsApp and Messenger. However, it is significant to acknowledge that this sample is relatively small and may not represent all the Moroccan universities.

Tables 1, 2, 3 and 4 show the participants distribution across various demographic backgrounds.

The participants in this study were, as table 1 shows, 44 males (59,5%), which accounts for 59,5% of the total sample. In contrast, 30 participants were females, accounting for the remaining 40,5% of the total of the sample.

Table 1. *Participants' gender*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	44	59,5	59,5	59,5
	Female	30	40,5	40,5	100,0

As for the age group of the sample, table 2 shows that the participants' ages ranged from 20 to 41 and above. The 20-25 age group made up 18.9% of the total sample, the 26-30 age group represented 23%, the 31-35 age group were 14.9% of the sample, the age group 36-40 represented 18.9% and the age group 41 and above made up the majority of participants (24.3%).

Table 2. *Participants' age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-25	14	18,9	18,9	18,9
	26-30	17	23,0	23,0	41,9
	31-35	11	14,9	14,9	56,8
	36-40	14	18,9	18,9	75,7
	41 and above	18	24,3	24,3	100,0

As far the participants' PhD academic year is concerned, table 3 shows that the participants belonged to different years of study, ranging from the 1st year to the 4th year or more. First-year students made up the majority of sample (37.8%), Second-year students represented 28.4%, 15 participants (20.3%) were third-years students, and only 10 participants (13.5%) were in fourth-year or more.

Table 3. *Participants' PhD academic year*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1st Year	28	37,8	37,8	37,8
	2nd Year	21	28,4	28,4	66,2
	3rd Year	15	20,3	20,3	86,5
	4th Year or more	10	13,5	13,5	100,0

As for the participants' field of study, table 4 indicates that PhD students in this study belonged to various disciplines. However, the vast majority of participants (75.7%) were in the Applied Linguistics. Meanwhile, 2.7% were in English Literature, 2.7% in Cross-Cultural Studies, 8.1% in Media Studies, 1 participant (1.4%) in Gender Studies, and 1 participant (1.4%) in TEFL.

Table 4. *Participants' field of study*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English Literature	2	2,7	2,7	2,7
	Cross-cultural Studies	2	2,7	2,7	5,4
	Media Studies	6	8,1	8,1	13,5
	Applied Linguistics	56	75,7	75,7	89,2
	Gender Studies	1	1,4	1,4	90,5
	TEFL	1	1,4	1,4	91,9

3.2. Data collection and instrument

In this quantitative research we utilized an online survey to collect measurable and statistically analyzable data. The survey comprised of three sections. The first one gathered the demographic data, such as gender, age, the academic level and the field of study. The second section gathered information about the AI utilization and this section contained three questions related to the AI tools they used most, the type of AI tools (free or paid) they used, and the reason for which they used AI tools while conducting research. The last section of the survey aimed to capture and examine researchers' perspectives on AI adoption in the field of research. In this section we utilized a five-point Likert scale, adapted from Guhan et al. (2023). The scale ranges from 1 (strongly disagree) to 5 (strongly agree) to measure the PhD students' perspectives on the utilization of AI tools in academic research and the potential benefits and challenges, in parallel with the institutional supported provided for maintaining quality and academic integrity.

The Likert scale used in this survey has 20 items with components, such as research skills (8 items), challenges (2 items), students' beliefs (5 items) and the institutional support (5 items). The internal consistency of these items was examined using the Cronbach's alpha test for assessing the reliability of the survey. The Cronbach alpha test result was 0,886 as shown in table 5.

As we observe in table 5, the result indicates a good reliability. This suggests that the items in our scale are internally consistent. This is a strong indicator that the survey is reliable and

effective in measuring the PhD students' perspectives regarding the AI utilization in research and the available institutional support.

Table 5. *Reliability statistics*

Cronbach's Alpha	N of Items
,886	20

3.3. Ethical considerations

In this research ethical issues were actively anticipated and properly addressed in all research phases. Based on the fact that this study attempts to collect data from students and about students, strict measures were followed to ensure the privacy and anonymity of the participants. These methodologies aim to build trust with participants, collect authentic data and promote the integrity of this research.

3.4. Data analysis

As stated above, this study adopted the quantitative approach. Thus, the analysis of data was done using the SPSS for gaining frequencies and percentages of participants' responses. These frequencies and percentages were crucial for understanding the extent to PhD students in this study utilize and perceive the AI in the research process and its potential impact on research quality and integrity. They are also significant in for gaining a picture on the support provided by the Moroccan universities regarding the adoption of artificial intelligence in scholarly research.

3.5. Questions

To reiterate, this research focuses on gaining insights into the perspectives of PhD students regarding the use of AI in their research, and examining the extent of support offered by Moroccan universities in training students to use AI tools appropriately, responsibly and ethically. In the light of such objectives, the following research questions have been formulated:

- **RQ1:** what are the PhD students' perspectives on the use of AI tools in enhancing their research skills and productivity?
- **RQ2:** how do PhD students perceive the level of institutional support for AI integration in scholarly research at Moroccan university?

4. Results

4.1. Descriptive statistics: AI use among PhD students

The integration of artificial intelligence in academic research among PhD students nowadays is apparently increasing. As the PhD tasks grow complex, AI provides valuable support to optimize the academic tasks and increase the productivity. This subsection explores the types of AI tools PhD students use in research. It also highlights the most commonly used AI tools by PhD students in Moroccan context and examines the main purposes for which students integrate AI in their research activities. Understanding the AI usage among PhD students provides insights into the transformative role of AI tools in scholarly research.

Table 6 shows that 60 participants (81%) used free AI tools, making up the largest group. Only 2 participants (2.7%) used paid tools, and 8 participants (10.8%) used both types. 4 participants (5,4%) do not use AI in research tasks.

Table 6. *Types of AI tools*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Free	60	81,1	81,1	81,1
	Paid	2	2,7	2,7	83,8
	Both	8	10,8	10,8	94,6
	No AI	4	5,4	5,4	100,0
	Total	74	100,0	100,0	

As for the AI tools that PhD students in Moroccan Universities use for research activities, figure 1 demonstrates that the vast majority of participants (81.08%) indicated using ChatGPT. Grammarly was used by 62.16% of participants, while 36.49% used QuillBot and 29.73% used Zotero. Only 13.51% of participants used Mendeley and Scholar AI. Additionally, more than 90% of participants showed that they did not use other tools, like Connected papers, Trinka, PaperPal, Scite, Semantic Shcolar, etc.

As for the major purposes for which PhD students use AI tools for when it comes to research tasks, table 7 indicates that more than 40% of respondents reported using AI tools for tasks such as suggesting research topics, finding relevant sources, grammar checking, paraphrasing and summarizing. Additionally, more than 30% of respondents indicated using AI tools for identifying gaps, generating questions and hypotheses, designing surveys, translation and citing

sources. Overall, the majority of responses indicated not using AI tools for the most common research tasks listed in table 7.

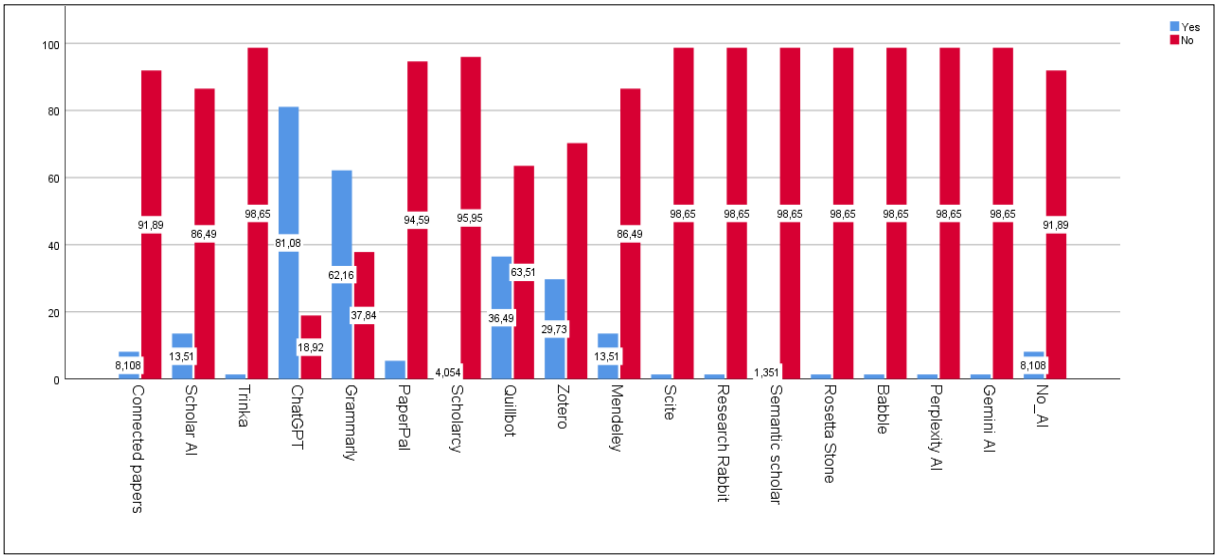

Figure 1. *AI tools PhD students use*

Table 7. *The purposes PhD students use AI tools for*

	Yes	No
Identifying research gaps	37,8%	62,2%
Suggesting topics	43,2%	56,8%
Generating Questions and hypotheses	39,2%	60,8%
Designing surveys	32,9%	67,1%
Finding relevant sources	48,6%	51,4%
Paraphrasing and summarizing	41,9%	58,1%
Translation	32,4%	67,6%
Grammar checking	47,3%	52,7%
Reliability testing	4,1%	95,9%
Data analysis	17,6%	82,4%
Data interpretation	13,5%	86,5%
Citing sources	32,4%	67,6%
No AI use	8,1%	91,9%

In general, the data shows that free AI tools are the most commonly used by PhD students in Moroccan Universities, with ChatGPT, Grammarly, QuillBot, and Zotero being the most popular choices for research activities. Additionally, these students utilize AI tools for various purposes and across different research stages, starting with identifying gaps to citing sources.

4.2. Analysis of students' perspectives

4.2.1. *General perspectives on AI adoption in research*

The third part of the questionnaire was a survey to examine the PhD students' perspectives on AI integration in academic research and the level of support provided by higher education institutions as a response to this transformative trend. This survey contained 20 items. 6 items of this survey aimed to capture students' general beliefs on AI adoption in research, their perspectives on the effectiveness of AI and the extent to which they trust its suggestions.

Figure 2 shows that the majority of participants (more than 70%) affirmed that AI tools helped them complete research tasks in less time. Nearly 40% believed that AI tools are essential for producing higher quality research, while 27.3% disagreed with this. More than 68% of participants affirmed that AI tools have positively improved their research productivity. In contrast, nearly half of participants (48.64%) confirmed that they don't trust the suggestions and recommendations provided by AI tools. Additionally, the vast majority of participants (52.70%) strongly agreed that following ethical and legal guidelines is essential for the appropriate use of AI in research. More than 62% of participant believed that AI helps in generating innovative research ideas and hypotheses.

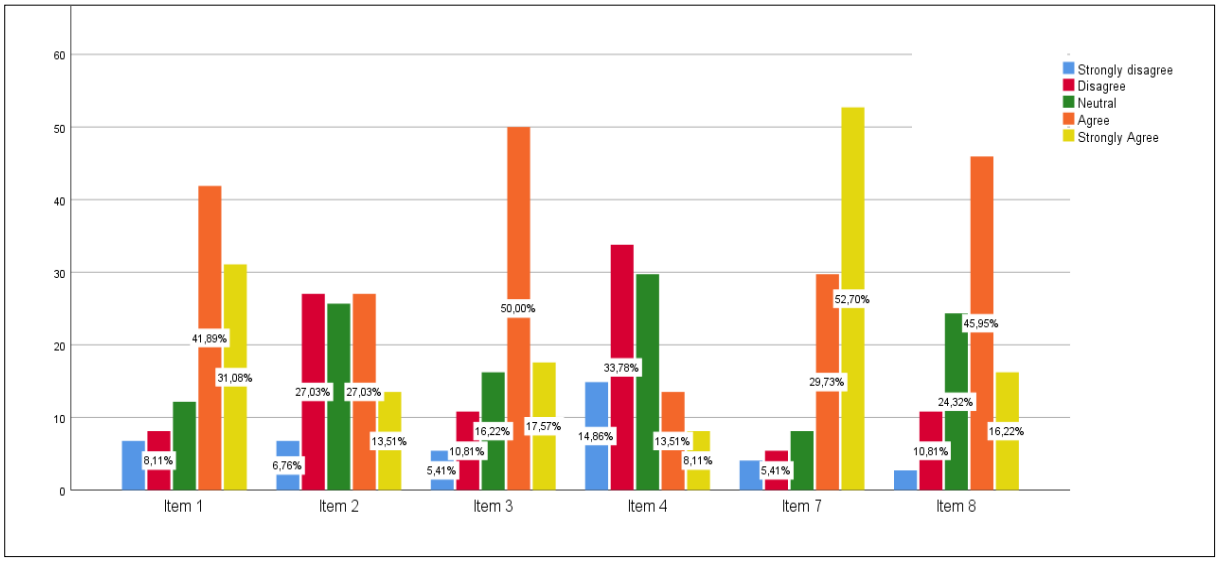

Figure 2. *PhD students' Perspectives*

Overall, table 8 shows that the mean score for item 7 is 4.22. This value indicates a strong agreement with the item among participants, whereas the standard deviation was 1.076 indicating a significant degree of variation in participants' responses. Moreover, for items 1, 3 and 8 the mean score varies between 3.60 and 3.80, which indicates a neutral to a positive

tendency among participants. There is no strong agreement with the Likert scale statements, but rather a mild inclination toward agreement. For item 4, the mean value was 2.66 suggesting that the respondents were somewhat undecided or neutral, just slightly above disagreement. Yet, there is a considerable degree of variation in participants' responses based on the standard deviation, which was, for most items, around 1.100 as shown in the table 8.

Table 8. *Descriptive statistics: PhD students' Perspectives*

	N	Range	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Item 1	74	4	3,82	,135	1,163	1,352
Item 2	74	4	3,14	,135	1,162	1,351
Item 3	74	4	3,64	,124	1,067	1,139
Item 4	74	4	2,66	,132	1,138	1,295
Item 7	74	4	4,22	,125	1,076	1,158
Item 8	74	4	3,62	,113	,975	,951

4.2.2. *Optimizing research skills*

The survey has also revealed PhD students' perspectives on AI adoption in terms of its impact on research skills. In other words, the third part of the Likert scale (7 items, from 9 to 15) gained insights from PhD students into the extent to which AI tools optimized their research tasks, such as conducting literature reviews, citing sources, summarizing and paraphrasing and others.

Figure 3 indicates that more than 59% of participants affirmed that AI tools helped them become more efficient in conducting literature reviews. Nearly 62% of participants stated that AI tools enhanced the organization and structure of their research. Regarding citation, almost 42% of participants felt more confident in citing sources accurately due to AI tools, while 34% disagreed to some extent, and approximately 27% remained neutral. In terms of summarizing and paraphrasing research content, 44.59% of participants agreed, and 12.16% strongly agreed, that AI tools were helpful and effective in this area. More than 32% of participants reported feeling more confident in conducting statistical analysis with AI tools. Around 26% **disagreed**, and the majority (nearly 42%) were **neutral**. In terms of qualitative data analysis, 44.59% of participants affirmed that using AI improved their ability to process and analyze qualitative data, while 37.84% were neutral. Finally, nearly 50% of participants confirmed that AI tools enhanced their ability to interpret statistical results and research findings. Only 15% disagreed with this statement, whereas more 36% were neutral.

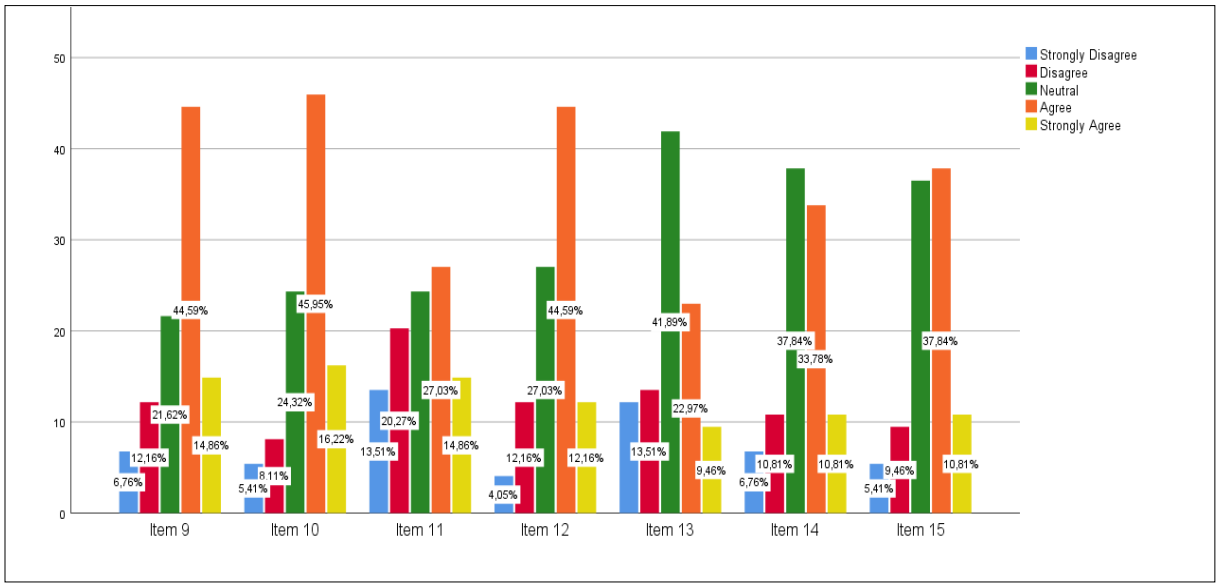

Figure 3. *Participants' agreement levels on the usefulness of AI in key research activities*

In general, table 9 demonstrates that the mean score for the perceived significance of AI tools in optimizing research activities is approximately 3,40 for most items. This value indicates a neutral to a positive tendency among participants. The results do not show a strong agreement with the Likert scale statements, but rather a mild inclination toward agreement. However, the standard deviation, which was around 1.100, indicates a considerable degree of variation in participants' responses.

Table 9. *PhD students' Perspectives: Research Skills*

	N	Range	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Item 9	74	4	3,49	,128	1,101	1,212
Item 10	74	4	3,59	,120	1,033	1,066
Item 11	74	4	3,09	,148	1,273	1,621
Item 12	74	4	3,49	,116	,996	,993
Item 13	74	4	3,04	,130	1,116	1,245
Item 14	74	4	3,31	,120	1,033	1,066
Item 15	74	4	3,39	,115	,991	,981

4.2.3. *Perspectives on institutional support*

Due to the increasing usage of Artificial intelligence among students and its potential benefits in enhancing research productivity and quality, higher education institutions should engage with this emerging technology. The primary concern of these institutions should be maintaining academic integrity and ensuring high research quality. The fourth component of the survey used

in this study aimed to investigate PhD students' perspectives on the level of support and guidance provided by Moroccan universities regarding the integration of AI in academic research. This component has five items (from 16 to 20).

Figure 4 shows that 35.13% of participants strongly disagreed that their institutions provided access to AI tools for research purposes, and nearly 33% disagreed. 20.27% remained neutral and about 12% agreed with the statement. Similarly, 36.39% of participants strongly disagreed that their universities offered training programs and workshops on using AI tools for research, and 24.32% disagreed. Moreover, more than 67% of participants disagreed that they had the opportunity to attend AI-related training through their faculties. Regarding institutional guidance, approximately 68% of participants rejected the idea that they received guidance from their institutions on how to use AI tools in research. Finally, nearly 46% of participants disconfirmed that their institutions have clear rules for using AI ethically in research, while 32.43% of participants remained neutral.

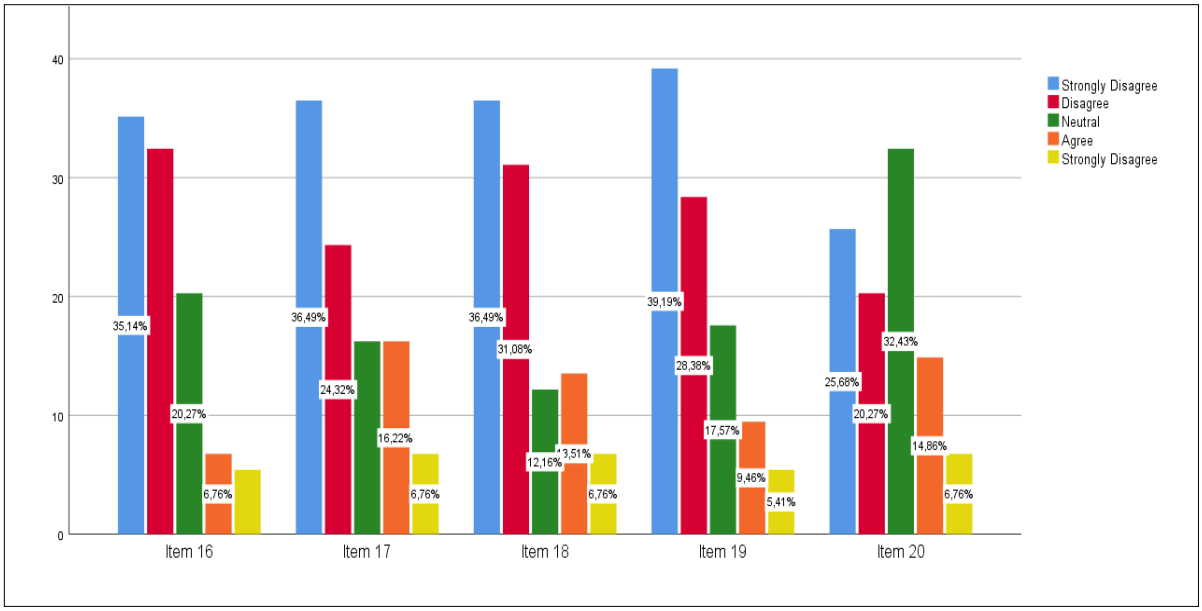

Figure 4. *PhD students' Perspectives on Institutional Support for AI integration in academic Research*

In general, table 10 shows that the mean values for items regarding the institutional support for AI usage in academic research range between 2.15 and 2.57, indicating general disagreement with the items. This suggests that participants perceive a lack of institutional support, as they tended to disagree with the statements regarding university guidance on AI adoption in research. However, the standard deviation, which was around 1.200, reflects a notable degree of variation in participants' responses.

Table 10. *Descriptive statistics: Perspectives on Institutional Support*

	N	Range	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Item 16	74	4	2,15	,133	1,143	1,306
Item 17	74	4	2,32	,152	1,304	1,702
Item 18	74	4	2,23	,147	1,267	1,604
Item 19	74	4	2,14	,139	1,197	1,434
Item 20	74	4	2,57	,142	1,217	1,482

4.3. Relationship between perspectives and research skills development

A Pearson correlation was conducted to examine the relationship between PhD students' general perspectives on AI usage in research and their research skills promotion as table 11 shows. There was a **strong, positive correlation**, r =.770, p <.001, indicating that more positive attitudes toward the AI adoption in research were associated with stronger perceptions of AI contributing to research skill development. This relationship was statistically significant, suggesting that general perspectives on AI may play an important role in enhancing PhD students' research skills and competencies.

Table 11. *Pearson correlation between perspectives and research skills development*

		General perspectives	Skills enhancement
gen_perspectives	Pearson Correlation	1	,770**
	Sig. (2-tailed)		,000
	N	74	74
Skills_enhancement	Pearson Correlation	,770**	1
	Sig. (2-tailed)	,000	
	N	74	74

Overall, the data collected in this study show that the vast majority of participants use open-access AI tools such as ChatGPT, Grammarly, Quillbot, and Mendeley at a certain point of their research process. Most of PhD students use such tools for tasks like suggesting research topics, finding relevant sources, grammar checking, paraphrasing and summarizing.

5. Discussion

Generally speaking, in the light of the results obtained in the current study, most of PhD students use Free AI tools in their research activities. This is probably due to their availability and free

cost. However, Danler et al. (2024) highlighted the potential limitations of these freely accessible AI tools when it comes to their effectiveness and quality in scientific research. Danler found out that such available tools were limited in data sourcing and other functionalities, and they raised the question of the potentiality that paid AI tools may offer better performance and reliability regarding research tasks.

The data also reveals that ChatGPT, Grammarly, QuillBot, Zotero and Mendeley are the most commonly used AI tools by PhD students. This can be attributed to various factors such as the perceived ease of use, satisfaction and PhD students' research output improvement (Boubker, et at., 2024). This finding aligns with previous studies highlighting a high level of students' dependency on ChatGPT for writing and content suggestions (Yazid & Dzulfikri, 2024). Similarly, Guhan et at. (2023) also found out that the majority of participants (research scholars) used Grammarly, Quillbot, Mendeley and Zotero to optimize their research tasks. This is congruent with Malik et al. (2023) who stated that ChatGPT, Grammarly, Quillbot are among the top list of AI tools used by students. However, this result may seem unmatching with that of Guleria et al. (2023), who stated that ChatGPT provided false and incorrect results and the use of such Chatbots should be avoided in scientific research. In a moderate and neutral view, Qasem, F. (2023) argued that ChatGPT is helpful if it is used wisely and ethically.

The present study has also revealed that PhD students use AI while conducing research for tasks such as suggesting topics, finding relevant sources, grammar checking, paraphrasing and summarizing. In this regard, it is worth mentioning that the main advantage of AI is its ability to optimize the work of future research scholars (Oliinyk et al., 2024). This is apparently congruent with the findings in Guhan et al. (2024), who reported that 57.76% of participants (research scholars in the Vellore district) affirmed that AI tools like ChatGPT have facilitated the identification of relevant research sources. Likewise, data in Malik et al. (2023) showed that respondents believed that AI is beneficial for suggesting appropriate essay ideas, summarizing content and synthesizing information.

In addition to this, the current study has also explored the PhD students' general perspectives on the utilization of AI-powered tools in scholarly research. It was revealed that participants in this study agreed that AI improves the efficiency and productivity of their research. They perceive AI tools as beneficial in completing research tasks more quickly. Such findings align with that of Boubker et at. (2024), who stated that ChatGPT could significantly improve the PhD students' research productivity, and Guhan et al. (2023), who found that 68.32% of

participants confirmed that using AI tools sped up data analysis in their research, and 91% already used AI-powered software to improve their academic writing and productivity. However, the majority of PhD students in the present study believed that AI is not essential for producing higher-quality research. This finding contrasts sharply with the findings in Moukhliss et al. (2024), who reported that 91% of higher education professors believed that AI tools improved the quality of their research activities. This study has also revealed that the majority of PhD students, in spite of using AI for several research tasks and believing that it helps in generating innovative research ideas and hypotheses, reported that they do not trust the suggestions and recommendation provided by AI tools. Participants may be afraid of the risks and inaccuracy of some tools, but they probably resort to them for saving time and enhancing productivity, especially in contexts where quantity is more valued than quality. This is congruent with Ekundayo et al. (2024) and Guleria et al. (2023). The two studies emphasized the risks of inaccurate, false or misleading findings associated with AI tools, like ChatGPT. On the other hand, previous research explored that 68.94% of researchers trusted the suggestions and recommendations provided by AI tools (Guhan et al., 2023). Lastly, participants in this study considered following ethical and legal guidelines as essential for the appropriate use of AI in research. In this respect, it is worth mentioning Qasem, F. (2023) who stated that ChatGPT is beneficial if it is used wisely and ethically.

Another significant finding in this study is that participants demonstrated that there was a lack of guidance and support regarding the utilization of AI in research. This implies that PhD students in the present study did not receive any institutional guidance on how to use AI-powered tools in research tasks and what should be taken into consideration while doing that. This is congruent with the results in Moukhliss et al. (2023) who reported the lack of training as the major challenge students encountered. Guidance regarding the incorporation of AI in scientific research can be a valuable solution to avoid the violation of ethics and academic integrity that were reported as the main challenges in Oliinyk et al. (2024). Moreover, previous research highlighted other limitations when relying on AI like the lack of originality and innovation, the limitation of critical thinking skills (Malik et al. 2023), as well as the increased risk of plagiarism and impersonal writing (Yazid & Dzulfikri, 2024). On the other hand, a reasonable portion of participants in the present study stated that they did not face technical challenges when trying to integrate AI into research. This obviously indicates that they have a

good mastery of research-related AI tools. This is incongruent with the findings of Moukhliss et al. (2024) who reported that university teachers and students lacked the mastery of AI tools.

Another key finding in this study is that participants reported enhanced research skills due to the utilization of AI tools. In other words, the majority of participants agreed or strongly agreed that AI-powered tools contributed to their efficiency in conducting literature reviews, organizing and structuring research, citing sources accurately, summarizing and paraphrasing research content, processing qualitative data and interpreting statistical results. Such finding aligns with that of Guhan et al. (2024), who reported that 64.59% of researchers in their study have affirmed that AI tools have improved their literature review process. Additionally, 77.1% agreed that AI tools like Grammarly and Quillbot enhanced the organization and structure of their research, while nearly 75% of participants feel more confident in citing sources due to AI tools. Similarly, Oliinyk et al. (2024) found that AI use is effective in building and enhancing the research competence of PhD students. In the same vein, Malik et al. (2023) stated that most of students believed that AI technology improved their academic writing skills. Overall, these studies strongly suggest that the incorporation of AI contributes to the development of research skills and competence.

The last significant finding in the current study is that the vast majority of participants demonstrated an obvious lack of institutional support regarding the AI integration in scientific research. They suggested having free access to paid AI tools due to their potentiality of providing more authentic and reliable information and resources. They also suggested training programs and workshops as well as being updated with clear rules that guides their AI usage in research activities. This finding goes hand in hand with that of Oliinyk et al. (2024) who stressed developing a clear institutional policy regarding the use of AI in the research work of PhD students. Similarly, Ekundayo et al. (2024) reported the necessity for the creation of ethical guidelines and best practices in the deployment of AI in research. Generally, the present study and others demonstrated that a lot of work is needed to be done by institutions in order to ensure research quality and academic integrity. While there is a wide spread of research-oriented AI tools, ethical challenges may pop up and significantly many students still lack the mastery of AI tools (Moukhliss et al., 2024). Thus, university officials should take actions for an ethical and reasonable AI adoption in academic research.

6. Conclusion

The current study examines PhD students' perspectives on, and experiences with, the utilization of AI tools in research activities. The findings show that PhD students in Moroccan university do use AI tools while conducting research, mainly the free tools. They use these technologies for research tasks like suggesting topics, finding relevant sources, grammar checking, paraphrasing and summarizing. ChatGPT, Grammarly, QuillBot, Zotero and Mendeley were explored as the most commonly used tools for such tasks. The results of this study also indicate that participants view AI tools as significant for improving the efficiency and productivity of their research. Moreover, the study also highlights the extent of support and guidance provided by Moroccan universities regarding the adoption of AI tools in scholarly research. The findings revealed that there is an apparent lack of institutional support regarding the AI integration in scientific research. For students, their institutions do not provide access to AI tools for research purposes, do not offer training programs and workshops addressing the extent to which AI tools can be used in research and do not specify clear rules for using AI ethically and appropriately.

6.1. Limitations

Although this study provides valuable insights into the PhD students' beliefs and experiences regarding AI use in academic research, several limitations should be recognized. First, the sample size, 74 participants, is small and this might affect the research generalizability. Second, other data collection methods could be more insightful and illuminating for this study such as observations, interviews, etc. Finally, the study should also have addressed challenges that PhD students encounter while utilizing the AI tools in research activities.

6.2. Implications

Despite the above limitations, this research provides evidence-based recommendations for enhancing research quality and innovation and ensuring that future researchers are equipped with the necessary tools and knowledge to conduct research ethically, responsibly and appropriately in a way that aligns with the university policy and academic integrity. This study explicitly shows that PhD students use AI tools in research tasks, whereas institutions do not provide any support in this regard. Therefore, for maintaining and ensuring the academic research quality, institutions should provide clear rules to legitimize and frame the utilization of AI in research, they should provide guidance and support through training programs and

workshops, and they should provide free access to paid AI tools for research purposes alongside creating AI use policies as long as students are already using AI tools.

6.3. Suggestions for Future Research

This study has uncovered two significant gaps in literature that should be academically addressed. First, future research should delve deeper into gaining more insights into the challenges researchers face while adopting AI tools in research. This can be valuable and informative regarding training programs and workshops. Besides, this study has highlighted a paradox that should be investigated which is the fact that participants use AI tools for various research tasks and stages, yet they declared that they do not trust suggestions provided by AI tools. Future research can delve deeper into this point by investigating why PhD students do not trust the AI tools' answers and suggestions, and examine possible ways to restore this trust.

Disclosure Statement

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References

Ahmed, S. F., Han, H., Alam, M. M., Rehmat, M. K., Irchad, M., Arrano-Munoz, M. & Ariza-Montes, A. (2023). Impact of Artificial Intelligence on Human Loss in Decision Making, Laziness and Safety in Education. *Humanities and Social Science Education*. https://doi.org/10/1057/s1599-023-01787-8

Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. Kuwait Chapter of *Arabian Journal of Business and Management Review*, *33*(5471), 1-8. https://doi.org/10.12816/0040336

Baker, J. (2011). The Technology-Organization-Environment Framework. *Vol. 1, Integrated Series in Information Systems* 28, https://doi.org/10.1007/978-1-4419-6108-2_12

Boubker, O., Abdessadek, M., Ben-saghroune, H. & Sabbahi, R. (2024). Examining the Impact of OpenAI's ChatGPT on PhD Student Achievement. *International Journal of Information and Education Technology.* https://doi.org/10.18178fijiet.2024.14.3.2065

Burger, B., Kanbach, D. K., Kraus, S., Breier, M., & Corvello, V. (2023). *On the use of AI-based tools like ChatGPT to support management research. European Journal of Innovation Management, 26*(7), 233-241. https://doi.org/10.1108/EJIM-02-2023-0156

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Danler, M., Hackel, W. O., Neururer, S. B. & Pfeifer, B. (2024). Quality and Effectiveness of AI Tools for Students and Researchers for Scientific Literature Review and Analysis. *IOS Press https://doi.org/10.3233/SHTI240038*

Davis, F. D. & Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly.* https://doi.org/10.2307/249008

Ekundayo, T., Khan, Z. & Nuzhat, S. (2024). Evaluating the Influence of Artificial Intelligenceon Scholarly Research: A Study Focused on Academics. *Human Behavior and Emerging Technology.* https://doi.org/10.1155/2024/8713718

Fischer, H. E., Boone, W. J., & Neumann, K. (2023). Quantitative research designs and approaches. *In Handbook of research on science education* (pp. 28-59). Routledge. https://doi.org/10.4324/9780367855758-3

Golan, R., Muthigi, A., Reddy, R. & Ramasamy, R. (2023). Artificial Intelligence in Academic Writing: A Paradigm-Shifting Technological Advance. *Nature Reviews Urology.* https://doi.org/10.1038/s41585-023-00746-x

Guhan, M., Chandramohan, S. & Venkatesan, D. (2023). A Survey on Analizing the Effectiveness of AI Tools Among Research Scholars in Academic Writing and Publishing. *International Journal of Advance Research and Innovative Ideas in Education.* https://www.researchgate.net/publication/376198760

Guleria, A., Krishan, K., Sharma, V. & Kanchan, T. (2024). ChatGPT: Ethical Concerns and Challenges in Academics and Research. *The Journal of Infection in Developing Countries.* 17(9): 1292-1299. https://doi.org/10.3855/jidc.18738

Hutson, M. (2022). *Could AI help you to write your next paper?* _Nature, 611 (7934), 192-193. https://doi.org/10.1038/d41586-022-03479-w

Lamrabet, L., Echantoufi, N., Fakhar, H. & El-khattabi, K. (2024). AI-Based Tools: Exploring the Perceptions and Knowledge of Moroccan Future Teachers Regarding AI in the Initial Training- A Case Study. *International Journal of Information and Education Technology, 14*(11), 1493–1505. https://doi.org/10.18178/ijiet.2024.14.11.2180

Malik, A. R., Pratiwi, Y., Andajani, K., Numertayasa, W., Suharti, S. & Darwis, A. (2023). Exploring Artificial Intelligence in Academic Essay: Higher Education Student's Perspetive. *International Journal of Education.* https://doi.org/10.1016/j.ijedro.2023.100296

Moukhliss, G., Diab, G. & Lahyani, K. (2024). The Impact of Artificial Intelligence on Research and Higher Education in Morocco. *Journal of Education and Learning (EduLearn).* https://doi.org/10.11591/edulearn/18i4.21511

Oliinyk, I., Bulavina, O., Romanenko, T., Tatamikova, A. & Smirnov, A (2024). Artificial Intelligence in Developing Doctoral Students' Research Competencies. *Revista Eduweb,* 18(3), 294-305. https://doi.org/10.46502/issn.1856-7576/2024.18.03.22

Qasem, F. (2023). ChatGPT in Scientific and Academic Research: Future Fears and Reassurances. *Library Hi Tech News*. https://doi.org/10.1108/LHTN-03-2023-0043

Sukamolson, S. (2007). *Fundamentals of quantitative research*. Chulalongkorn University. Retrieved from http://www.culi.chula.ac.th/e-Journal/bod/Suphat%20Sukamolson.pdf

Wagner, G., Lukyanenko, R. & Pare, G. (2022). Artificial Intelligence and the Conduct of Literature Reviews. *Journal of Information Technology. Vol. 37(2) 209-226.* https://doi.org/10.1177/02683962211048201

Yzid, S. R. & Dzulfikri, D. (2024). ChatGPT, Smart Writing Assistant Chatbot for Students: Analysis of its Drawbacks. *International Journal of Education*. 09 (1): 41-56. https://doi.org/10.18860/abj.v9i1.24459

Appendix

The Likert Scale used for gathering information on participants' perspectives and experiences regarding the utilization of AI throughout their research activities as well as the extent of support and guidance that universities offer.

PhD students in this study had to rate their level of agreement with 20 statements as shown below:

1- Strongly disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly Agree

Items	Statements	1	2	3	4	5
1	AI tools help me complete research tasks in less time.					
2	AI tools are essential for producing higher-quality research.					
3	I believe AI tools have positively improved my research productivity.					
4	I trust the suggestions and recommendations provided by AI tools.					
5	I face technical challenges when trying to integrate AI into my research.					
6	There is a lack of guidance or support when using AI tools in research.					
7	Following ethical and legal guidelines is essential for the appropriate use of AI in research.					
8	I believe AI helps in generating innovative research ideas and hypotheses.					
9	AI tools have helped me become more efficient in conducting literature reviews.					
10	AI tools has enhanced the organization and structure of my research.					
11	I feel more confident in citing sources accurately due to AI tools.					
12	AI tools helps in summarizing and paraphrasing research content effectively.					
13	I feel more confident in conducting statistical analysis with AI tools.					
14	Using AI has improved my ability to process and analyze qualitative data.					
15	AI tools have enhanced my ability to interpret statistical results and research findings.					
16	My institution provides access to AI tools for research purposes.					
17	My university offers training programs & workshops on using AI tools for research.					
18	I have had the opportunity to attend AI-related training through my faculty.					
19	I receive guidance from my institution on how to use AI tools in my research.					
20	My university has clear rules for using AI ethically in research.					