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The Use of Generative Artificial Intelligence Algorithms (DeepSeek AI) in Scientific Research

An Evaluative Study on a Sample of Algerian University Professors

توظيف خوارزميات الذكاء الاصطناعي التوليدي DeepSeek AI في البحث العلمي
"دراسة تقييمية على عينة من أساتذة الجامعة الجزائرية"

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Abstract:

This study aims to explore how university professors utilize generative artificial intelligence (AI) technologies, including the DeepSeek AI system, and their impact on academic research in higher education. It also investigates how this technology is employed in the development of educational curricula. The research adopted a survey methodology, with systematic observation and interviews used to collect professors' opinions and insights. The findings indicate a growing interest in AI technology and its continued use within universities, improvements in research and exploration processes, and enhanced communication among researchers. Furthermore, the study shows that employing this technology contributes to curriculum development, facilitates research activities, and strengthens collaboration among academics.

Keywords: University professors, artificial intelligence, DeepSeek AI, academic research.

المخلص:

تهدف الدراسة الى معرفة كيفية توظيف الأساتذة الجامعيين لتقنيات الذكاء الاصطناعي التوليدي، بما في ذلك نظام تقنية "DeepSeek AI"، وأثرها على البحوث الأكاديمية في مجال التعليم الجامعي، وكذلك فهم كيفية استخدام هذه التقنية في تطوير المناهج التعليمية، حيث استخدمنا المنهج المسحي، أما بخصوص الادوات البحثية تمثلت في الملاحظة العلمية المنتظمة، والمقابلة لجمع آراء وملاحظات الأساتذة. فيما أظهرت نتائج الدراسة: الاهتمام المتزايد بالتقنية واستخدامها المستمر داخل الجامعات، وتحسين عمليات البحث والاستكشاف، وتعزيز التواصل بين الباحثين. وقد أظهرت النتائج المتوصل اليها أن استخدام هذه التقنية ساهم في تطوير المناهج التعليمية وتحسين عمليات البحث والاستكشاف، وتعزيز التواصل بين الباحثين.

الكلمات المفتاحية: الأساتذة الجامعيين، الذكاء الاصطناعي، تقنية DeepSeek AI، الأبحاث الأكاديمية.

1. INTRODUCTION

Artificial Intelligence (AI) is considered an emerging technology in the field of machine sciences. Through its various systems and tools, it has brought about a profound transformation in social and institutional structures and has reshaped many concepts related to practices and relationships. This term embodies vast potential in creating an advanced interaction between human ingenuity and technology, through the design and development of data analysis systems, algorithms, robots, and intelligent devices that contribute to building systems capable of performing tasks by generating predictions and making decisions that have a tangible impact on the augmented world.

Artificial intelligence aims to simulate the cognitive and psychological processes of human intelligence and thought, including the abilities of learning, understanding, and perception. It enables the execution of automated tasks without the need for direct

human intervention or the explicit programming of every single step.

This technological evolution positions artificial intelligence as a central driver of innovation, redefining how humans interact with intelligent systems and how decisions are produced and implemented in contemporary digital environments.

In addition, DeepSeek AI technology relies on artificial intelligence to enable systems to interact with users through chat-based communication, thanks to its ability to process natural language, understand conversational context and user inquiries, and provide intelligent and immediate responses. This contributes to delivering advanced interactive experiences and enhancing interaction between automated systems and humans.

The higher education sector is considered one of the most important and most benefited sectors from the technological revolution in general, and from artificial intelligence in particular. Many countries around the world

have been keen to promote and generalize the use of artificial intelligence within this sector. Algeria is among the countries that have witnessed a remarkable engagement with artificial intelligence technologies across various sectors, especially in higher education, notably among members of the Algerian academic community in the field of scientific research. This engagement involves the use of several artificial intelligence algorithmic techniques, including DeepSeek AI.

Accordingly, this study aims to examine how this technology is employed in academic research. Based on this objective, the research problem is formulated around the following central question:

2. Second Subtitle

Research

Problem:

How do Algerian university professors employ generative artificial intelligence technology (DeepSeek AI), and what is its impact on scientific research?

Sub-Research Questions

1. What is the theoretical foundation of artificial intelligence and **DeepSeek AI** technology?
2. How do Algerian university professors use **DeepSeek AI** technology in scientific research?
3. What are the main motivations and gratifications behind Algerian university professors' use of generative artificial intelligence technology (**DeepSeek AI**)?
4. What are the major consequences and ethical considerations related to Algerian university professors' use of **DeepSeek AI** in academic research?

1. Objectives of the Study

This study, entitled "The Use of Generative Artificial Intelligence Algorithms (DeepSeek AI) in Scientific Research: An Evaluative Study of a Sample of Algerian University Professors," aims to achieve the following objectives:

1. To examine the concept of artificial intelligence and its applications, and to analyze how university professors use generative AI technologies to improve

educational systems and enhance communication with students.

2. To highlight the importance of DeepSeek AI technology in improving the quality of education and developing students' skills, as well as to explore the challenges associated with the use of DeepSeek AI in supporting academic research and propose effective strategies to overcome these challenges.

Significance of the Study

This study is significant as it contributes to a deeper understanding of the role of generative artificial intelligence algorithms, particularly DeepSeek AI, in the context of scientific research and higher education. By examining the concept of artificial intelligence and its practical applications, the study provides a comprehensive analytical framework for understanding how university professors employ generative AI technologies to enhance educational systems and improve communication with students.

Moreover, the study underscores the importance of DeepSeek AI in improving the quality of education and fostering the development of students' academic and cognitive skills. It offers an evaluative perspective on the effectiveness of this technology in supporting academic research processes, including knowledge production, data analysis, and scholarly writing.

In addition, the study holds practical significance by identifying the key challenges associated with the use of DeepSeek AI in academic research environments. By proposing effective strategies to address these challenges, the study contributes to the responsible, ethical, and efficient integration of generative AI technologies within Algerian universities. Consequently, the findings of this research may inform policymakers, university administrators, and academics, and serve as a reference for future studies on the integration of artificial intelligence in higher education and scientific research.

Definition of Concepts and Terms

1. Concept of Use

a. Linguistic Definition:

In Lisan Al-Arab, the term use is derived from the root khadama (to serve). Al-khadam refers to servants, and al-khadim denotes a servant, whether male or female. The term implies service, assistance, or performing tasks for others. It is also used to indicate adopting someone as a servant or requesting service from another person. Linguistically, the concept of use is closely associated with service, assistance, and benefiting from others' efforts.

b. Terminological Definition:

Use refers to the set of activities and actions that individuals engage in to meet their needs and organize the means required to achieve their goals. It is a concept that goes beyond mere exposure to media or technological tools, encompassing the active employment of all factors related to usage in order to gain benefits or achieve desired outcomes.

In the context of communication and media studies, the concept of use integrates two main dimensions: gratification, from the receiver's perspective, and impact or effect, from the perspective of the media or technology itself. Thus, use involves a dynamic interaction between the user, the medium, and the expected outcomes (Nseigawi, 2014, p. 6).

c. Operational Definition:

Use refers to the extent to which Algerian university professors benefit from and employ artificial intelligence technologies in their scientific research through conversational AI platforms such as ChatGPT. This use represents an important step toward improving the quality and effectiveness of academic research, as it enables professors to intensively benefit from intelligent algorithms for identifying research topics, extracting core information, and organizing scientific content in a more efficient and systematic manner.

2. University Professors

a. Linguistic Definition:

According to Al-Munjid Dictionary of Contemporary Arabic, the term professor (plural: asatidhah) refers to a teacher, instructor, administrator, or scholar who

practices the teaching of a science or an art (Haji, 2022, p. 648).

b. Terminological Definition:

Abdelaziz Al-Sayed defines university professors as "the backbone of education; the soundness of education depends largely on the soundness of the professor" (Aziz, 2021, p. 155).

c. Operational Definition:

University professors are members of the academic staff and researchers working in various faculties and departments within Algerian universities. They possess scientific qualifications and teaching experience in their respective fields of specialization. Their responsibilities include teaching students, guiding them throughout their academic paths, and conducting scientific research in recognized academic disciplines.

3. Concept of Artificial Intelligence Technology

a. Linguistic Definition of Intelligence:

Linguistically, intelligence derives from the Arabic root Dhaka, which denotes sharpness of mind and quick understanding (Awad, 2023, p. 111).

b. Terminological Definition:

Al-Mutairi (2000, p. 9) defines intelligence as an individual's ability to reach appropriate solutions to the problems they face, adapt to new situations, and benefit from the experiences of others.

In reality, intelligence does not have a single unified definition; rather, multiple definitions exist due to the importance of studying intelligence and considering it one of the observable and measurable manifestations of cognitive and behavioral life. Intelligence can therefore be understood as the ability to perform complex, abstract, and demanding activities efficiently in order to achieve specific goals. It also reflects the capacity for creativity and innovation, meaning the individual's ability to reach desired objectives and aspirations (Shakshak, 2007, p. 8).

c. Operational Definition of Intelligence

Intelligence, in the context of Algerian university professors, represents the ability to conduct research and academic activities

such as comprehending information and engaging deeply with complex contexts. This is achieved through analyzing the various dimensions of intelligence and applying them in research and educational fields in order to enhance the learning experience.

Several terminological definitions of artificial intelligence have been proposed, among which the following can be highlighted:

Artificial intelligence consists of the term intelligence, which refers to the ability to perceive, understand, and learn new situations or conditions, and the term artificial, which is related to the act of making or manufacturing. Accordingly, the concept applies to all entities that arise as a result of human-made activity, distinguishing them from naturally existing objects (Boulgueroun, 2023, p. 3).

John McCarthy (2004) also provides a comprehensive definition of artificial intelligence, describing it as the science and engineering of making intelligent machines, particularly intelligent computer programs. It is related to the task of using computers to understand human intelligence (Ben Sghir, 2023, p. 115).

c. Operational Definition of Artificial Intelligence:

Artificial intelligence is a branch of computer science that aims to create systems capable of functioning and behaving in ways similar to human intelligence. These systems seek to provide personalized and adaptive educational experiences that meet the needs of university professors by

4. Concept of DeepSeek AI

a. Terminological Definition:

DeepSeek AI is defined as a generative artificial intelligence model that relies on natural language processing and deep learning techniques to generate and analyze texts. It is used as a supportive tool for academic research in areas such as writing, summarization, analysis, and translation.

b. Operational Definition:

DeepSeek AI is a conversational technology employed by Algerian university professors in academic

research to facilitate new discoveries, guide research processes, formulate research questions, write academic articles, conduct meetings and discussions with research teams, exchange knowledge with colleagues across various disciplines, and assist in developing academic study plans.

Research Population and Sample

Research Population

This study examines the use of generative artificial intelligence algorithms, specifically DeepSeek AI, by university professors and their impact on academic research. The research population includes all elements and aspects related to the studied problem or phenomenon. Accordingly, the population consists of all professors at Algerian universities who use this technology, reflecting the growing interest in innovation across various academic disciplines.

Study Sample

The study adopts a sampling method to select a portion of the research population due to the difficulty of examining all its elements. The objective is to obtain estimates that can be generalized to the entire population. A systematic random sampling technique was employed to ensure fair representation of participants while maintaining regular intervals between selections. Based on this approach, a sample of **50 university professors** from various scientific, social, and human sciences disciplines was selected in order to obtain generalizable and reliable results.

Research Instruments

The study relied on a set of commonly used research tools to collect data related to the research topic, as follows:

First: Observation

This study is based on systematic and periodic scientific observation to assess how artificial intelligence technologies, such as DeepSeek AI, influence the interaction of the research community within the digital environment. The aim is to explore how this interaction can be enhanced to access new knowledge sources and verify academic

information. The observation also highlights the ability of these technologies to learn from previous experiences and apply them in new contexts, in addition to their role in supporting education and supervising research projects at different academic levels.

Second: Interview

The interview tool was also employed to collect data and information related to the research topic, as it is considered one of the most appropriate methods for such studies. A structured interview was conducted with university professors at Algerian universities to gather in-depth and reliable insights relevant to the objectives of the study

Uses of DeepSeek AI by Algerian University Professors

Algeria has recently placed considerable strategic importance on the field of artificial intelligence, particularly within the higher education and scientific research sector. This growing interest reflects the country's awareness of the central role that artificial intelligence plays in shaping contemporary knowledge economies and driving technological innovation. In this context, and pursuant to a presidential decree, Algeria established a Higher School specialized in Artificial Intelligence starting from the 2021–2023 academic year. The primary mission of this institution is to train highly qualified engineers with solid expertise in both the theoretical foundations and practical applications of artificial intelligence and data science (Ben Sghir, 2023, p. 174).

Admission to this Higher School is highly selective, as it targets outstanding and high-achieving students who demonstrate excellence in the Baccalaureate examination and are officially enrolled through a competitive national selection process. This approach ensures the formation of an elite academic and scientific body capable of contributing effectively to advanced technological research and innovation.

The establishment of this specialized school aims mainly to promote the dissemination, development, and application of practical and innovative solutions to complex challenges facing various social and economic sectors.

These sectors include, but are not limited to, health, energy, agriculture, transportation, and public services. By integrating artificial intelligence technologies into these strategic domains, Algeria seeks to enhance efficiency, optimize resource management, and support sustainable development. Consequently, this initiative represents a significant contribution to strengthening the country's scientific capabilities and boosting its economic competitiveness at both regional and international levels.

Moreover, the Algerian Ministry of Higher Education and Scientific Research has demonstrated a strong commitment to supporting and accompanying university students' projects and research proposals related to artificial intelligence and its various systems. As part of this effort, specialized structures known as Artificial Intelligence Houses have been established within universities. These centers aim to encourage innovation among university youth by providing technical guidance, scientific supervision, and institutional support. Their activities focus on registering and labeling innovative projects, fostering entrepreneurship, and assisting students and researchers in filing patent applications.

According to Professor Ben Sghir, these initiatives have led to the registration of more than 234 innovative project labels and the submission of over 853 patent applications (Ben Sghir, 2023, p. 174). These figures highlight the growing dynamism of the Algerian academic environment in the field of artificial intelligence and reflect the tangible outcomes of institutional support mechanisms.

Overall, these developments clearly demonstrate the sustained efforts of the supervising ministry and underline the fact that engaging with artificial intelligence is no longer an optional choice, but rather a strategic necessity imposed by the rapid transformations and complex challenges of the modern digital era.

DeepSeek AI is considered a powerful and versatile tool in the academic context of university professors. This technology offers

numerous scientific and educational benefits. First, in the field of teaching, university professors can use DeepSeek AI to enhance students' learning experiences.

For example, DeepSeek AI can provide immediate academic support by answering students' questions in an advanced and accurate manner, thereby helping students understand concepts more quickly and effectively. It can also offer personalized guidance and tailored educational resources that meet the individual needs of each student. Second, DeepSeek AI helps professors manage time and effort more efficiently in delivering academic resources. Instead of responding individually to each inquiry, DeepSeek AI can handle frequently asked and repetitive questions, allowing professors to focus on more complex and intellectually demanding academic tasks. Third, from an administrative perspective, DeepSeek AI can be used to provide administrative information to students and faculty members, such as examination schedules, deadlines for document submission, and other administrative procedures. It can also assist in registration processes and facilitate communication between students and university administration. In addition, DeepSeek AI can be integrated with e-learning platforms to provide a comprehensive and integrated educational experience. In this context, conversational AI systems such as ChatGPT can offer additional educational content, assist in organizing courses, and provide progress reports for both students and professors

preserving the original ideas while deepening the explanation and strengthening the analytical tone:

DeepSeek AI is regarded as a powerful and versatile technological tool within the academic environment of university professors, as it offers a wide range of scientific, pedagogical, and administrative benefits. Its integration into higher education reflects the growing reliance on generative artificial intelligence to improve teaching

quality, optimize academic practices, and enhance institutional efficiency.

First, in the field of teaching and learning, university professors can rely on DeepSeek AI to significantly enrich students' educational experiences. The system is capable of providing immediate and accurate academic support by responding to students' questions in a sophisticated and context-aware manner. This feature helps students grasp complex concepts more quickly, reinforces their understanding of course material, and promotes independent learning. Moreover, DeepSeek AI can deliver personalized guidance by adapting explanations, examples, and learning resources to the individual needs, academic levels, and learning pace of each student. Such personalization contributes to reducing learning gaps and fostering inclusivity within the classroom.

Second, DeepSeek AI plays an important role in helping professors manage their time and academic workload more efficiently. By handling frequently asked, repetitive, or routine questions, the system reduces the burden on professors and allows them to allocate more time to high-level academic activities. These activities include curriculum development, research supervision, scientific production, and the design of innovative teaching strategies. In this way, DeepSeek AI supports a more effective distribution of academic effort and enhances overall productivity in higher education institutions.

Third, from an administrative standpoint, DeepSeek AI can be employed to provide accurate and up-to-date administrative information to both students and faculty members. This includes information related to examination schedules, deadlines for document submission, academic regulations, and other procedural matters. Additionally, the system can assist in registration and enrollment processes, respond to administrative inquiries, and facilitate communication between students and university administrations. As a result, it contributes to improving administrative transparency, reducing procedural delays,

and enhancing the quality of institutional communication.

Furthermore, DeepSeek AI can be integrated with e-learning platforms to offer a more comprehensive and cohesive digital learning environment. Within this framework, conversational artificial intelligence systems—such as ChatGPT—can provide supplementary educational content, assist in organizing course materials, support assessment and feedback processes, and generate progress reports for both students and professors. This integration strengthens the effectiveness of distance and blended learning models and supports the digital transformation of higher education.

Overall, the use of DeepSeek AI in the university context represents a strategic tool that enhances teaching practices, supports academic research, improves administrative efficiency, and contributes to the development of a modern, intelligent, and student-centered higher education system.

4. RESULTS AND DISCUSSION

Based on the interviews conducted with a group of Algerian university professors from various disciplines, the results of the study can be summarized as follows:

First Result

The majority of respondents agreed that they use artificial intelligence technologies, particularly DeepSeek AI. Approximately **30 professors from different academic disciplines** reported placing significant emphasis on the use of this technology, especially in relation to scientific conferences and doctoral and master's theses. One respondent stated that DeepSeek AI is used in writing scientific articles and academic research.

On the other hand, respondent No. 43, a professor specializing in History, indicated that she began using this technology at the beginning of 2025. Although she discovered it relatively late compared to other respondents, she nevertheless benefited from its use in academic research.

From the above, it can be concluded that professors' interest in using generative artificial intelligence technology, specifically

DeepSeek AI, in conferences and doctoral and master's theses reflects their strong engagement in scientific participation and postgraduate research. Those who use it in writing academic dissertations aim to enhance the quality and accuracy of their theses. Moreover, participation in conferences and the preparation of academic theses play an effective role in exchanging ideas and building scientific networks, which represent valuable opportunities to become familiar with the latest innovations and research developments in their respective fields.

Second Result

All respondents agreed that the use of DeepSeek AI varies across research and academic teaching fields among the study sample. Half of the participants stated that the technology is mainly employed to simplify complex topics. For instance, respondent No. 33 indicated that he uses this technology in academic research due to its ease of use and its ability to facilitate access to information, particularly within the field of technological sciences. Similarly, respondent No. 41, a professor specializing in economic sciences, reported using DeepSeek AI for statistical analysis purposes.

Based on these findings, it is evident that DeepSeek AI receives the greatest interest from professors in simplifying explanations of complex topics. Several professors emphasized that their use of this technology is attributed to its strong capability to transform complex information into simplified and easily understandable concepts. This enables professors to deliver clearer and more accessible educational content to students, thereby enhancing deeper comprehension of academic material—an essential factor in achieving high-quality academic education.

Conversely, many professors also use this technology as a search-support tool to explore various topics and access new information, reinforcing its role as a supportive instrument for research and knowledge development. This may be due to the high efficiency of DeepSeek AI in rapidly

providing accurate and comprehensive information, which constitutes a decisive factor in facilitating research and teaching processes. Additionally, the technology can provide reliable sources and references that assist professors in preparing their academic materials more effectively. Likewise, some professors reported notable use of the technology in statistical analysis.

It is also worth noting that Algerian universities have recently witnessed a significant transformation in scientific research, as an increasing number of professors have adopted generative artificial intelligence technologies. This trend reflects the integration of modern and innovative technologies aimed at improving the quality of scientific research and accelerating processes of discovery and innovation.

Third Result

The responses of the study sample highlighted the advantages of this technology, which is considered one of the most prominent generative artificial intelligence tools. Participants indicated that DeepSeek AI contributes to enhancing transparency and open communication in the academic environment by facilitating information exchange and addressing ethical challenges. The majority of respondents strongly supported the use of AI algorithms to achieve these goals.

Conversely, some participants expressed concerns regarding the potential impact of DeepSeek AI on user privacy and confidentiality, as well as on students' cognitive capacities. They noted that such technologies sometimes surpass human intelligence, even though the human mind is ultimately the origin of these AI systems, as stated by one respondent from the field of Humanities.

From the above, it is evident that most respondents strongly endorse the use of generative AI technologies such as DeepSeek AI, as these tools enhance transparency and foster open communication in academic work environments. This strong endorsement can also be seen as an indicator of the increasing

interest in integrating modern technologies into higher education and scientific research.

Several reasons can explain this trend:

1. Professors believe that artificial intelligence facilitates the effective exchange of data and information, thereby promoting collaboration among researchers and contributing to faster and more efficient research development.
2. Enhancing transparency can increase trust in research outcomes, as it becomes easier to verify data and analytical methods, reducing doubts and questions about the credibility of studies.
3. Artificial intelligence can help automate many routine processes that are prone to human error, thereby improving the accuracy and efficiency of academic work.

Fourth Result– Ethics of Using Artificial Intelligence Algorithms

Regarding the ethics of using artificial intelligence algorithms, some respondents expressed concerns about the potential impact of transparency and open communication on information confidentiality and privacy, particularly in light of the increasing prevalence of cybercrime. Several reasons were cited:

Some participants stated that making data and information openly available could lead to violations of participant privacy or the disclosure of sensitive information. Additionally, there were concerns that excessive transparency might expose research results to theft or unauthorized use, thereby threatening researchers' intellectual property rights. For instance, two professors from the Faculty of Law and the Faculty of Arts expressed reservations about adopting new technologies and using these algorithms, arguing that they had negatively affected academic research and contributed to a decline in students' academic performance. They noted that these technologies often provide ready-made solutions without requiring students to exert effort or critical thinking.

Conversely, a professor from the Department of Media and Communication emphasized

the importance of adopting such modern technologies to break away from traditional methods and to transform scientific research approaches and teaching methods in academic settings.

From the above, it can be concluded that some professors support the use of artificial intelligence algorithms, particularly DeepSeek AI, in academic research. They argue that traditional research methods need to evolve and that it is essential to keep pace with technological developments, especially in higher education and scientific research. These technologies facilitate research writing and translation, making academic tasks more efficient. However, other respondents highlighted significant concerns regarding the negative aspects of these technologies, particularly when used without ethical considerations, expressing a lack of trust in AI algorithms. They emphasized that these tools are created by human minds and therefore do not surpass human intelligence. In summary, DeepSeek AI presents both advantages and disadvantages. While it offers substantial benefits for academic work, its potential to compromise research ethics highlights the need for careful and responsible use.

Discussion of Results:

Variation in Faculty Engagement with AI in Academic Research

The study results revealed a clear variation in the level of interest among faculty members regarding the use of AI technologies in academic research. Some groups demonstrated strong and growing interest in this technology, successfully employing it to produce intelligent and effective research outputs, such as data analysis and preparation of research reports. Conversely, other professors utilize DeepSeek AI to generate new ideas, enhance academic writing, and support translation tasks. This highlights the diversity in both interest and the practical applications of technology in scientific research.

1. Increasing Need for Technology in Academic Research

The findings also indicated a growing

necessity to rely on technology in academic research. Professors adopt tools such as DeepSeek AI to improve work efficiency and save time, contributing to the production of higher-quality research in a more effective manner. This reflects the pressing need for artificial intelligence technologies to develop and modernize academic practices to meet the expectations of researchers and the wider academic community.

2. Enhancement of Research Quality and Academic Practices

The study further demonstrated an increasing interaction with generative AI algorithms and their ability to enhance research quality and improve academic practices. This underscores the importance of technological inevitability in the continuous development and improvement of academic projects and research. Additionally, these technologies can enhance both teaching and research processes, enabling university professors to analyze large datasets and generate new research ideas more rapidly. Consequently, research outcomes become more accurate, evidence-based, and capable of advancing knowledge and innovation across multiple disciplines.

3. Ethical and Professional Challenges in Using AI in Academic Research

The results also highlighted that the use of DeepSeek AI in academic research may present ethical and professional challenges for Algerian university professors. Concerns were raised regarding data privacy and the protection of information from leaks and cyber threats. Therefore, the use of such technologies must comply with strict procedures and regulations to ensure the confidentiality of information. Improper use of these tools can negatively affect the quality of scientific research; hence, academic staff should avoid sharing inaccurate information or relying on unreliable analyses.

3. CONCLUSION

In conclusion, this study, which examined the utilization of generative artificial intelligence algorithms (DeepSeek AI) in academic research through an evaluative study of a sample of Algerian

university professors, confirms that this technology represents a qualitative and revolutionary shift in the field of academic research. The growing reliance on AI technologies has demonstrated a significant capability to enhance research methodologies, develop academic practices, increase researchers' efficiency, and accelerate research processes in a remarkable manner.

The use of DeepSeek AI has not been limited to simplifying research tasks; it has also opened new horizons for scientific creativity and critical thinking among professors. These technologies contribute to generating innovative ideas, stimulating analytical thinking, and facilitating the exploration of complex topics, thereby enhancing research quality and strengthening the capacity for innovation across various fields and disciplines.

Furthermore, the ongoing development and effective integration of AI algorithms within academic institutions are expected to further enhance creative and innovative engagement in research. This underscores the importance of investing in such technologies by universities and research centers to improve research quality, support sustainable scientific advancement, and maximize the potential of artificial intelligence in serving knowledge and the academic community.

Ultimately, DeepSeek AI is not merely a supportive tool; it is a strategic partner for researchers, enabling them to refine their research methods, achieve more precise results, and contribute to enriching scientific knowledge in innovative and effective ways.

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