Ethical and regulatory challenges of the use of AI tools by university students: the case of the Library Science School

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Abstract

Overview. The implementation of artificial intelligence in higher education offers significant opportunities to improve teaching, learning, and institutional management, these advances pose significant challenges, such as equity, privacy, aswell as academic integrity, which must be carefully managed to ensure that the benefits of AI are distributed fairly, aside, that academic integrity remains intact, thus AI has the potential to revolutionize the way we teach, learn, and assess, but its implementation also presents challenges that must be approached with caution. It is essential to redesign educational curricula to incorporate digital competencies that allow students to interact effectively with artificial intelligence, thus AIimplementation must be inclusive to ensure that all students have equitable access to these advanced technologies, while always protecting the privacy of their data and maintaining high standards of academic integrity.

KEYWORDS: ARTIFICIAL INTELLIGENCE, VOCATIONAL TRAINING, EDUCATIONAL OPPORTUNITIES.

Introduction

Artificial intelligence (AI) is unpredictably transforming numerous sectors and education is no exception, the ability it has to analyze large volumes of data, personalize the learning experiences to each individual or automate administrative tasks of teaching, promises to revolutionize the way we teach and in turn how we learn, "the integration of AI in higher education offers a wide range of opportunities to improve teaching and learning, as well as to optimize institutional management" (Vera, F., 2018, p.18). However, with these advances come significant challenges that must be carefully managed to ensure that the benefits of AI are distributed fairly but that academic integrityis also maintained. e have read and heard many times that education is in a moment of profound transformation, driven by the dizzying technological advances now in particular, by the irruption of Artificial Intelligence, considering that AI has the potential to revolutionize the way we teach, learn and evaluate, offering new tools to significantly improve the quality of education (UNESCO, 2021), but its implementation also presents challenges that must be approached with caution to ensure optimal development and thus be able to avoid negative consequences.

Theoretical framework

The implementation of Artificial Intelligence (AI) in education promises to revolutionize teaching and learning through data analysis as well as the personalization of educational experiences, its adoption

must be guided by ethical principles that ensure equity, privacy and security. A responsible vision of AI in the classroom is crucial to ensure transparency, but to consider that this is fulfilled, a curricular redesign that incorporates digital competencies to interact with AI is required, only in this way can the educational potential of AI be maximized, ensuring its fair use in the digital era. (NúñezMichuy , C. M, et.al, 2023).

The use of AI in education is revolutionizing teaching and learning methods, but it is critical to address ethical and technical issues before implementation, existing literature mentions platforms such as Moodle and Khan Academy, as well as Intelligent Tutoring Systems (ITS) that provide personalized guidance to students, these systems can adapt content but more importantly, teaching strategies to individual needs, improving learning effectiveness. However, it is crucial to ensure equity of access in the use of AI, promoting appropriate skills for the digital age and protecting students' educational data. (UNESCO, 2021)

Method

To understand the current landscape of AI use in the Library, Documentation and Information Science School (EBDI), a survey was administered to 29 out of 61 fourth and fifth year students in the Library and Information Management program, obtaining a participation rate of 47.5%. The survey collected information on the frequency of use of AI tools, the specific tools used, the activities for which they are used, the ethical perception of AI use, and the opinion on the need to regulate or limit their use in the academic environment. The survey was designed using a combination of multiple choice and open-ended questions. The multiple-choice questions were used to collect quantitative data on AI use, while the open-ended questions allowed students to express their opinions and perceptions in more detail, these collected data were analyzed using quantitative and qualitative data analysis techniques. It is important to note that the sample of students surveyed represents a small fraction of the total EBDI student population; therefore, the results of this study cannot be generalized to the entire student population. However, the findings provide initial insight into the use of AI at EBDI and can serve as a starting point for future broader and more comprehensive research.

Results

The study revealed a high adoption of AI tools among students, with 82.8% indicating having used them to perform academic tasks. ChatGPT proved to be the most popular tool, followed by Gemini and Perplexity AI. Students use AI primarily to generate ideas (72.7%) and correct grammatical errors (40.9%). Although 95.8% believe that they use AI tools ethically, 58.3% believe that their use should be regulated in the academic context. One of the most significant findings of the study is the high adoption rate of AI tools among EBDI students, with more than 80% of respondents reporting having used AI to complete academic assignments, suggesting that these technologies have become an integral part of the learning process for many students.

The most popular AI tools among students were ChatGPT, Gemini and Perplexity AI. ChatGPT, in particular, was mentioned by all respondents who had used AI. This is not surprising, as ChatGPT is one of the most well-known and versatile AI tools currently available, with capabilities ranging from text generation to problem solving. Students reported using AI for a variety of academic purposes, the most common being idea generation (72.7%) and grammar correction (40.9%). This suggests that students find AI capabilities particularly useful for stimulating creativity, but also allowing them to improve the quality of writing.

Despite high adoption, the majority of students (58.3%) believe that the use of AI in the academic context should be subject to regulations or limitations within the university campus. This concern

reflects a recognition of the ethical challenges inherent in theuse of AI, such as data privacy, fairness, as well as academic integrity.

Discussion

The findings of this study highlight the need to address the ethical as well as regulatory challenges associated with the use of AI in education. That said, while AI offers numerous opportunities to enhance teaching and learning, its implementation must be ac- companied by strong teacher training in best practices and the establishment of clear policies to ensure academic integrity, so it is crucial to foster a thorough understandingof ethical principles among students and teachers to ensure responsible use of these technologies. One of the main challenges facing EBDI is the lack of teacher training in the ethical use of AI, although the majority of students surveyed report having received instruction from their teachers on the use of AI in academic tasks, almost a third did not receive such guidance, this suggests that there is an urgent need to strengthen teacher training in this area, so that they can guide students in the responsible use of these tools.

Another key challenge is the Establishment of clear policies or regulations for the use of AI in the academic context, while most students believe that its current use is ethical, there is widespread concern about the need to limit or regulate its application, for this reason these concerns reflect a recognition of potential risks, such as plagiarism, impersonation, perpetuation of bias or academic fraud. It is crucial that educational institutions work collaboratively with experts in ethics and technology to develop guidelines that encourage the responsible use of AI while maintaining academic integrity. Finally, it is important to note that the use of AI in education also presents significant opportunities to improve learning outcomes, in turn freeing teachers from administrative tasks, since, by leveraging AI capabilities to personalize instruction, provide feedback, analyze large volumes of data; educators can focus on more creative and holistic aspects of teaching.

Conclusions

Artificial intelligence is rapidly transforming the educational landscape, posing both opportunities and ethical, teaching and learning challenges, so this study at EBDI reveals a high adoption of AI tools among students, although their formal integration into the curriculum is still limited, on the other hand the lack of training on good practices in the use of AI among teachers as well as students stands out as a critical area that requires urgent attention. As AI continues to advance, its use in education expands, it is crucial that the educational community work proactively to address ethical and regulatory challenges, this re- quires a concerted effort by faculty, senior university administrators, ethics and technology experts to develop guidelines or frameworks that encourage the responsible useof AI in the academic context.

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