



Use of Artificial Intelligence platforms in university students

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Abstract

This contribution presents the results of a mixed survey conducted with students from the School of Collective Communication Sciences (ECCC) at the University of Costa Rica (UCR) during the first semester of 2024 to determine their knowledge about Artificial Intelligence (AI), its applications in their university activities, and its significance for their future careers. The survey was carried out using an online form that invited participants to answer a series of questions regarding students' knowledge levels about AI applied to educational processes. Among the main findings, it is noteworthy that ChatGPT remains the preferred AI system among the student population, surpassing the national usage percentage of this digital tool by more than ten times. However, the levels of confidence regarding the quality of information obtained from these platforms are low.

KEYWORDS: ARTIFICIAL INTELLIGENCE IN EDUCATION (AIEd), DIGITAL COMPETENCE, DIGITAL DIVIDE, EDUCATIONAL TECHNOLOGY.

Introducción

Within the still incipient framework of AI development in higher education, with the purpose of having a clearer panorama based on data rather than assumptions, we conducted a survey in the first semester of 2024 with the students enrolled during this same period in our academic unit. The survey asked about their use of AI in their educational processes, as well as their opinions and some projections about the scope of these tools.

Our area of expertise at the School is communication, a disciplinary area that tends to be associated within the Social Sciences with people who are highly linked to the latest technological trends. We conducted the survey to find out if this perception coincides with high use of AI in the educational field.

Theoretical framework

The Arrival of Artificial Intelligence in the Educational Context

The arrival of ChatGPT in November 2022 caused a stir in the global educational community, as it meant considering, overnight, a new and unexpected actor within the academic ecosystem that needed to be understood in order to address it. ChatGPT, an open-source chatbot from OpenAI, uses the GPT-3 language model to generate responses to user inputs. It is a Generative Pre-trained Transformer (GPT) response system based on Artificial Intelligence (AI) (Alonso and Quinde, 2023).

The use of ChatGPT, as well as other AI-based language systems, has been rapidly generalizing in educational processes, presenting challenges related to the possibilities of how these resources are used. On one hand, academia began to discuss the implications of using AI, while on the other hand, companies selling AI systems found broad opportunities for business expansion with these tools. For example, Microsoft announced in December 2023 that it would expand the Microsoft Copilot tool “to enhance the creativity and efficiency of higher education teachers and students” (Microsoft Press, 2023).

Some discussions focus on the benefits that technology has brought to education, alongside concerns related to its impact on higher education (Ortega, 2024). The issue of ethics and the use of AI as a valid source for research has been part of these discussions (Martínez, 2023). Also discussed has been how AI impacts the rules of education, both in content production and what could be the beginning of a new era of plagiarism that cannot be detected by specialized programs like Turnitin (Alonso and Quinde, 2023).

The challenge of implementing technology in higher education continues to be a central concern in the academic community, starting with the lack of knowledge about how it is being used, as well as the multiple reflections that arise around it (ChaoRebolledo & Rivera-Navarro, 2024).

Method

The study was conducted with ECCC students who were enrolled in any course during the first semester of 2024, corresponding to 531 students. A convenience sampling was carried out through the WhatsApp platform, where the link to a Google Forms questionnaire was sent, which was completed by 57 student participants aged 18 and above, distributed among the five emphases of the bachelor's degrees in communication. The form was available from June 24 to July 14.

Results

In the following graphs, some of the data obtained from the survey can be observed, showing information from a heterogeneous population in terms of demographic characteristics, age, and professional preparation.

Fig. 1. Gender of the participants.

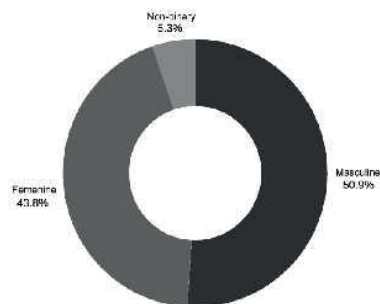


Fig. 2. Ages of the participants.

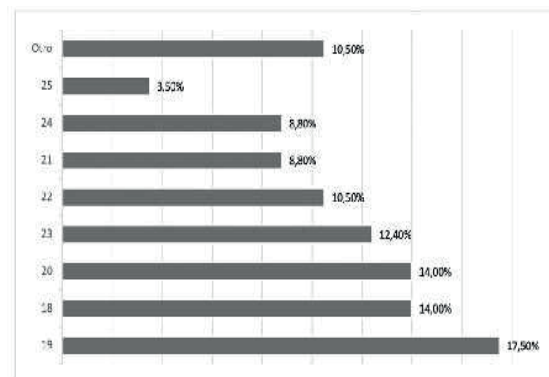


Fig. 3. Years studying at the ECCC.

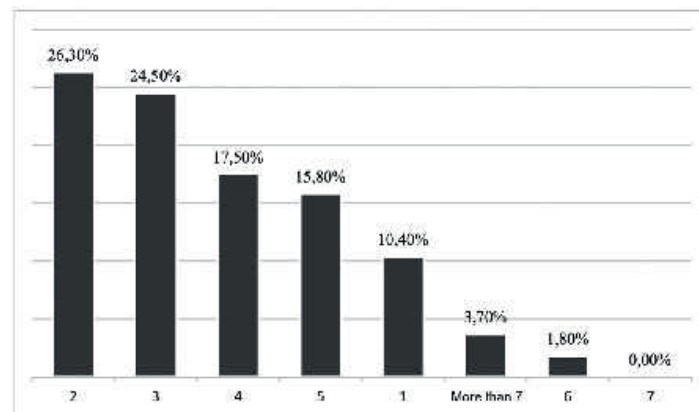
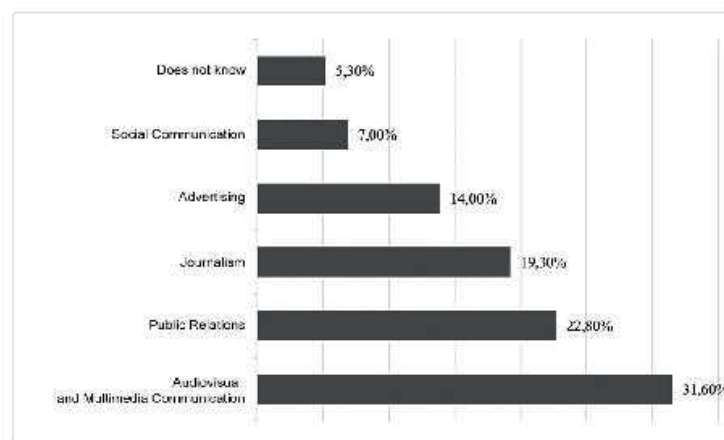
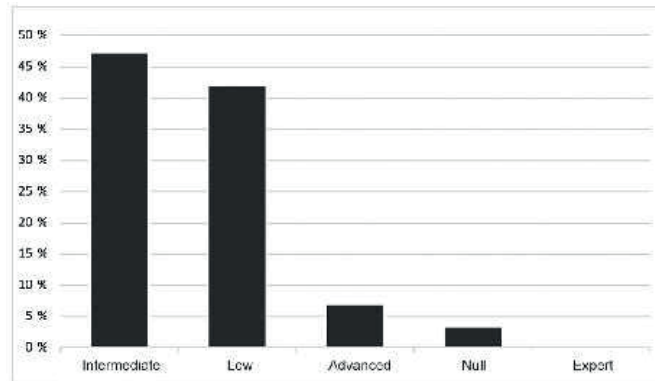


Fig. 4. Emphasis of the degree.



The majority of the surveyed population belongs to the area of Audiovisual and Multimedia Communication, with 31.60%, followed by 22.80% in Public Relations, 19.30% in Journalism, 14% in Advertising, 7% in Social Communication, and 5.30% who are still undecided about which emphasis to choose.

Fig. 5. Level of knowledge about Artificial Intelligence.



93% of the students believe that their knowledge of AI is null, low, or intermediate, with only 5% considering it advanced, and none categorized themselves as experts on the subject.

Fig. 6. Percentage of the participant population that has used ChatGPT.

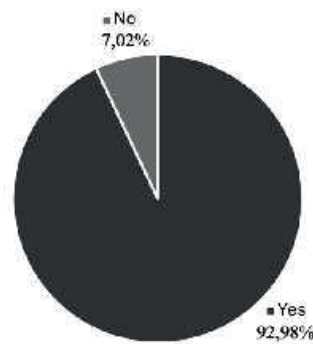
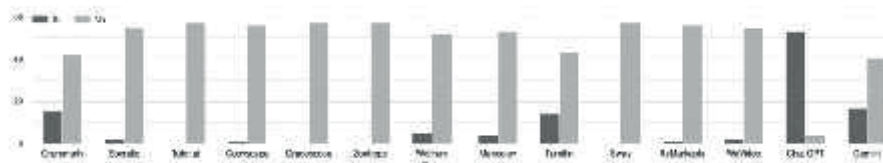
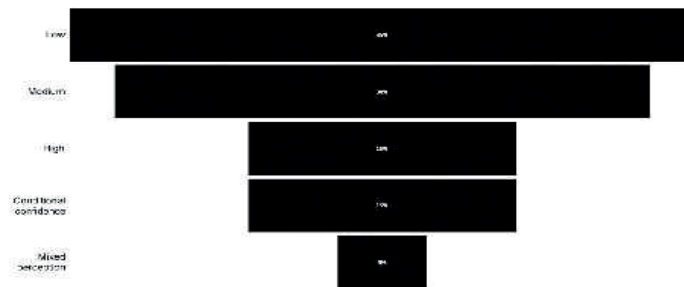


Fig. 7. Artificial Intelligence platforms used for completing university assignments.



Regarding the survey about the 14 AI platforms used in education, 93% mentioned knowing ChatGPT, 30% Gemini, 26% Grammarly, and 24.5% Turnitin.

No one indicated knowing 4 of them, while the other 6 were identified by less than 9%.

Fig. 8. Feelings of confidence regarding the responses generated by IA.

We observe that ChatGPT is the main AI consultation platform used for university tasks.

However, high confidence levels only reached 15%. Low and medium confidence levels are at 65%, while the perception of mixed or conditional confidence is 20%.

From the open-ended questions in the questionnaire, it stands out that the main perceived opportunities of using AI in the academic field revolve around time savings, improvement in writing, ease and speed in completing tasks, verification and supplementation of information, task simplification, inspiration and idea generation, enhancement in learning and performance, and other more specific opportunities such as ease and speed in information processing.

The student population considers AI as a tool or technology used for automation and information processing, as well as an imitation of human intelligence, which is useful for generating responses, problem-solving, predictions, and learning.

Regarding professional future, observations focus on time savings, skill improvement and efficiency, adaptation to technological change, information generation and processing, complementing human skills, enhancing communication and collaboration, and developing new professional opportunities.

Discussion

The arrival of Artificial Intelligence (AI) in the context of university education has generated a significant impact. The need for an ethical approach to the use of AI is fundamental to maximizing the benefits of these technologies.

The research conducted at ECCC shows that, although ChatGPT is the most used platform, the majority of students have limited knowledge about AI. This suggests a gap between the availability and inquiry about the technology and the students' readiness to use it effectively.

The results highlight the perception of AI as a useful tool but with low confidence in its reliability, emphasizing the importance of training and education on the ethical and critical use of these technologies.

Conclusions

AI is a powerful tool that is employed and can be enhanced in higher education to personalize educational processes and the development of digital competencies, always considering that ethical components must be linked to the training processes within each disciplinary area. All these processes are in constant consultation and construction.

Due to the rapid nature of AI development, which is growing at a pace faster than educational processes, it is necessary to work on the joint creation of policies for the use of AI applications within the university community.

The level of ChatGPT usage among ECCC students is very high. According to the Second Report on the Use of Digital Platforms in Costa Rica (CICOM, 2024), only 9% of the surveyed population uses ChatGPT, in contrast to the 93% of ECCC students surveyed who do, a percentage that exceeds the national average by more than ten times. However, the majority are skeptical about the information generated by the platform.

Limitacions and Future Research

It is suggested to continue conducting studies in other academic units and educational centers to gather data that can be integrated into educational processes from the coordination of the programs, so that it can influence the curriculum, course content, methodologies, instructional planning, assessment, and even proposals for other programs.

It is recommended to incorporate research methods such as focus groups, semistructured interviews, and practice observation as a complement to the questionnaire. Unfortunately, the time available for research at our university is very limited, making it not always possible to utilize the suggested research methods.

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