Integration of ChatGPT into Didactic Planning: Perceptions and Evaluations from Special Education Students

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Abstract

This study was conducted within a university course to investigate student perceptions regarding the incorporation of Artificial Intelligence, specifically ChatGPT, into didactic planning. Ten Special Education students actively collaborated in the development of a didactic plan that integrated the Problem-Based Learning methodology. Data were collected via a semi-structured questionnaire, which was completed by 100% of the participants. The study found that ChatGPT has significant potential to enhance efficiency in both educational and administrative tasks. Ninety percent of the students found ChatGPT suggestions to be clear and understandable, and the majority assessed its impact on improving didactic planning in a positive way. Despite the limitations of the ChatGPT 3.5 model in terms of response quality and reasoning capabilities, its integration is considered to offer a significant improvement in didactic processes.

Keywords: Artificial Intelligence, Educational Planning, ChatGPT, Didactics

1 Introduction

In the General Didactics course at Universidad de las Américas, 10 out of the 11 enrolled students participated in a collaborative educational endeavor that utilized ChatGPT to enhance the quality of their didactic planning. Employing the Inverted Classroom methodology, students initially analyzed a video and subsequently applied the gleaned principles to the development of a didactic plan. Following this, they engaged with ChatGPT in a conversational setting to receive suggestions for refining their initial proposals. The projects were then presented in a group format.

The primary aim of this educational experience was to investigate student perceptions regarding the incorporation of Artificial Intelligence into didactic planning. The study sought to optimize student proposals and foster a collaborative learning environment.

2 Theoretical Framework

Since Alan Turing's seminal 1950 paper questioning the capacity of machines to think (Turing, 1950), Artificial Intelligence (AI) has found applications in a myriad of domains, including the optimization of didactic processes (Alata Carhuavilca, 2022). AI aims to emulate facets of human intelligence such as learning, reasoning, and self-

correction (Avila-Tomás et al., 2020). Some scholars posit that AI serves as a precursor to a fourth industrial revolution (Alonso & Alonso, 2017). While the body of literature on AI in educational settings remains limited, UNESCO underscored the necessity for ethical considerations in its implementation during Mobile Learning Week 2019 (Jivan, 2019). The emerging challenges necessitate decisive action (Vera, 2023). Moreno Padilla (2019) emphasizes AI's potential to streamline administrative tasks, advance global educational objectives, and serve as virtual tutors via chatbots like ChatGPT.

However, the ethical dimensions of AI in education cannot be overlooked. Flores-Vivar & Garcia-Peñalvo (2023) stress the imperative for an ethical framework governing its use. Launched in 2022, ChatGPT has garnered acclaim for its consistency in generating responses and its diverse applications in educational contexts. These include lesson preparation, assessment, concept explanation, creativity promotion, learning personalization, and efficiency enhancement (Chung Kwan, 2023; Halaweh, 2023; Rudolph et al., 2023; Vera, 2023).

This paper aims to explore the utility of ChatGPT in educational settings, specifically within the confines of an ethical framework.

3 Method

The current study employs a non-experimental, exploratory research design with a quantitative methodology to investigate student perceptions of integrating ChatGPT into the enhancement of their didactic planning. Ten students from the Special Education program at Universidad de las Américas participated in the study. Utilizing the Inverted Classroom methodology, the students developed didactic plans that incorporated the Problem-Based Learning approach. Subsequently, they engaged with ChatGPT to receive suggestions for refining their plans and discussed these recommendations collectively. Data were gathered through direct observation and a semi-structured questionnaire. The study aimed to explore the nature of student interactions with AI and to assess its perceived role in didactic planning.

4 Results

This study engaged 10 out of the 11 enrolled students, 80% of whom had no prior experience with ChatGPT or artificial intelligence. The overall level of satisfaction among participants was high: 60% reported being very satisfied, 30% were satisfied, and a mere 10% expressed significant dissatisfaction. In terms of usability, 40% found ChatGPT to be very user-friendly, 50% considered it easy to use, and the remaining 10% were neutral. A substantial 90% of participants found the suggestions for improvement to be clear and comprehensible, while 10% deemed them only partially understandable.

With respect to the relevance of ChatGPT's responses, 50% of the students found them to be relevant, 40% considered them highly relevant, and 10% remained neutral. When asked about the utility of ChatGPT suggestions in enhancing their didactic planning, 50% found them to be highly useful, 30% deemed them useful, and 20% found them to be of limited utility. In terms of future engagement with ChatGPT, an overwhelming 90% indicated that they would both use and recommend the technology, while 10% were undecided.

In response to open-ended questions, participants highlighted several areas where ChatGPT contributed to the improvement of their initial planning. These included refinements in phrasing, enhanced coherence between objectives and didactic sequencing, enrichment of original ideas, and suggestions for the improvement of proposed activities.

5 Discussion and Conclusions

The findings of this study corroborate the seamless integration of Artificial Intelligence (AI), specifically ChatGPT, into educational settings. This is evidenced by its diverse applications and the overwhelmingly positive student feedback, aligning with the conclusions drawn by Chung Kwan (2023) regarding the role of AI in pedagogical processes.

While student perceptions on the utility of ChatGPT suggestions in didactic planning varied, a significant 50% found them to be highly useful. This level of satisfaction, although not maximal, is consistent with the findings of Zhu et al. (2023), who questioned the comprehensibility of the ChatGPT 3.5 model. Conversely, Baidoo-Anu & Owusu Ansah (2023) attribute to ChatGPT the capacity for generating creative and assertive responses, further substantiating its potential contribution to educational processes.

In summary, ChatGPT appears to significantly enhance the quality of didactic planning. It not only improves the writing process but also fosters creativity in suggesting enhancements for activities and reinforces the internal coherence of initial planning efforts. These observations are in line with the research conducted by Baidoo-Anu & Owusu Ansah (2023), Chung Kwan (2023), Ruiz Miranda, E. (2023), and Rahman, M. M. & Watanobe, Y. (2023), all of whom underscore the positive impact of ChatGPT in educational contexts.

6 Limitations and Future Research

The limitations of the study reside in the restricted reasoning of ChatGPT 3.5. Future research should delve deeper into AI in education and explore new applications.

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