

Actas / Proceedings / Actes

# 3rd International Congress: Education and Knowledge

Jordi M. Antolí Martínez  
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(Eds.)



International Congress: Education and Knowledge  
Congreso internacional: Educación y Conocimiento  
Congrés internacional: Educació i Coneixement

Octaedro  Editorial

# Libro de Actas

**3rd International Congress: Education and Knowledge**  
**III Congreso Internacional: Educación y Conocimiento**  
**III Congr s Internacional: Educaci  i Coneixement**



*Construyendo el conocimiento de forma colectiva*

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# The Application of Artificial Intelligence Tools in Higher Education

Carrascal Tris, Diana; Yuan, Qianting

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The application of artificial intelligence (AI) tools in the academic contexts has become increasingly prevalent. While this fast-developing technology can bring great opportunities to and increase efficiency in research and teaching, it also poses significant challenges, especially for professors and educators, since the inappropriate use of these tools can result in plagiarism and/or academic fraud in a way that is, at times, difficult to detect. The present project aims to facilitate and optimize the research progress for university students as well as to refine their English reading and writing skills in the elaboration of research papers through the use of AI. The specific objective is to foster the proper use of AI tools in crafting research papers in English and thereby reduce the cases of plagiarism and academic fraud. This work has been prepared within the framework of an Innovative Teach Project of the subject Academic English in the Degree in English Studies at the University of Valladolid during the 2023-2024 academic year. Various classroom activities related to the different stages of academic writing were developed, which contrasted conventional practices with the use of AI tools. These stages included conducting bibliography research, reading and analyzing references and writing an academic article based on a research project. In addition to the in-class exercises, a seminar was held in which an expert in the field discussed the AI functionality in the academic contexts with the students, addressed their relevant queries and solved their doubts. A total of fifteen sophomores who officially enrolled in the subject Academic English during this academic year have been involved in the pilot test of the present study. They were assigned two tasks: one at the beginning of the semester and the other, at the end. The initial task consisted of writing an academic essay based on a previous reading assignment about the elaboration process of a final degree project, while the final task dealt with writing an abstract for a research project that the students had undertaken during the semester. Both writing tasks were evaluated from five perspectives, namely, the organization, the content, the use of grammar and expressions, orthography and the format. The results show that, in the initial task, a case of plagiarism and academic fraud is identified, with 81% of the work generated by AI due to the improper use of AI tools, whereas in the final task, no such cases are detected. Furthermore, there is a significant improvement in the overall grades for the final task when compared to the initial one ( $t(14)=3.173$ ,  $p=.007$ ). Process is also noted in the organization of information (i.e., structure and coherence) ( $t(14)=2.037$ ,  $p=.061$ ) and in the content ( $t(14)=2.087$ ,  $p=.056$ ) in the final task although the differences do not reach statistical significance. Additionally, a significant decrease in the number of grammatical mistakes ( $t(14)=-3.814$ ,  $p=.002$ ) and spelling errors ( $t(14)=-3.833$ ,  $p=.002$ ) is observed in the final task. Therefore, while subjects related to reading and writing in higher education often exhibit higher rates of plagiarism and/or academic fraud, the proper integration of AI tools in such subjects can offer students the opportunities to leverage these technological advancements; this could, in turn, help to reduce the incidence of plagiarism and/or academic fraud, and enhance their academic performance.

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