Relationship Between the Academic Use of ChatGPT/ Generative AI and Academic Motivation Among University Students

Elena Fabiola Ruiz Ledesma
Instituto Politecnico Nacional, Escuela Superior de Computo, Mexico

Lorena Chavarria Baez
Instituto Politecnico Nacional, Escuela Superior de Computo, Mexico

Ofelia Bautista Sarabia
Instituto Politecnico Nacional, Escuela Superior de Computo, Mexico

Abstract:

Students and educators are increasingly using artificial intelligence (AI) tools for a wide range of activities, including content creation, writing, programming, and information retrieval. Due to their growing adoption and their ability to perform diverse tasks, these technologies are expected to contribute to the enhancement of teaching and learning processes. However, whether AI effectively helps students improve their learning depends largely on how these technologies are used and the purposes for which they are employed. One of the factors that may influence the effective use of AI in educational contexts is academic motivation.

This study examines the relationship between the use of generative artificial intelligence tools, particularly ChatGPT, and academic motivation among university students. The objective was to determine whether a statistically significant relationship exists between these two variables. The primary data source was the open-access dataset *Dataset and Survey Questions for Not Just Answers: ChatGPT's Expanding Role in Supporting Student Motivation*, complemented by a questionnaire administered to students at the National Polytechnic Institute (Instituto Politécnico Nacional, IPN). The variables analyzed were the academic use of generative AI (X) and academic motivation (Y). The statistical analysis included descriptive measures such as the mean, variance, and standard deviation, as well as joint and marginal distributions, conditional probability, and Spearman's rank correlation coefficient. The results revealed a statistically significant positive correlation ($\rho = 0.6495$, $p < 0.05$) and a higher probability of exhibiting high academic motivation among students who reported greater use of generative AI. The findings suggest a positive relationship between the academic use of generative AI and the academic motivation of university students.