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Artificial Intelligence Applied to Mathematics in Economics"

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Abstract

This paper presents the findings of a survey conducted among 53 first-year Economics students enrolled in a Mathematics course at the University of Alcalá during the 2024–2025 academic year. The study explores students' use of artificial intelligence (AI) in academic settings, revealing that 98.1% employ AI tools to support their learning. The most frequently cited platforms include ChatGPT, DeepSeek, and Gemini, with applications spanning various subjects—particularly Mathematical Analysis and Economic Statistics.

Students reported that AI was most beneficial in enhancing cognitive skills such as understanding, analyzing, and creating, as categorized by Bloom's Taxonomy. In contrast, its use was less prevalent for tasks involving memorization and evaluation, suggesting a preference for personal engagement in activities requiring critical judgment. Within mathematics, AI was primarily used to comprehend problem-solving processes and obtain solutions, while fewer students utilized it to generate new exercises.

The distribution of students' grades approximated a normal curve, with the majority scoring between 4 and 6. Both students and instructors were perceived to possess medium-high proficiency in AI, indicating a shared belief in its positive impact on learning outcomes.

Ethical considerations were also addressed. Although 58.5% of students acknowledged using AI due to poor time management, many emphasized its role as a complementary tool rather than a substitute for personal effort. Concerns were raised regarding overreliance and its potential effects on originality and academic integrity.

In conclusion, the paper underscores AI's value as an educational resource when used responsibly. It fosters deeper comprehension, supports creative thinking, and enhances learning efficiency, while also necessitating ethical awareness and critical engagement.

Keywords: **Mathematics in Economics, Bloom's Taxonomy, Use of Artificial Intelligence, Ethics.**