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Chatgpt in Learning the Hyperbola Equation Among Engineering Students in Antofagasta, Chile.

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Abstract

The present research is conducted using a qualitative approach, employing the case study method, with the aim of understanding the perceptions of four third-year engineering students at the University of Antofagasta, Chile, during the first semester of 2025, regarding the use of ChatGPT as a support tool in learning the equation of the hyperbola in the plane a key topic within analytic geometry with applications in planetary physics.

To collect information, semi-structured interviews were conducted, through which the students shared their experiences and reflections on the use of this artificial intelligence tool in their learning process. The information obtained provides direct insight into how young people interpret and experience the incorporation of AI in the study of mathematical content.

The findings not only offer an enriching perspective on the potential of ChatGPT to facilitate the understanding of abstract concepts, but also provide valuable input for teachers and higher education specialists. In particular, for the guidance and integration of new technologies in engineering education and for strengthening pedagogical strategies in mathematics.

Keywords: Education; Chatgpt; Hyperbola; Learning; Qualitative.