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THE ARTRONAUT MODEL: THE INNOVATIVE WAY OF COMMUNICATING SPACE THROUGH ART

Abstract

This study investigates the integration of art into STEM education to enhance focus, interest, efficiency, and long-term impact in communicating space-related concepts within educational settings. Traditional methods of instruction, such as PowerPoint presentations and blackboard lectures, may not always captivate the majority of students effectively.

Many educators globally remain unaware of innovative educational approaches or lack empirical evidence regarding their efficacy, hindering widespread adoption. Extensive research indicates that employing art-based techniques, such as origami and theatrical performances, enhances behavioral skills, cooperative learning, cognitive development, and multicultural awareness in space education sessions. Theater, in particular, serves as an inspirational tool, bolstering self-esteem, motivation, and achievement among participants while conveying complex messages in easily understandable formats, thus optimizing long-term memory retention.

The incorporation of thematic costumes during educational sessions, especially those related to space, significantly boosts engagement, participation rates, and academic performance. Gamification, through group problem-solving activities and interactive platforms like "Kahoot," sustains participants' focus and enhances learning outcomes substantially. The ARTronaut model, developed through rigorous experimentation with various communication techniques, including gamification, theatrical performances, thematic presentations, and origami, offers a standardized approach for effectively communicating STEM concepts to diverse audiences.

This model has been successfully implemented across various age groups and educational contexts, including orphanages, primary schools, high schools, educational institutions, and astronomical societies, demonstrating its adaptability and efficacy in maximizing communication effectiveness in STEM education.