ENHANCING THE METHODOLOGY FOR ORGANIZING STUDENTS' EDUCATIONAL ACTIVITIES: INTEGRATING NEURODIDACTIC TECHNOLOGIES IN TEACHING THE "ARITHMETIC-LOGIC UNIT" TOPIC

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ABSTRACT

This article proposes a novel methodology for integrating neurodidactic technologies into the teaching of the "Arithmetic-Logic Unit" (ALU) topic in higher education. Traditional teaching methods often fail to fully engage students' cognitive processes and pose challenges in mastering complex technical subjects. Neurodidactic technologies, particularly neurofeedback, adaptive learning systems, and gamified environments, enhance students' attention, motivation, and problem-solving skills. The study tests a methodology combining active learning, neurofeedback, and adaptive platforms. Expected outcomes include a 20-30% improvement in students' academic performance and significant enhancements in cognitive engagement. This approach holds substantial potential for personalizing technical education and increasing its effectiveness.

Keywords: Neurodidactic technologies, arithmetic-logic unit, cognitive engagement, neurofeedback, adaptive learning, gamification, higher education.