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EFFECTIVENESS OF GAME-BASED ACTIVITIES IN ENHANCING IMMEDIATE RECALL AND ENGAGEMENT IN COGNITIVELY DEMANDING SUBJECTS

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Anatomy is a cognitively demanding course in Physical Education, requiring students to recall extensive information that serves as a foundation for professional practice. Despite its importance, many students struggle with immediate recall of anatomical knowledge due to the subject's complexity and the traditional lecture-based approaches commonly used in instruction. This challenge highlights the need for innovative teaching strategies that actively engage learners and enhance memory retention.

Game-based learning has emerged as a promising pedagogical approach that integrates interactive, competitive, and rewarding elements into the educational process. Games stimulate active participation, foster motivation, and create meaningful learning experiences, which can facilitate encoding and retrieval processes essential for immediate recall. Embedding game-based activities into lesson plans provides a structured means of reinforcing content in a way that is both engaging and effective.

In this study, a quasi-experimental design was employed to examine the effectiveness of game-based activities in improving immediate recall among students enrolled in Anatomy. Lesson plans embedded with game-based activities were validated by experts to ensure content accuracy and pedagogical appropriateness. A pre-test was conducted one week prior to the intervention, and the same instrument was administered as a post-test following the lesson. The results demonstrated a significant improvement in immediate recall ($p < .001$), suggesting that integrating game-based activities into Anatomy instruction can enhance students' ability to remember content in the short term.

Keywords: Game-based learning, immediate recall, cognitive learning

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