


Chapter 6

Using Game-Based Learning to Improve the Academic Achievement of Intellectually Challenged Learners in Inclusive Settings: A Case From South Africa

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ABSTRACT

Education is continuously changing as new approaches emerge to meet the needs of learners with developmental disabilities. One newer approach is game-based learning. Game-based learning is defined as using games as a primary lesson while keeping learning as the desired outcome. Learners with intellectual disabilities usually have cognitive, motor, auditory, language, and psychosocial difficulties. Research states that most intellectually challenged learners drop out of school because of a lack of motivation and engagement in learning. Researchers have found that game-based learning improves learner performance and has helped generate a positive environment. This qualitative case study consists of a sample of 36 teachers in 4 secondary schools in Pretoria. Data was collected through semi-structured interviews, and thematic analysis was adopted. The Gamified Learning Theory underpins the study. Findings revealed that few teachers who use games in

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their teaching and learning confirmed that Game-based learning can draw learners into their learning and keep their attention.

INTRODUCTION AND BACKGROUND

Educating intellectually challenged learners poses a significant challenge, as traditional teaching methods often fail to address their unique needs and learning styles. One promising approach to address this issue is incorporating game-based learning strategies, potentially enhancing this population's academic achievement.

Game-based learning, a pedagogical approach integrating educational content into interactive digital games, has gained increasing attention in education (Rahman, Khalilah, Khadijah, Mohamad, & Azlan, 2022). Incorporating games into the learning process can foster engagement, motivation, and cognitive skill development, all of which are crucial for the academic success of intellectually challenged learners (Huck, Day, Lin, Jorgensen, Westlin, & Hardy, 2020). Mostly, games are played for entertainment, challenge, fun, and thrill.

Numerous studies have highlighted the benefits of game-based learning for students with intellectual disabilities (Cano, Garcia-Tejedor, Alonso-Fernandez, & Fernandez-Manjon, 2019; Contreras, García Bauza, & Santos, 2019; Delavarian, Bokharaeian, Towhidkhah, & Gharibzadeh, 2015). Games are proven effective in improving cognitive skills, reasoning, and problem-solving abilities, which are often difficult for this population. (Saravanan & Juliet, 2018). Furthermore, the motivational aspects of gaming are particularly beneficial for intellectually challenged learners, as they can enhance intrinsic motivation and create a more engaging learning environment. (Saridaki & Mourlas, 2012). The literature notes that when we motivate ourselves, we can develop incentives, thus setting up conditions to start or terminate specific behavior” (Saridaki & Mourlas, 2012). This is particularly relevant for intellectually challenged learners, who may struggle with maintaining focus and attention in traditional classroom settings. In this book chapter, ‘game-based learning’ refers to digital and non-digital games such as video games, card games, and puzzle games.

Game-based learning catalyzes the development of critical thinking and problem-solving skills among students, engaging them in complex scenarios that necessitate analytical reasoning and creative solutions (Nadeem et al., 2023). In these interactive environments, students are often required to assess multifaceted challenges, encouraging divergent thinking and fostering the ability to evaluate multiple perspectives (Lasala, 2022). Many games can be customized to meet learners' individual needs and preferences. This customization allows students to progress at their own pace, receive personalized feedback, and address their learning gaps. By tailoring the

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