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Game-Based Learning in Secondary Education: A Review of Evidence on Learner Engagement, Motivation and Academic Achievement

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Abstract

Game-based learning (GBL) is becoming more recognized as a unique and modern style of teaching that makes education more dynamic, attractive, and centered on learners. This study analyzes the role of game-based learning in learner involvement, motivation, and academic performance in secondary education within the East African context. This study explores the role of game-based learning in learner involvement and participation in classes; evaluates how this concept affects learner motivation, interest, and enjoyment; and summarizes findings on how it relates to academic success and knowledge retention. The study adopted a structured systematic literature review design and reviewed peer-reviewed literature identified through major academic databases and search engines. From an initial search of 585 records, screening, eligibility assessment and quality appraisal resulted in 15 studies being included in the final synthesis. Data were extracted and thematically synthesized according to the three study objectives, with international, African and Kenyan evidence compared. The review was guided by Self-Determination Theory and Flow Theory, which explain the motivational and engagement mechanisms underlying game-based learning. The results from the first objective show that GBL enhances learner enthusiasm, attention, involvement, and interaction due to the adequacy of game challenge, feedback, and collaboration. The second objective results showed that GBL has a positive effect on the learners' motivation, enthusiasm and pleasure, although the factors such as intense competition and imposition of external rewards might hinder long lasting motivation. The analysis for the third objective indicated that GBL had positive results in terms of the learning outcomes but only if game activities are designed appropriately and correspondence to the curriculum is maintained. The conclusion of this study shows that GBL is a potential option for increasing learners' enthusiasm, motivation and cognitive success;

however, it is important to note that the efficiency of GBL depends on the instructional design and contextual conditions.

Keywords: Game-Based Learning; Secondary Education; Learner Engagement, Learner Motivation, Academic Achievement, Secondary Education; Digital Game-Based Learning