

Chapter 3

Game-Based Learning: A Future Research Agenda

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ABSTRACT

The continuous growth in the development of interactive technologies has lighted up the game-based learning applications. The game-based learning applications motivate the students to enhance their knowledge and improve the overall student learning experience. Learning with fun and entertainment is the prime aspect of any interactive platform. The skills and knowledge learned by game-based learning are kept longer than traditional learning methods. In addition, an efficient learning method involves students completely in what they are doing. The game-based learning application is very helpful for the physically handicapped students to reveal their intellectual ability. This chapter discusses how the game-based learning applications impacts the Indian education system, national and international status of game-based learning, challenges of game-based learning, existing game-based learning applications, and present and future impacts of game-based learning applications on the Indian education system.

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INTRODUCTION

Game-based learning uses gaming technology to create a fun, encouraging, and collaborative virtual learning atmosphere for situated learning. Nowadays, many researchers believe that the game-based approach is the inspiration for today's entertainment-based students who learn more effectively through meaningful activities described in the game context rather than conventional didactic approaches. The future of the educational gaming industry is a wide-open playing field. Game-based learning (GBL) (Plass, 2015) can be used to boost both learning and teaching, and it merely means that learning and teaching must involve games. Game-based learning is changed from learning through lectures and written to learning through games and has become an essential part of modern learning. One of the biggest obstacles for teachers is giant learners' performance, with all their having different personalities, capabilities, and entirely different learning interests. In addition to this, the most significant challenge is to find new ways of catching students' interest and involving them in the learning process. Learning is not just rote memorization (Grove, 2012). In the recent era, students are unable to learn from the tedious learning process, however, they appreciate the use of expertise and experience to solve problems with the aid of an efficient learning process. Students like to have various events, prizes, surprises, and humour to continue their passion for learning with high expectations of everything digital. Gaming-based learning preserves the information and skills longer than other learning types. Successful learning is one of the processes in which learners engage entirely. Game-based learning includes games that are well-designed and effective to make the learning process more productive. An educational game has developed to suit the educational system's objectives combine with fun. Game specially designed to educate children and inspire them to learn themselves and solve problems significantly. It merely means including knowledge matter of subject into games. All types of games are learning processes, it may be casual gaming for fun or something serious. The learning process consists of three ways to combined games and fun. Firstly, students build and create their games to suit their needs; secondly, they rely on instructors, trainers, and developers designed games at the knowledge level of students, and thirdly they incorporate prefabricated commercial games into the classroom activities for efficient research. Moreover, game-based learning plays an integral part in teaching through students' cooperation, communication, engagement, and teamwork. Strategic games boost brain activity and provide dynamic knowledge, encouraging the students to develop skills and establish an emotional relationship to learning and storylines. Games can be personalized to individualize teaching that increases students' trust and freedom (Tobias, 2014). One of the most significant aspects of game-based learning is to every student will receive direct feedback and recommendations about how their performance can be enhanced.

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