

Chapter 13

Role of Digital Games and Gamification in Promoting the Learning Process

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ABSTRACT

Learning is a constantly evolving process, and the educational systems are constantly seeking to employ technological innovations in developing this process and increasing its effectiveness. Attention has been directed to employing digital games and gamification in the learning process because of their impact of increasing students' motivation towards learning and developing students' knowledge and skills. In addition, they can be a good solution for many problems in the educational world. This chapter discusses the supportive opinion of using digital games and gamification in the learning process, while the opposition opinions are faced through evidences and modern studies that dealt with this topic. It is important to adopt a strategy of teaching based on the integration of digital games and gamification in the curriculum to achieve educational goals in a fun and entertaining way.

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INTRODUCTION

Rapid technological and scientific developments changed our daily way of life, due to the huge information explosion in science and technology, and this period was called the information society which was characterized by producing knowledge in all its forms and focusing on the relationship between science and technology (Pektas & Kepceoglu, 2019). Learning societies have worked on changing educational environments and developing the use of educational activities supported by multimedia. The development in computer and internet technologies has helped to innovate and develop new models of learning using the Internet and multimedia which have contributed greatly to the emergence of the concept of gamification and employment of games in the educational process (Kim & Chun, 2014).

Digital games and gamification are a common term in education that provides an opportunity to learn by playing and providing a virtual environment governed by disciplines, rules, and restrictions that combine competition, motivation, and learning (Seaborn & Fels, 2015). Using game design elements for a particular task provides a more intense interaction in exchanging information and engaging students in a fun way (Begosso et al., 2018).

Students are often lazy when it comes to studying, and how to motivate them is one of the most important problems of education (Tokan & Imakulate, 2019). The digital games and gamification with educational goals play a prominent role in the learning process; they can be a good solution for many problems in the educational world, hence This paper will discuss the following topics:

- The increasing use of digital games and gamification.
- The role of games and gamification in promoting the learning process.
- The limitations of digital games and gamification in the learning process.

THE INCREASING USE OF DIGITAL GAMES AND GAMIFICATION

The use of digital games and gamification in education is crucial. digital games industry is growing around the world, so this sector is expected to grow very significantly in the coming period, and it will reach \$138.5 billion by 2025 (Newzoo, 2017). Looking at the following chart which indicates the growth of the digital games market in the USA for example, It is noticeable that the digital games market will double every ten years by approximately 5.8%, and this indicates the importance of digital games and the high demand for them (see Figure 1).

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