

Chapter 1

Game Concepts in Learning and Teaching Process

Ilana de Almeida Souza Concilio

Faculdade de Informática e Administração Paulista, Brazil

Pedro Henrique Cacique Braga

Mackenzie Presbyterian University, Brazil

ABSTRACT

The traditional teaching and learning process has undergone several transformations in order to increase the engagement and motivation of students in relation to the content studied. The emergence of learning management systems, along with the adoption of games or gamification features, make the instructional process more stimulating and dynamic. Educators also seek to identify appropriate pedagogical strategies in the context of motivational design and the study of emotions. This chapter aims to present different approaches to playful learning and also discuss good practices in the use of frameworks created based on students' emotional components and instructional design in order to make game-based learning and the use of gamification more effective and engaging.

INTRODUCTION

The constant emergence of disruptive technologies continues to offer exciting new opportunities for educators. In recent years, web-based Virtual Learning Environments (VLE) / Content Management Systems (CMS) / Learning Management Systems (LMS) have quickly become an essential part of the learning and teaching process.

As educators strive to adopt and adapt web 2.0 technologies, a connection is possible between technological advancement and improved pedagogical practices.

In order to plan, implement and evaluate a specific learning process (LMS), software applications or web-based technologies emerge. The LMS supplies the instructor with a way to create and deliver content, monitor students, evaluate their performance and provide them the ability to use interactive features such as discussions, forums and chats.

DOI: 10.4018/978-1-5225-5790-6.ch001

A LMS offers students the opportunity to use interactive resources and various available tools to promote a better and more interesting teaching and learning process. There was a time when teachers were used to complain about the lack of students' interest and motivation and students were used to do the same about traditional teaching methods. Now, this behavior is changing.

One of the main complaints made by students and teachers is also the interaction process and the poor quality of the proposed material, which often shows as a reflection of the materials used in the traditional classroom (Souza-Concilio & Pacheco, 2013a).

Along with the popularization of LMSs, the proposal to use Games or Gamification features has appeared to make the teaching process through these platforms more stimulating and dynamic.

The use of these recreational resources for educational purposes is increasing, employing game mechanics for non-game systems (Souza-Concilio & Pacheco, 2013b). This process is accelerating as educators learn to make effective use of the more compelling features of computer games, for example, active participation, intrinsic and fast feedback and challenging but achievable goals.

According to Graven and MacKinnon (2006), students learn more and have more fun when they are actively involved, rather than just being passive listeners, traditionally known as boring in some educational systems.

Despite the growing acceptance, there is still some resistance to the use of Digital Games as an effective mean of teaching, which may be a consequence of a lack of knowledge about concepts such as Game-Based Learning and Gamification. A teaching environment can be improved using Gamification features as motivating and challenging factors without the insertion of Digital Games into the pre-established content in the school curriculum.

According to Blanco et al. (2012), in real life learning situations, the purpose of increasing emotional engagement should be to call on a playful attitude towards learning. Students are not "empty vessels" that can memorize all learning content. Students learn more effectively when they are involved and interested.

A major challenge in the development of educational games is to provide a balance between fun and learning. Ideally, the learning curve should increase while the student continues to enjoy while playing. For educational purposes, a game should not be too much fun and not simply just teach. The student must learn in a more motivating and emotional way.

From this point of view, this chapter aims, based on motivational design and emotional engagement, to discuss how the use of Digital Games or Gamification features can motivate students, enriching the teaching-learning process. The idea is to provide an overview of the effectiveness of using playful resources in LMSs, highlighting the use of game concepts in teaching as an attempt to improve learning skills in a more positive way.

This chapter is intended to address the following:

- To present the concepts and fundamentals related to educational games as Funology, Emotional Engagement, Motivational Design, Learning Management Systems, Game-Based Learning, Serious Games, Educational Games and Gamification.
- To highlight the differences between game-based learning, gamification and the use of games in education.
- To discuss best practices about the usage of Digital Games and Gamification features to make the teaching and learning process more interactive, interesting and entertaining for students.

32 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/game-concepts-in-learning-and-teaching-process/210988

Related Content

Acceptability of Video Games Technology for Medical Emergency Training

James F. Knight (2013). *International Journal of Gaming and Computer-Mediated Simulations* (pp. 86-99).
www.irma-international.org/article/acceptability-of-video-games-technology-for-medical-emergency-training/102617

The Gamification Experience: UXD with a Gamification Background

Cathie Marache-Francisco and Eric Brangier (2015). *Gamification: Concepts, Methodologies, Tools, and Applications* (pp. 1-20).
www.irma-international.org/chapter/the-gamification-experience/126050

Healthcare Games and the Metaphoric Approach

Catherine Lelardeux, Julian Alvarez, Thierry Montaut, Michel Galaup and Pierre Lagarrigue (2013). *Serious Games for Healthcare: Applications and Implications* (pp. 24-49).
www.irma-international.org/chapter/healthcare-games-metaphoric-approach/67955

Identifying Stressors and Coping Strategies of Elite Esports Competitors

Matthew J. Smith, Phil D.J. Birch and Dave Bright (2019). *International Journal of Gaming and Computer-Mediated Simulations* (pp. 22-39).
www.irma-international.org/article/identifying-stressors-and-coping-strategies-of-elite-esports-competitors/238744

Designing a Learning Analytic System for Assessing Immersive Virtual Learning Environments

Donna Russell and Steven E. Wallis (2016). *Handbook of Research on Gaming Trends in P-12 Education* (pp. 502-526).
www.irma-international.org/chapter/designing-a-learning-analytic-system-for-assessing-immersive-virtual-learning-environments/139822