Chapter 7
The Gamification in Online Environments in the Context of the Flipped Classroom

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ABSTRACT

Research into teaching and learning methodologies is intense and demonstrates the academic community's unrelenting need to understand how people learn in a continuous effort to improve efficiency in the transmission of knowledge. Teachers are dealing with a growing disengagement of students in recent decades. In part, this is due to the increase in the spread of ICT technologies outside the classroom, particularly those supporting social networking and video games. New trends, such as gamification and flipped classroom, are emerging to try to find ways to stimulate increased student engagement and motivation. In this chapter, the authors present a critical reflection and field experiences, around the potential of joint implementation of gamification with flipped classroom, demonstrating possibilities of positive increment of efficiency and effectiveness of teaching and learning processes.

INTRODUCTION

The teaching and learning process and its relationship with the digital world is the subject of constant research and debate in academia, particularly about the efficiency and effectiveness of educational techniques and methodologies (Tularam & Machisella, 2018). The digital paradigm in education significantly impacts the education system at different levels, involving teachers, students, and the educational institutions, going through behavioral, educational, and strategic aspects, which require continuous adaptability and flexibility of the intervening parties.

Complementarily, one must consider how learning, relearning, teaching, and the effort to understand how to transition and implement different teaching methodologies, whether traditional or emerging, especially in the e/b-learning context, as evidenced in times of pandemic by COVID-19 (Williams et al., 2019), through the abrupt and forced growth of distance learning.

The challenges in implementing b-learning are high, both in terms of the intrinsic aspects of the subject being taught and in terms of the behavioral and affective factors in the academic relationship between teachers and students (Akcil & Bastas, 2021). Therefore, so that it is possible to create a digital teaching environment that is productive, attractive, motivating, efficient in learning aspects and that creates in students a sense of group belonging, even if these students are physically distant and in asynchronous learning activities in Virtual Learning Environments (VLE).

In this sense, academia is making several efforts, which involve the use of various educational methodologies and teaching techniques, which can be adapted, complemented, and merged, but which focus on a considerable empirical component in the search for the best adjustment of the educational process.

Smith & Hill (2019, p. 238) conducted a scientific work of reviewing articles in indexed scientific reference databases, having analyzed more than ninety articles published between 2012 and 2017, which dealt specifically with the theme of the approach to implementing b-learning in higher education institutions (HEIs). In this work it was found that 65.9% of the articles presented results of empirical experimentation in the use of teaching methodologies, noting a relevant growing trend around the scientific production about b-learning.

However, although we observe that over the years, there is a tendency of relevant growth about the implementation and experimentation of digital in education, we have in the scientific literature a large concentration of works with one-off experiments, performed in a short time, which contribute to the elucidation of some questions but leave others unanswered, being necessary to perform a continuous and repetitive process of experiments, within the same protocol criteria (Lopes et al., 2019).

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