



Gamification and Player Profiles in Higher Education Professors

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ABSTRACT

This paper conducts descriptive quantitative research of the player profile of a set of 808 university professors, and the player profiles that participants consider most suitable for learning when educational gamification is employed in higher education. It also studied the existence of influential variables in the chosen player profiles, including sociological (gender and age) and academic variables (area of knowledge). The results reveal that most professors are mostly explorers, followed by the socializers, and consider these player profiles as the most efficient for achieving learning objectives. There are no gaps based on sociological aspects or knowledge about gamification, but there are gaps based on area of knowledge. It is proposed that universities design training sessions for professors on educational gamification and further research on factors that influence the configuration of their player profile.

KEYWORDS

Faculty Training, Games, Improving Classroom Teaching, Innovative Methodologies, Motivation, Pedagogical Issues, Personalized Learning, Teacher Professional Development

INTRODUCTION

Gamification in education has been understood as a motivational resource to address school dropout and lack of student engagement in the teaching-learning process (Martí-Parreño et al., 2016; Zahedi et al., 2021). However, not all gamification applications have produced the expected positive results, either because they have failed to motivate students, or because their initial enthusiasm has gradually waned as the game novelty value faded (Domínguez et al., 2013; Williams et al., 2008; Koivisto & Hamari, 2014;

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Dymora & Niemiec, 2019), or because of the specific training needs of the teaching staff in this area (Figg & Jaipal-Jamani, 2015). As explained by Hassenzahl et al. (2010), a growing number of studies highlight the importance of customizing the game design to meet the basic needs and personality profile of players.

Some studies, such as Denisova & Cairns (2015), claim that the full adaptation to the student's profile is not a guarantee that the game experience will be more immersive, although it increases the motivation of the students and facilitates their integration in the game. Therefore, to the extent that the immersive experience also helps to achieve the learning objectives (Subhash & Cudney, 2018; Grivokostopoulou et al., 2019), it seems necessary to distinguish between the player profiles of the game designer, the student who will be the user and the player profile that will best ensure the acquisition of learning.

A search of bibliographic resources indexed in SCOPUS with the word "Gamification" in title, abstract or keywords reveals that there are no significant works on gamification prior to 2011 but that, since that year, interest in this methodology has grown every year among researchers (Figure 1). However, if the same is done with the expression "Player profile", it is observed that, although the trend of publications is increasing, the number of studies on the player profiles of the agents involved in gamified didactic situations is very low, in relative terms, with respect to the number of papers on gamification (Figure 1). Specifically, in 2021, the most recent full year for which reference is available, there are 1879 articles on gamification, compared to only 88 that discuss player profiles, so that less than 5% of the work on gamification focuses on player profiles. Moreover, the rate of growth of the number of publications is also lower, as can be deduced from the lower slope of the curve corresponding to publications on "Player profile" with respect to the curve of "Gamification". All this occurs despite the crucial importance of matching player profiles to learner profiles, something which, as has been explained, is amply supported by the previous literature.

This article analyzes the player profile of 808 university professors and their preferences about the player profile they consider most conducive to learning. The study also analyzes the influence that certain sociological (i.e., gender and age) and academic variables (area of knowledge), exert on these preferences. The distributions of the responses to the profiles chosen within each value of the above variables are also compared. The description of the professors' player profiles in this work will allow establishing the basis for a detailed description in subsequent works of the gap between students and professors in terms of their respective player profiles. Knowledge of this gap is important, because it will allow professors to adapt more effectively the gamified didactic situations they design to the students' interests, which will help, according to the perspective of personalized learning, to increase academic performance.

As far as it has been possible to explore, it has only been possible to find one paper that explicitly analyzes the player profiles of university professors, but only in the Engineering area (Vergara et al., 2022), whose main conclusion is the identification of a strong gap between the profiles of professors and those of students. In fact, some studies suggest that there is a divergence between the profiles chosen by professors in the design of gamified situations and the interests of the students to whom they are addressed (Kimmitt, 2017). This gap may be caused, at least partially, by the age difference between students and professors, since the preferences of player profiles change from more competitive and success-seeking to less so as age increases (Tondello et al., 2017).

LITERATURE REVIEW

Player Profiles in Game-Based Learning

There are several studies that provide a description of player types, as well as the dynamics they generate. These typologies are associated with different variables. Among the most studied, Bartle's (1996) typologies of players stand out, with four types of players (Killer, Explorer, Socializer and Achiever), and Marczewski, who extends this classification with the types: Free spirit, Philanthropist and Disruptors (De-Oliveira et al., 2020). Bartle's taxonomy was novel in the classification of player profiles when it was published and served as the foundation for all taxonomies that have followed.

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