Chapter 3
Player/User Types for Gamification

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ABSTRACT

Gamification has created great expectations for education and has become a trend in education. It is not an easy process to integrate gamification into educational environments. The design and development phases of gamification are very important. Therefore, it is necessary to follow a model that will guide the process in gamification designs. Individual differences among students are an important factor affecting their learning performance. In this context, considering student characteristics will increase the effect of gamification in education. Personalized gamification designs that meet the needs and expectations of students will be more effective than one-size-fits-all designs. It can benefit from player/user types in gamification designs to identify individual differences. This chapter aims to discuss player/user types in relation to gamification in the context of education.

INTRODUCTION

Gamification refers to the "*use of game design elements within non-game context*" (Deterding et al., 2011a). At the same time, "*human-oriented design*" and "*motivational design*" is emphasized for gamification (Berber, 2018; Chou, 2016). In gamification designs, the game mindset must be properly adapted to the context in which it is used (Kapp, 2012). Therefore, it would be beneficial to use a design model to guide the process (Kumar & Herger, 2013). Especially in the context of education, this becomes even more important. Because learning should not happen unplanned. A planned and sequenced process should be followed for instructional design (Seels & Glasgow, 1998). In addition, individual differences of students are an important variable that affects the success of education (Thorndike, 1918). They express various personal characteristics. Ability, learning style, perception and motivation of each person are different.

It is not correct to assume that all students have the same characteristics. For a more effective learning, the individual differences of the students should be known, furthermore these differences should be considered in instructional design. So, gamification designs should not be made by "*one size fits all*" approach. As the interests and expectations of each person may differ, gamification design should be carried out considering the characteristics of the target audience (Sezgin, 2020). Individual differences are an important factor affecting the efficiency of gamification (Barata et al., 2017; Mekler et al., 2017). Therefore, the significance of personalized gamification designs has increased (Santos et al., 2021). In gamification design, user preferences should be at the center of the process (Burke, 2014; Marczewski, 2015; Werbach & Hunter, 2015). In this context, player/user types can be used in gamification designs to explain individual differences. This chapter aims to discuss player/user types in relation to gamification in the context of education.

BACKGROUND

The Benefits of Gamification for Education

Gamification originally appeared in the marketing field and later spread to other fields such as healthcare, management, and entertainment (Domínguez et al., 2013). Effective applications of gamification in these areas have revealed the idea of using it in education (Deterding et al., 2011a). According to Lee and Hammer (2011), gamification will encourage students to learn, and it will make education more fun. This situation was likened to "*peanut butter meeting chocolate*" and interpreted as "*two great tastes working together*". Gamification has created great expectations and it has become a trend in education (Surendeleg et al., 2014).

With gamification, it is aimed to facilitate learning by providing motivation and engagement in learning environments (Seaborn & Fels, 2015). Gamification can make significant contributions to engagement and motivation in educational environments (Simões et al., 2013). The inclusion of game elements in learning environments increases student engagement and outcomes related to engagement (Goehle & Wagaman, 2016; Looyestyn et al., 2017; Tenório et al., 2016). Gamification helps students produce quality educational outcomes by increasing their engagement in educational tasks and their interaction with course content (Armier et al., 2016; Cózar-Gutiérrez & Sáez-López, 2016; Darejeh & Salim, 2016). Students have positive attitudes and high satisfaction with gamification (Hew et al., 2016; Kopcha et al., 2016). Also, gamification promotes students' 21st-century skills such as collaboration, communication, and critical thinking (Dicheva et al., 2015; Lee & Hammer, 2011). In addition, gamification creates an opportunity for formative assessment and offers an alternative solution to innovative assessment methods (Taşkın & Kılıç Çakmak, 2017).

Gamification in education can be done without using any technology (Gennari et al., 2016). However, developments in the internet and computer technology have a great role on the popularity of gamification (Deterding et al., 2011b). Today's students live in an era which the internet and computers are used extensively (Prensky, 2016). They also have close ties to digital games. Gamification offers great opportunities for students who are called "*digital natives*". They have grown up with technological possibilities and can use them effectively. The inclusion of gamification in online learning environments increases interaction and encourages students to learn (Castro et al., 2018). The use of gamification in online environments increases students' positive attitudes towards these environments and increases their motivation and so-

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