Chapter 5

The Learning Style of Gamers: Exploring a Multidimensional Profile Aimed at Gamifying MOOCs

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ABSTRACT

The use of gamification has shown to be an interesting approach to engage users in MOOCs. In this context, different game strategies, elements, and mechanics are applied to help to improve the teaching/learning process. When designing teaching/learning methods, teachers must take into account both gamification techniques and learning styles in order to encourage students and to improve their learning performance, respectively. However, while applying gamification and at the same time keep taking into account the corresponding learning styles, we may find some kinds of incompatibilities. Thus, what this chapter covers is the conducted experimental analysis aimed at exploring the viability of merging gamer’s profiles and learning styles in a single multidimensional user profile. The obtained results expose that, with this approach, we are able to identify groups of students so that, while designing teaching/learning methods, we can take into account both learning styles to improve the learning performance and gamification techniques to motivate and encourage the student.
INTRODUCTION

One of the challenges in current MOOCs (Massive Online Open Courses) is to keep students enrolled throughout the whole course. This is an active research topic in order to know how to engage and motivate users so that they do not abandon the course (Coffrin, Corrin, de Barba, & Kennedy, 2014; Guo, Kim, & Rubin, 2014; Hew, 2016; Nawrot & Doucet, 2014; Xiong, Y., Li, H., Kornhaber, M. L., Suen, H. K., Pursel, B., & Goins, D. D., 2015; Zheng, Rosson, Shih, & Carroll, 2015). In this sense, Gamification is an approach that appears to provide good results (Borras-Gene, Martínez-Nunez, & Fidalgo-Blanco, 2016; Borrás-Gené, Martínez Núñez, & Fidalgo Blanco, 2014; Reischer, Khalil, & Ebner, 2017; Vaibhav & Gupta, 2014).

In fact, Gamification has become a trending term in several contexts aimed to motivate and to engage users. Although there is no-consensual definition, it is generally defined as the use of game elements and mechanics in non-game contexts (Seaborn & Fels, 2014). To name a few of these elements we can mention: services for socializing; mastery with levels and achievement; competition through scoreboards and points; status by means of badges, etc.

However, although Gamification has been applied in a wide range of domains like education, computer science and engineering, online communities and social networks, health and wellness, crowd sourcing, sustainability, orientation, research, marketing, computer supported cooperative work, etc., it looks that the approaches are still immature and more validations and evaluations are necessary (Caponetto, Earp, & Ott, 2014; J. W. Chang & Wei, 2016; De Sousa Borges, Durelli, Macedo Reis, & Isotani, 2014; Dicheva, D., Dichev, C., Agre, G., Angelova, G., Salem, W., Salem, W., & Carolina, N., 2015; Domínguez, A., Saenz-De-Navarrete, J., De-Marcos, L., Fernández-Sanz, L., Pagés, C., & Martínez-Herráiz, J. J., 2013; Hamari, Koivisto, & Sarsa, 2014; Nah, Zeng, Telaprolu, Ayyappa, & Eschenbrenner, 2014; Pedreira, García, Brisaboa, & Piattini, 2015; Seaborn & Fels, 2014). Nevertheless, it is worth highlighted that the top field for Gamification research is education (Seaborn & Fels, 2014), and in this field we can find some recent studies that have proved its effectiveness (Borrás-Gené, O., Martínez Núñez, M., & Fidalgo Blanco, Á., 2014; Da Rocha Seixas, Gomes, & De Melo Filho, 2016; Gennari, Melonio, & Torello, 2016; Hamari, J., Shernoff, D. J., Rowe, E., Coller, B., Asbell-Clarke, J., & Edwards, T., 2016; Vaibhav & Gupta, 2014).

One of the reasons that lead to obtaining no-conclusive evidence in learning contexts could be due to an unappropriated match between game mechanics and the learning content. (Kapp, 2012) affirms that the introduction of Gamification in education and training can help to improve the teaching/learning process by taking different game strategies into account according to the learning content. That is, specific gamers will prefer specific learning content, and because they will be
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