Gamification-How to motivate students in an online environment*

Karin Kollarovičová

Slovenská technická univerzita v Bratislave

Fakulta informatiky a informačných technológií

`xkollarovicovak@stuba.sk`

29.10.2020

Abstract

The focus of this paper is on analysing a method called Gamification and its use in the e-learning environment. Gamification plays a big role when it comes to successfully motivating students and improving their social interactions with one another while communicating via the internet. The psychological point of view is crucial to fully understand how educational tools should be developed. According to multiple studies, this method has been practically used in education and has shown some good results. Most of the success exists thanks to well-known mechanics implemented from the video game industry. This article provides arguments on why gamifying education is beneficial as well as a somewhat critical point of view, from which objective idea can be formed.

1 Introduction

Students' lack of motivation may have always been a problem, but it has never been more noticeable than it is today, in the age of e-learning. Especially during the COVID-19 pandemic, many more student and teachers are the victims of a non-functional online education system which is poorly organized and does not provide the same satisfaction as in-person learning does. Lack of motivation can easily occur when students and teachers cannot or simply do not interact with one another efficiently. To fully understand how we can benefit from gamifying education we also have to understand the psychology behind it. Therefore, section 2 will be focused on how motivation works and what can be done to boost it. Gamifying education has truly proven useful over the past years due to its high interactivity. What makes it so efficient and effective are all the gameplay mechanics if incorporates into learning. We will take a look at what precisely is understood under the term 'Gamification' (section 3) as well as its practical use (section 4). Despite proven useful, there still may be some shortcomings about whether the results achieved by Gamification are good enough to keep up its good reputation. You can read further about these in section 5.

---

*Semestrálny projekt v predmete Metódy inžinierskej práce, ak. rok 2020/21, vedenie: Ing. Michal Hatala, PhD.

2   The lack of motivation

3   What is gamification

The term 'Gamification' simply means applying specific and efficient gameplay mechanics to the education process. It, however, does not necessarily mean creating full games as we know them. [2] A bit more precise definition is creating e-learning tools with the use and application of specific elements from games. These elements are what makes videogames fun, while maintaining the challenging and educational character. [1] It must also be remembered that successful gamification is not solely about the game attributes of it. Equally important are the social and cognitive factors, which are the true sources of education. [2] If executed correctly, the student/learner is given proper motivational, social, and emotional satisfaction. [1]

3.1   Engagement in Gamification

Having a user's full attention or making sure they stay engaged for a longer period of time is something game developers have been mastering for decades. Their knowledge can therefore be helpful. According to Raymer [2], "essentially, there are two components to the perception of something being rewarding: wanting and liking". To put it in other words, being rewarded for something we enjoy and like is what keeps us engaged and excited. This must naturally be remembered in the development process of a certain gamification tool. [2]

3.2   Game mechanics

Veľmi dôležitá poznámka.   Niekedy je potrebné nadpisom označiť odsek. Text pokračuje hneď za nadpisom.

4   Gamification in use

5   Critical view

6   Conclusion

References

[1] S. Abu-Dawood. The cognitive and social motivational affordances of gamification in e-learning environment. In *2016 IEEE 16th International Conference on Advanced Learning Technologies (ICALT)*, pages 373–375, 2016.

[2] Rick Raymer. Gamification: Using game mechanics to enhance elearning. *ELearn*, 2011(9), September 2011.