Gamification’s Role as a Learning and Assessment Tool in Education

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ABSTRACT

Gamification is a new and upcoming trend that is predicted by many to further enhance the field of educational technology in the new millennium. The use of gamification has fared well in the corporate world and is gradually transcending into the educational arena. The usage of game elements such as points, badges and leader board can assist in keeping the students not only motivated but also engaged to the teaching and learning process in the school. As learning and assessment come hand in hand as a knowledge acquiring process in a classroom, therefore it should be identified whether or not gamification can be truly utilized in the form of a learning and assessment tool in the teaching and learning process. This paper will discuss about the repercussions of using gamification as a learning and assessment tool based on the review of several studies carried out in the field of gamification.

KEYWORDS
Assessment, Educational Technology, Game Elements, Gamification

INTRODUCTION

Constant changing landscape of education has brought the introduction of many innovations in educational technology. One such innovation is gamification; the use of gaming elements in non-gaming context. These game elements are points, badges and leader boards, elements that usually exist in video games. Although Nick Pelling was credited with coming up with the term back in the 1990’s, gamification only came into prominence in the late 2011, in the world of technology via the arrival of social networks and web-based marketing (Rughiniş, 2013). Gamification; with its’ use of elements found in games in either online or offline allows a much needed flexibility in bringing a game like experience to the users. For example, the loyalty points achieved when buying flight tickets or the badges received when we constantly post in a social networks or online forums. Or the number of badges that is awarded to buying materials from a hypermarket that can be accumulated...
and changed with gifts. This has proved fruitful in other fields, but its fullest potential has yet to be harnessed in the educational technology field.

Learning and assessment come hand in hand as a knowledge acquiring process in a classroom. Implementation of games or game elements into education is another task all together. By carefully designing a game with structured learning activities and embedded formative assessment, designers risk creating a game that does not interest students (Walker and Shelton, 2008). Additionally, it may not be realistic for a teacher to carry out their formative assessment on students during the duration of the game as each path or route of exploration in game play may not be the same (Walker and Shelton, 2008).

Insertion of assessment into game based learning environment is still in its infancy and can be time consuming (Chin, 2009). This is the key reason why gamification is chosen to take up in the role as learning and assessment tool in education as it only requires the use of game elements as opposed to creating a whole game system from scratch. Although, ensuring the reliability of a gamification based learning and assessment system will depend on creating a meaningful gamification.

**FOUNDATIONS OF CREATING A MEANINGFUL GAMIFICATION**

The concept of meaningful gamification was introduced by Nicholson, (2012) through a user-centred exploration. A meaningful gamification will be successfully implemented if it puts the “needs of the users first over the needs of an organization”. This allows the cultivation of a positive feeling among the users, thus leading to long term and deep engagement allowing the users to have a positive experience that eventually will lead towards a longer-term and deeper engagement (Sanmugam, et al., (2014). A false sense of achieving a target will occur if the focus is solely based on game mechanisms. This was supported by Glover, (2013) whom found that important game concepts, gives an overview of examples from outside education and provided several ideas for executing gamification into education generally, and e-learning specifically. Levels of motivation also need to be known prior to the introduction of a reward system. This is because in an optimized environment, dependency towards the rewards may disrupt their flow of learning. As a result of this, the learning activity and gamification should be done and planned at the same stage. Meanwhile, gamification should focus more on quality based elements such as students assessing and giving feedback among themselves; rather than rewards and points; quantitative elements. Rewards too need to be created or set aside to make sure it’s achievable to push up the motivation level, yet limited enough to create a sense of accomplishment receiving it. This reduces the sense of abundance in rewards; creating a sense of uniqueness in that reward that pushes to participants to strive for it.

A research by Morrison and DiSalvo, (2014) whose theoretical research on Khan Academy found that the web based gamification system addressed the issues of short-term engagement and keeping users involved and progressing to more difficult tasks. It is noted to have missed critical motivational components in utilizing external rewards without matching them to the underlying exercises makes an empty gamification experience and instils a negative feeling in the users. A meaningful gamification involves “adding elements of pure play to the system”; not just scoring systems. Attaining a certain level of achievement in a task, one has to work for it to have the sense of accomplishment. So any reward received upon completing this task is deemed meaningful and worth it. For example, a student is rewarded for accomplishing a sequence of challenges or quizzes in comparison to getting rewarded for every challenges or quiz he or she completes. Thus missing the notion of meaningful gamification, where it is user-centred. Though Khan Academy has included gaming elements, it has not managed to create desired motivational effect. It is concluded the successful gamification of the site can be
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