Increasing Students Involvement by Gamification in Assessment Evaluation

By

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FINAL APPROVAL

It is certified that the research work presented in this thesis entitled "Increasing Students Involvement by Gamification in Assessment Evaluation" was conducted by Qasim Ali under the supervision of Dr. Adnan Abid and co-advisor Ms. Uzma Farooq at University of Management and Technology, Lahore, Pakistan in May 2018 to fulfil the requirements of the degree in M.S/M.Phil in Computer Science.

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DECLARATION

I hereby **Qasim Ali** with Student ID **15026050010** declare in this declaration that it's my own original work. Where collaborations with other researchers are involved, or materials generated by other researchers are included, the parties and/or materials are acknowledged or are explicatory referenced as appropriate.

This work is being submitted to the University of Management and Technology in partial fulfilment of the requirements of the degree of Master of Science (M.S) in Computer Science.

This thesis has not been submitted to any other University or institution for any degree or examination.

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Abstract

In universities, student's registers in many courses and they have to submit assignments, quizzes and work on subject projects. They find all these tasks old fashioned and don't entirely corporate and adequately engage with the course materials. Therefore, students don't get good grades. Secondly, students can't get feedback on their work on time, and they become confused either they are on the right path or not and they don't get the chance to check their progress at any time. This study aimed to gamify course content in such a way that student motivates and participate in classroom activities and manage their time and give them quick feedback and progress report. This research generates a gamification toolbox by blending course outline, project-centric approach, and gamification techniques by developing an online web portal and badges, leaderboard, SMS and web notifications are its main features. This study took two model classes into its observations and performed a series of test on the data. Student t-test shows the level performed better where gamification toolbox was applied. Correlation between project deliverable and questions in exams related to same domain show a strong relationship in the class where gamification of this research was involved.

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1 Introduction

People of all ages play games either on their mobile phones, tablets or on pc for fun and enjoy. Gamification refers to the use of game mechanics and framework into non-game context or applications in order to engage and motivate participants for target tasks [1]. Gamification is a process in which all the elements of the games apply to real world activities. It rises the user engagements and give freedom to user to do tasks in game-play technics and feel more ownership. In the last couple of years' gamification has become trending topic since 2013 and first use was found back in 2010 [2]. There has been a lot of research going on in gamification since 2012. The Gamification has widely applied by commercial brands in order to enhance user experience, user's engagements and for work place productivity as well. The applications of Gamification are used in various fields e.g. marketing, finance, business, education, health and media.