

Gamification of the Assessment Process

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Abstract— Gamification of assessment is a developing approach for increasing motivation and engagement of learner's by integrating game design elements in educational/assessment environments. With the growing popularity of gamification and the mixed success of its application in educational environments, the current review is aiming to shed a more realistic light on the research in this field by focusing on empirical evidence rather than on potentialities, beliefs or fondness. Accordingly, it thoroughly examines the advancement in gamifying the assessment. The discussion is structured around the used gamification mechanisms, the gamified subjects, types of gamified activities in assessing candidates, and the study goals, stressing on the reliability and validity of the reported outcomes.

Keywords: Assessment, Engagement, Formative Assessment, Gamification, Gamifying Assessment, Learning, Performance, Students Motivation

I. INTRODUCTION

Gamification of assessment is the process of adding game elements throughout the learning, recruitment, selection process, in order to make it alluring and easy to use, thereby increasing the engagement and motivation of the candidates undertake the assessment.

Gamification is a term that has become increasingly widespread in today's world. It uses game design elements to create the environment for the gamified experiences. Gamification typically means adding game-like aspects such as badges, points, and rules. For example, every time you visit the store and swipe your rewards card, that is gamification. The store is rewarding you with discounts, points and free stuff because you are carrying out the coveted action when you make a purchase.

II. GAMIFICATION

Along with the increasing popularity of video games, it was necessary to defend the extension and application of elements usually present in video games to real world in fields that are far away from entertainment. Gamification corresponds to using of game mechanisms for engaging between a particular audiences.

The definition of any concept is always a difficult task; the gamification is no exception is definite by different perspectives, sometimes in terms of behavior, sometimes in terms of human behavior, trends, as information treatment process, or, in terms of the learning situation.

The use of gamification now-a-days is considered as an emerging phenomenon, which derives directly from the popularity of the games, and its inherent capability to motivate action, solving problems and enhancing learning in the most diverse areas of knowledge. The potential of using video games won the attention of authors from various fields.

Gee describes the impact of the game on the cognitive development and identifies learning principles that could be found in video games, namely, highlighted the potential of video games in learning processes. Prensky also defends the use of video games in education, suggesting that their use would be for future generations, creating the term "digital natives".

Gamification is the using gameplay and game design techniques in non-gaming contexts such as assessing candidates to engage people and solve problems. There are studies that discuss the positive impact of gamification in high school and report positive experience.

III. ASSESSING METHODS

The functions of evaluation are the control, diagnosis and classification. Locating, aiming and discrimination against defects and shortcomings in the development of the teaching-learning process and fixing it by systematic control is the focus of control. Identification, discrimination, understanding and characterization in triggering factors of learning disabilities are made possible in diagnosis. Classifying the student according to income or utilization level is the function provided largely in classification.

Three types of evaluations these functions relate to: summative, formative, diagnoses. Diagnoses is pre-assessing students' knowledge, strengths, weakness and skills. Luckesi states that evaluation would not only be diagnosis to pass or fail students, but a tool of diagnosis of their situation, to define appropriate referrals for their learning.

Formative assessment is the control function carried out throughout the duration of the term, to check whether students are accomplishing the objectives given. Through formative assessment, students mainly find out about their successes and mistakes and plan accordingly. Summative evaluation is after we have already noticed the results according to Hadji. These assessments focuses on evaluating students' learning by equating performance to a benchmark.

These three forms of assessment are closely linked. To ensure the efficiency of the system of evaluation and the effectiveness of the teaching-learning process, the teacher must make use in conjunction of the three modes.

IV. FORMATIVE ASSESSMENT IN CONTEXT OF GAMIFICATION

Formative assessment is control function carried out throughout the duration of the term, to check whether students are accomplishing the objectives given. Formative assessment helps students to find out about their successes and mistakes and plan accordingly.

The assessment is often a slow process, it takes place at the end of the academic year, interim exams. But in game world we use more constant and instant assessment.

Students who intend to change behavior, thinking with the objective of improving learning, gamified formative

evaluation is helpful. Although, teacher also receives the statistics of the student and use the data to help him in the learning process, students could be the main recipient of the formative evaluation.

For Effectual use of formative assessment we must feedbacks must be used effectively, so that the learners' have perfect understanding of goals in learning or objectives. Comparing his own performance to that pre-set goal and finding out a way to accomplish the desired goal. Feedback relating to learning tasks do have a positive effect on the learning process.

Feedbacks should be tasks focused instead of normative comparison. Comparing the performance of students against a standard or goal. Feedback helps student to get a better idea of the objectives of the task. ie. To understand the objectives of task more easily, especially since there are evidences suggesting that the teachers and students often have different views about the goals of the task or the evaluation criteria.

Hence, feedbacks should have more information rather than just letting the candidate know that if he has failed or passed an exam, or any other activity.

V. GAMEFIED ASSESSMENT TOOL

Gamification has the potential to ameliorate the way formative evaluation is conducted. It should involve tasks for students, that if designed properly will provide more useful information for everyone (students, teachers, parents, administrators, etc.). Creating immersive gaming experience that could be used in evaluation process can be a challenging task.

There are many possibilities that need to be taken into account in the integration of gamification with the development of assessment tasks.

Gamification in the assessment process enhances the potential of student engagement, keeps the student motivated, as compared to traditional method. On the subject of motivation, gamification provides more instant performance feedback and displays progress.

Leaderboards, badges, status, rating, all of these are a gamification element. Any gamification elements can be divided into two perspectives.

- 1) Gamification Mechanics
- 2) Gamification Dynamics

Gamification mechanics are the rules and rewards that appear in a program on a digital platform. Examples may include scores, ranks, levels, badges, trophies, tasks, unlocks, progress bars, notifications, leaderboards, etc. Game mechanics are how a user engages with a program and receives next tasks and a feedback on their accomplishments.

Gamification dynamics are referred to a set of behaviors, emotions and desires found in game mechanics that resonates with users. Examples of game dynamics could be achievements, competition, challenges, progress, collaboration, surprise, etc. Game dynamics are used with game mechanics to promote user engagement and motivate participants.

Combinations of mechanics and dynamics are actually ways to introduce gamification in eLearning. Examples of some are,

- Leaderboards based on the score attained by the student after the course completion, highest scoring individuals getting an achievement which could be reflected in their profiles.
- Challenges to finish a task in time half of the end time, and on succeeding the scores could be doubled.

The list can be infinite. "Mechanics-Dynamics" matrix is a great way to spark imagination and create engaging eLearning gamification elements - you are only limited by:

- Your course goal
- Your learning objectives
- Your players' profiles
- Your technological constraints

It is important for any gamified system that there is feedback. It helps to track progress of the student. In real world, feedbacks are usually very slow, whereas in game world feedback is instant. Each players points, levels will be instantly shown to them. Feedbacks could be progress bars, textual, verbal, points, etc.

Gamification will have an important role to play as a part of a comprehensive evaluation system.

VI. CONCLUSION

The concepts presented describe how elements of the game can be integrated into evaluation components, in this case, gamification, based on evaluation for assessing candidates. Some simple educational computer games – crosswords, Sudoku, memory cards, treasure hunt etc. can be used in assessment & self-assessment. These games are able to provide various educational actors such as students, teachers and administrators valid assessment information that will help the students as well as the teachers.

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