

Survey on MOOCs for Digital Game based Learning for Learners

Shivendra Chavan^{1*}, Mangesh Bedekar²

^{1,2} School of Computer Engineering and Technology, MIT World Peace University, Kothrud, Pune, Maharashtra, India

Corresponding Author: shivendrachavan49814512@gmail.com

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Abstract— The Massive Open Online Courses (MOOCs) require extrinsic or intrinsic to the low level of completion of the training, and encounter problems with the interactivity and engagement of students throughout the MOOCs that can transform the enthusiasm of the students in boredom, and then to abandon it at any time. To attract the best players to MOOCs, gamification has been implemented on many platforms; especially since gamification became a buzzword in 2012. This research project examines the motivation and training as perceived by participants in MOOCs, using innovative educational strategies for teaching community in the field of education. In learning gamification, the use of Digital Game Learning (GBL) it provides more fun learning than gamification. In this regard, the current implementation of gamification, DGBL and their role in MOOCs will be assessed.

Keywords—Gamification, Digital Game Based Learning, Massive Open Online Courses, and Online Learning

I. INTRODUCTION

Education is a fundamental human right and essential for the exercise of all other human rights. It promotes individual freedom and empowerment and offers important benefits for development [1]. To bring education closer together and democratize for all, phenomena such as open education and especially Massive Open Online Courses (MOOCs) has begun to develop in recent years; MOOCs could bring hypothetical education for all free. Despite this potential, MOOC studies have shown several limitations, such as lack of user loyalty, high drop-out rates and consequently low completion rates [2].

MOOCs that take into account the diversity of learners must be personalized, engaging and motivating. Various concepts have been proposed [3] to improve MOOCs using community-based approaches. Although there are different types of MOOCs, however, most still provide video learning content. MOOCs have become the containers content and storage equipment. If content is delivered monotonously, without advanced technological and didactic approaches, it will be difficult for users to stay involved.

Therefore, one of the main objectives of MOOCs design is to overcome the problem of its appeal to the mass audience while responding to a variety of individual needs, requirements and expectations. Therefore, we conceptualize the idea of the flipped MOOC-based concepts, flipped classroom, gamification, and learning Analytics. In line with the technological learning perspective presented in this

article, and aims to address the challenges of low student engagement, low completion rates, and high dropout rates by providing a MOOC design solution using pedagogical concepts successfully applied, known from other areas of pedagogical tools: classroom reverse gamification and learning analysis.

“Gamification” is the use of game elements in a non-game scenario to solve a problem or change the behavior of a target population. Gamification has great potential in education [4]. Its effectiveness has been studied by several authors, and in these studies it has been suggested that the gamification approach can generate several effects, such as on the performance, motivation, commitment and enjoyment of users. Form past ten years; gamification has been applied in several fields such as: marketing, trading, education, training, fitness, software, etc. the largest number of applications can be found in education.

As a last paragraph of the introduction should provide organization of the paper/article and rest of the paper is organized as follows, Section I contains the introduction of proposed system, Section II contain the related work of existing system, Section III explain comparative analysis, Section IV contain the architecture of proposed system, section V explain the discussion of proposed system, and Section VI concludes research work.

II. RELATED WORK

The concept of gamification implementation on the MOOC platform is presented in Gaurav C. Willems-2014. They listed many common gamification methods and discussed their effectiveness in the context of online learning. In addition, they have developed several game elements to address three related issues.

1. Extra extrinsic motivation generation for users to reduce drop-out rates,
2. Increased importance (and user acceptance) of the forums course,
3. Reducing performance peaks on the due date by encouraging students to submit their mandatory homework earlier.

They experimentally prove that the reward system is well balanced for different types of players. In addition, they have created a set of features that will make the learning platform more fun to use.

A. Hansch-2015, Student engagement is an important element of all learning processes. Platforms offering MOOCs and other online learning formats are looking for new ways to improve participation. One approach to promoting user engagement that has become visible in many areas is games, as suggested in proposed.

In this research study, they explored the potential of games in online learning. After reviewing the dynamic academic discussions surrounding this relatively young discipline, I try to shed some light on how the practitioner approaches the game. Based on a detailed analysis of the four platforms, we explore how experts think about the development and implementation of games in an online learning environment.

Playing is about fun and excitement, but academic learning is about hard work and effort. Many studies show the benefits of introducing the academic Professor's game as a way to improve learning. Curiosity is also important in learning. Of course, when curiosity wakes up, people learn without resistance. To improve the learning experience, serious games have been integrated into MOOC.

Using serious games as a form of MOOCs assessment is an innovation in online education. Students played video games where different situations and problems were presented in order to be solved. Innovation in education is certainly a challenge. It took a lot of technical effort to integrate serious games on MACOS, but the success rate was high-31%. The share of young students who successfully completed the course increased to 49%, as noted in [M. Thirouard, O. Bernaert-2015].

T. Staubitz, S. Woinar, J. Renz and C. Meinel-2014, A social graph was introduced that allows users to touch each other. Psychological studies have shown that relevance is a strong intrinsic motivation, especially for some types of users.

OpenHPI (Hasso Plattner Institute (HRI)) allows social media services to function as social contexts underlying various functions as well as game contexts based on social graphs. Using social graphics, you can enhance and adjust the original concept of the game, using innovative game components in the context of MOOC. For example, social leaderboards are considered to be more motivated by visualizing competition among friends rather than random strangers unrelated to an individual user's activity flow, showing the behavior of friends.

Mehmet Kesima, Hakan Altınpulluka-2015, as a general abbreviation that day, MOOC has attracted the attention and appealed to users who had not previously been able to study in reputable universities and their employees. This situation is not expected to be met with enthusiasm by educational institutions and managers providing full-time education. Thinking, creativity, active individual development became more important than diploma and degree. In this regard, even with restrictions, the emergence of moocs opened a new page of education, providing high-quality, open and free courses. Since this membership is a symbol of the brand's reputation and value, most elite universities around the world are making efforts to participate in this institution. This trend is being transmitted to more students at a lower cost. Mooc appears to be the solution for achieving this goal.

Joshua G. Peery and Celen Pasalar-2018, serious games are becoming more common in educational situations and must join both students and teachers to build learning experience and knowledge. The clinic's virtual learning environment has recently been developed and implemented at the University of East Carolina using a design framework based on bloom variables. As we refine these design issues, we determine how vibrant games offer a vibrant learning experience. The obvious learning experience is based on certain design issues, and the subtle experience has been conducted by studying the concept of location-related virtual environment. By considering the flow of the two knowledge designers can avoid pitfalls and construct design elements for a virtual learning environment.

Lifeng Sun, Xiaoyan Wang, Zhi Wang,-2017, offer a point of view recommendation click smart technique helps users capture high-quality photos in a famous tourist location for mobile photography. This method is based on content-based image extraction (CBIR). Extract low-level visual objects such as HOG objects (64 dimensions), SURF descriptor (64 dimensions), and RGB histogram (768 dimensions). The proposed method is compared with modern methods of efficiency analysis. They also explore the role of context, such as weather and time recommendation points of view.

In the social media system, the group's recommendation plays an important role in receiving multimedia content and

interacting with each other. In Yipeng Zhou, Jiqiang Wu, Terence H. Chan,-2015 they social structure of recommendations for social groups is proposed. The main video recommendation uses collaborative content filtering and collaboration. The proposed model of group preferences is based on social consciousness-tolerance, external factors and social behavior. The performance of this system is better for an inactive group member and a high dynamic group than the traditional method. Information is collected from public services such as Twitter, Weibo, etc.

Gaurav Kumar Singh, -2014 they proposed methods of automatic replenishment of educational material by means of practical questions are offered and for this purpose questions and answers (Q & A) from stackoverflow sites are used. This paper provides a correlation between student preferences and

expectations for future work, future work content, past experience, and perceived relevance of questions and answers.in any case, using these question and answer methods, users display the content of their scenario related to the interview, future tasks, scenarios related to the current and relevant technology.

Serial Digital Interface (SDI) audio and independent audio are breakaway in the today's television production functionality of such audio is improved using an IP as an industry transactions. By Leigh Whitcomb-2010 presents overview of AES67 (Audio Engineering Society) and presenting a technique for how to use with VSF (Video Services Forum), ST 2110, TR 03 and SMPTE ST 2022-6. This technique uses IEEE-1588 PTP timing standard.

III. COMPARATIVE ANALYSIS

Table.1 Survey Table

Sr. No.	Method Proposed	Limitations
1	Concept for the introduction of gamification to a MOOC platform.	They dose not yet been to test the system with a massive group of users in a production environment.
2	They examine the motivational potential of gamification in online learning.	Performance of this technique is worst.
3	The Serious Game in IFP School's first MOOC was designed to attract a young public	The completion rate was 31% compared to the total enrollment.
4	Implementation of a social graph in the context of openHPI's MOOC platform	A MOOC platform is that a large share of participants is not very active during a course.
5	Defines MOOCs, interprets their emergence, interpretations are made regarding its role today	They do not offer a formal accreditation system
6	East Carolina University using a design framework based on Bloom's variables	The effectiveness of the proposed methods not good.
7	Viewpoint recommendation clicksmart technique assists users to capture high quality photographs at the well-known tourist location for the mobile photography	Uniqueness based recommendation suggests non-popular Viewpoints.
8	Automatically augment learning material with the help of practical questions and for this they used question and answer (Q & A) from the stackoverflow websites.	Low efficiency of system for establishing relevance of the learning content.

IV. SYSTEM ARCHITECTURE

Since MOOCs usually suffer from dropout, many providers have started to implement various forms of gamification on platforms to prevent this. Back in 2012, gamification was a buzzword used in many contexts, leading to gamified MOOCs. While there is no global definition of gamification, the term is commonly used to describe game elements in a non-game context. [3] Thus, Gamification in MOOCs is mainly represented by badges, scores and ratings to motivate students to encourage them to participate in discussions and

keep them involved in the course content [2]. The gamification elements used on most platforms are called PBL (points, icons, and leaderboards) or Pointsification, as users tend to just reach the stated goals to collect their rewards rather than focus on all the available content because they are interested in it. Again, some participants seem to be exploring all the content, can be motivated by elements of gamification. Fig.3 shows that the proposed system architecture. Descriptions of proposed system architecture are given below

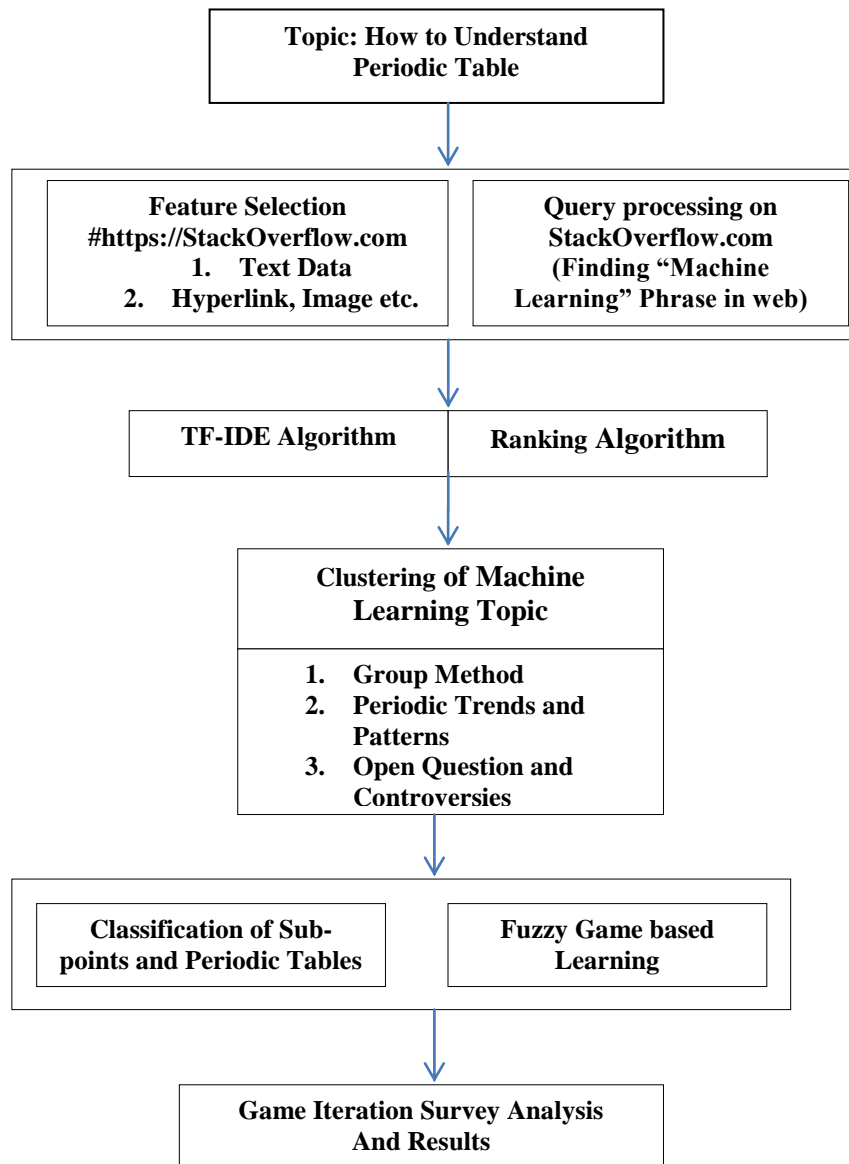


Figure 1. System Architecture

V. DISCUSSION

Digital Game Based Learning (DGBL) to offer learning in an even more playful way than with gamification is worth a look [1] and they had a relatively high completion rate: 31% of enrolled individuals and 59% of active participants handed out at least one task. The advantage of DGBL is the possibility of high motivation of the student.

This can prevent unintentional abandonment of students due to lack of motivation, maintenance of involvement in the

course content, and even motivation to communicate more actively with other course participants. They have listed numerous common techniques of gamification and discussed their effectiveness in context of online learning [2] such as: A) The generation of additional extrinsic motivation for users in order to reduce the dropout rate. B) The reduction of performance peaks on days with due dates by creating an incentive for students to submit obligatory assignments earlier. C) A boost for the importance (and user acceptance) of the course forums. A disadvantage of previous techniques [3-4] is learners could be diverted into the game itself and

partly or completely forgets about learning content that they are supposed to consider. Existing [5] games usually take longer than videos, especially if the player is new to the game and needs to be instructed to use it. In [1], the gamification currently implemented is often based on student comparison, which is an opportunity but not a necessity for games. Pointsification is not necessarily used to the game content if the game itself does not depend on collecting points and badges, although it can be done for a good integration with the functions of the platform gamification. In paper [1] proposed techniques is better than the other techniques this they techniques have many advantages then existing techniques.

VI. CONCLUSION

MOOC was originally designed for allows the study of connectivism, but most xMOOCs offer a wide range of behavioral learning content. Video tutorial and self-control question it currently, DGB is not implemented primarily in MOOC, but some limited gamma techniques are implemented. Here, present serious MOOC games that evaluate how the game can be used by professors. After that I showed why game learning is useful with a good learning environment and the requirements of motivation theory. Some teachers focus on interesting aspects of the game to engage students in learning; others think it distracts students. Currently, student's stage capture for the GBL MOOC would be appreciated.

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Authors Profile

Mr. Shivendra Chavan pursued Bachelor of Engineering from Savitribai Phule Pune University, Lonavala in 2017 and pursuing Master of Technology from MIT World Peace University in year 2017. He is working on MOOCs for Digital Game based Learning for Learners in web mining domain.