

ENGAGING STUDENTS THROUGH GAMIFICATION IN ONLINE TEACHING

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ABSTRACT

To cope up with the unprecedented situation emerged due to Covid-19; traditional classroom teaching was shifted to online teaching during lockdown. This ensured continuance of teaching but ensuring the participation of students with the same intensity, attention, seriousness and zeal as that of classroom teaching was like batting on a different pitch. Extended lockdown period increased the boredom of online classes too. To engage the students is really a challenge and it is imperative to apply innovative ideas, latest online tools and applications to make teaching interesting and effective. Gamification is one such method which engages the students in teaching just like they are playing a game. There are many tools and applications which can be used to break the monotony of the students in between the long hours of online teaching. It can be helpful in analyzing how many students are listening attentively. This paper is an attempt to provide a brief overview of the various tools and apps that can be used to keep the students engaged like Quizizz, testmoz, Google quiz through Google form etc.

Keywords: Gamification, Quizizz, Testmoz, Google quiz, Online Education.

INTRODUCTION

Online education was already prevalent from the beginning of this century specially in coaching for professional courses and competitive examinations. Education sector already on the path of digital revolution had to undergo a volte face during lockdown due to Covid-19 when it had to shift necessarily on e-learning and online classes. Teachers have to be learner first in order to equip themselves with the requisite skill set necessary for imparting online education. Overcoming the barriers of age, educational background, technology and mind teachers have rose to the occasion and with overwhelming zeal and perseverance have made the e-classes successful. Attending the classes from home was a new experience for students also. Traditional classroom teaching was completely replaced by online teaching during lockdown. This ensured the continuance of education which halted due to sudden and unprecedented lockdown. This was need of the hour as it was better to study online instead of no study at all. Initially online notes were provided through digital platforms which ultimately culminated into online classes. Initially, after the teachers and students became well versed to it, it worked very well but extended lockdowns increased the boredom of online classes also. Teachers had to cope up with the diminishing interest of students towards online classes and to ensure that students attend the online classes with the same attention, seriousness and zeal as they used to attend the classes in classroom teaching. The personal touch and bonding between the teacher and students was lacking and it was completely

missing in case of new entrants because teachers and students never came across each other and were strangers in online classes. Teachers found teaching via online classes as that of batting on a different pitch. Teachers had to face the challenge of engaging the students in online classes. They found the solution in applying innovative ideas and experimentation with teaching styles. With the implementation of latest online applications and tools teaching became more effective and interesting. One such method is gamification which is described as applying game like elements in non game environment. Gamification not only makes the studies more entertaining but also motivates the students to take studies more seriously. The concept of gamification was first given by Nick Pelling in 2002 according to **Marzewski (2012)**, while **Gaggioli (2012)** asserts that the idea was introduced by Jesse Schell in 2008. With gamification even the assessment of students has become easy. Instant feedback empowers the teachers with the analysis of students regarding their attentiveness. It also help teachers to improve further and prepare their lectures for the class more effective and interesting by taking feedback of students regarding course content etc. Quizizz, testmoz, google quiz through Google form, Kahoot, Insert Learning, Meeting Pulse, moodle etc. are some of the tools and applications which are used as gamification in online environment.

REVIEW OF LITERATURE

This generation children are tech savvy and brought up in an environment where tabs, cell phones and different types of gazettes are their playing materials and screens are their playgrounds. **Koivisto and Hamari (2014)** in their study have asserted that modern children called the Millenials or Y-generation children are born to digital technologies and they are brought up in a world where everyone has a computer in his pocket. These children have their own style of learning. **Prensky (2014)** in his study has said that they learn differently. They want to learn while having fun at the same time. They want to learn only the useful and relevant information only. They just do not want to step into the territory which is not directly related to their studies. Many studies have indicated that this generation students lack in motivation for studies and it is really very difficult to engage them in online instructional environment. **Lee and Hammer (2011)** in their study have indicated that there is lack of student motivation to learn. In general while teaching online teachers faced many obstacles like students remain online but not attending actually as camera is off and there is no response at all even after instructing them to switch on their camera, those on camera do not respond and pretend their microphone not working or any other network problem etc. **Kumar and Khurana (2012)** in their study have asserted that in the instructional environment there is lack of student engagement. This lack of motivation and engagement has contributed as basic hindrances in imparting effective education and problem has worsened in online environment. **Kiryakova, Angelova & Yordanova (2014)** have termed these basic hindrances as fundamental problem in modern education as a result of the digital revolution. Conventional methods have been found unsuitable to overcome these problems. There have been many studies like **Barata, Gama, Jorge, & Gonçalves, (2015)**; **Buckley & Doyle (2016)**; **Erhel & Jamet (2013)**; **Hamari & Koivisto (2014)** which concluded that conventional methods cannot achieve the objectives of resolving these fundamental problems. The idea of gamification was introduced to overcome these problems. Many researchers suggested that gamification is an

effective method to motivate for learning and engaging the students in online learning environment.

OBJECTIVE OF THE PAPER

To provide brief overview of various tools and applications i.e Google form, Testmoz and Quizizz, which can be used as gamification in order to make online teaching more effective and interesting.

METHODOLOGY

Keeping in mind the subjective nature of the research area as well as the research objective, the qualitative research approach was selected to help understand the subject better. The overview of the online tools and applications as a method of gamification in education sector cannot be studied in numbers but it requires the detailed study of the important features of the tools and above all hands on experience on using these tools. That is why qualitative research has been chosen for this study.

ELABORATIONS

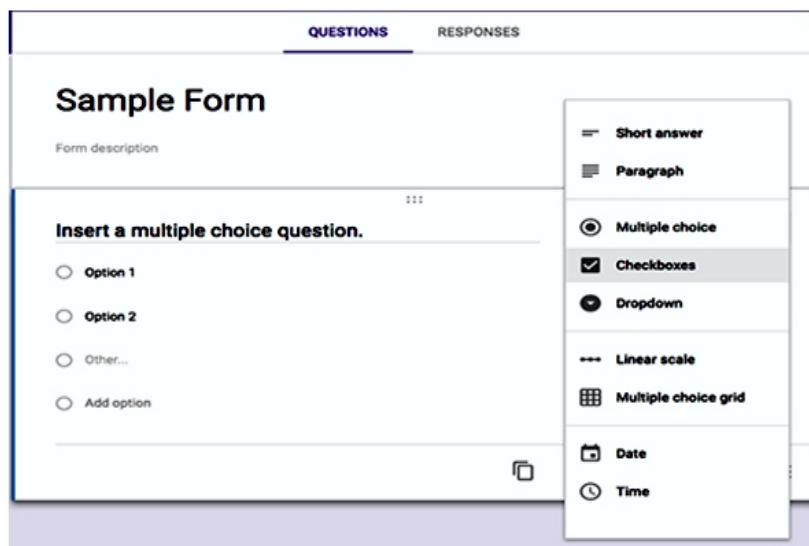
Google Form

The first tool that has been discussed is Google Form that is being widely used in online teaching as well as research data collection and online surveys. A Google form is a web-based tool that can be used for student engagement in online teaching. It can be used to prepare quizzes, event registration forms, collecting feedback, data collection for research etc. It can also be used as a tool to evaluate student performance. It has option for creating different type of questions including:

- Dropdown
- Multiple choice
- Fill in the blanks
- Short answers
- Paragraph response
- Linear scale
- Multiple choice grid
- Check boxes
- Check box grid etc.

Each form created has a unique URL which can be used to edit test later on or to share with others. It is a free tool as well as ad free tool therefore do not distract the respondent while filling the Google form. It just requires a login from G mail account. Quiz/ survey forms can be made available to people for unlimited period of time with no expiration date. But it can be made limited with the use of add-ons like FORMLIMITER to limit the time and date of responses as well as the number of responses to be received. We can also limit the number of response to one by a participant. It automatically takes the mail address of the respondent. We can customize the view

and can add audio video in the question. Respondent can skip a question at a time and can attempt next question. We can restrict the responses to particular users or open to all.



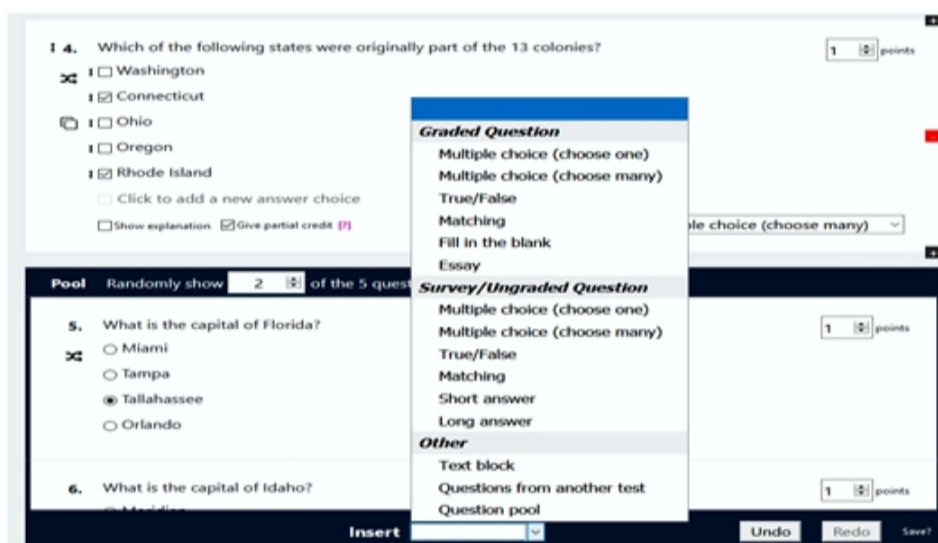
It shows the charts and summary form of all the responses. It automatically calculates the marks. We can review the answers anytime. We can release the score later on or immediately after the attempting the quiz depending upon the settings. The forms are integrated with Google spreadsheets therefore we can access to a spreadsheet view of the collected data. With various add on it usability increases many fold.

It has some limitations also. There is no feature that one can hover over the questions. Chrome locked mode is there only for institutions. No automatic partial marking is possible. For short and essay type questions also evaluation has to be done manually. Fill in the blanks answer is case sensitive. It requires the net to work. There are certain limitations regarding the capabilities of this tool. It accepts texts up to 500 Kb; images up to 2 Mb; and for spreadsheets the limit is 256 cells or 40 sheets. In Google forms one cannot set timer for particular question. There is no option that if once the answer option is clicked then it is final. These limitations can be overcome with improvements over a period of time. Overall it is a very useful tool for engaging students in the online teaching.

Testmoz

Testmoz, a simple and user-friendly online tool which allows you to create auto graded quizzes and tests. It is designed by Matt Johnson, an undergraduate student at Washington State University; Vancouver. Through Testmoz we can create four type of questions:

- True/false,
- multiple choice,
- multiple response,
- and fill in the blank.



Each test created has a unique URL which we can use to edit test later on or to share with others. It facilitates the teachers to analyze students' scores and responses as detailed reports are provided in this tool. Data from these reports can be easily exported and saved in CSV file. Another excellent feature in Testmoz, Password Protection allows you to lock your test using a password to forbid strangers accessing it. Additionally, Testmoz does not require any registration; however, registered members have access to more features than others. A password-based anti-cheating interface in Testmoz enables only the admin or creator of a test to edit it. The whole tool can be found at their main page. Overall, it provides a very simple and clear interface for test-generating and test-taking functionality.

It supports a variety of question types including multiple choice, true/false, fill in the blanks, and essay. Question bank or pools of questions can be created. It enables uploading of images and files. Even videos can be embedded. It has a facility of insertion of math's equations. In this tool explanations to the questions can be added. It has the facility of accessing on wide variety of devices like mobile, tablet and desktop computers. It can be accessed even on low bandwidth connections as it consumes very low bandwidth for its operations. Paper copies of the test can be created. Language of the student interface can be set by the teacher. The maximum limit of the number of times someone can take the test can be set along with the time limit.

It has the flexibility of showing a single question per page or all questions at once. The open/close dates for the test can be set. The order of questions within the test for each test taker can be randomized. Questions from our other quizzes can be imported. The customized message can be displayed at the end of the test like the student passed or failed the test. Multiple quizzes can be combined into a single test. Results can be exported to CSV. Partial credits can be given which is not possible in Google form. Scores and summary statistics can be easily reviewed. Comments on the test results can be given. Tagging of results by partitioning can be done. Email of the results can be sent to test takers. Student wise grouping of the results can be done and their minimum,

maximum, first or last score can be displayed. The scores can be adjusted manually also after reviewing. A notification can be received when someone finishes the quiz. So, with so many distinguishing features Testmoz is a very effective gamification tool of formative assessment in which students can learn while having fun and teachers have the flexibility of analyzing their students.

Quizizz

Quizizz is a unique online free quiz software used for evaluation in class, group works, exams and impromptu tests. Ankit and Deepak founded Quizizz in 2015 while teaching remedial math at a school in Bangalore, India. Today, Quizizz supports millions of students in over 100 countries and has offices in Bangalore and Santa Monica, California. It aids in conducting student paced formative assessments in a fun and engaging way for students of all grades. It has readymade quizzes or we can create our own quiz with unique URL and game code. Time can be set for individual question depending on the difficulty level. It can be made public or kept private. It can be played live or assigned. It also uses music at the background. Students need not to sign up or create accounts to use to take quizzes. They can attempt a quiz by clicking Join a Game and then entering the code of the quiz created by the teacher. Students must use their school/college Google account to login or sign up. It is an ad free tool which does not uses behaviorally targeted advertising.



Students will be awarded points based on accuracy and speed. 600 points for getting it correct, and 0–400 based on speed. Students will get maximum 1000 for correct and 0 for incorrect. Feedback can be customized. We can see after every question in the form of premade or custom memes displayed based on the right or wrong answer. The Challenge Friends feature in Quizizz allows students to host and play already available or self created quizzes with their friends.

But sometime students can mistakenly tap the wrong answer on touch screens; and as time limit is there for every question so student cannot come back to previous question to review. It has no open-response questions. But overall it is a good multiple-choice-based quiz tool with some handy customization options for teachers and fun extras for students.

CONCLUSION

Gamification, no doubt, is a very effective method for engaging the students in online teaching. It is an effective assessment tool to learn with fun. Students learn as well as enjoy. The boredom of monotonous online classroom teaching can be diminished to a considerable level using gamification. The students attention can be ensured towards classes and learning. There are many tools which not only assess the students but also ensure their consistent attention towards learning. The teachers can choose the online tools available as per his convenience, ease of operations and the pro and cons of respective tools.

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