Enriching Students' Learning Experience and Classroom Enrichment using Online Classroom Games

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ABSTRACT

As millennials, students nowadays are more prone to technology usage in their daily life. Being literate in the new era of technology is not only about being able to save, upload and download materials, it also means knowing how to share, chat and respond to online activities in real time. In order to keep up with the current needs of millennials, educators are to revise their teaching techniques, coordinating it not only with the knowledge on subject but also the current use of technology in education. This research looks into the classroom engagement, motivation and learning experience using online classroom games. Further, it explores the effects of online classroom game on classroom dynamics, the influence of online classroom game on students' engagement, the extent of the use of online classroom game in influencing students' motivation towards learning and the learning enrichment based on the usage of classroom online learning. The semi structured interview was conducted among 25 long distance learning students doing their bachelor degree in a Malaysian public university. Using purposive sampling, students were selected among classes in which lecturers use online classroom game in their teaching method. Data were analysed using grounded theory. The effectiveness of using online classroom game in enhancing students' understanding of the subject were highlighted along with enrichening the quality of learning, promoting better subject engagement, providing the motivation to further continued learning, and exploring the subject and promoting a better learning experience. This makes a significant contribution towards assessing the improvement of quality teaching and classroom engagement and involvement among students and lecturers that will help not only in terms of teaching improvement among lecturers but also in developing motivated, confident students, enhancing their learning abilities and becoming lifelong learners towards this change.

Keywords: Online Classroom Game; Classroom Engagement; Student Engagement

INTRODUCTION

Classroom engagement has become a current issue. It refers to how lecturers or teachers attract students' attention in the classroom. Classroom engagement is all about communication between students and the lecturer or teacher in the classroom. The ones who teach must build a good connection with their students to attract the latter's attention. According to Watanabe-Crockett (2019), building lecturer-student connections means building trust and ensuring the best learning outcomes are produced. By using the right classroom engagement strategies, lecturers as well as teachers are able to connect meaningfully with students and this can make the biggest difference in their lives.

Classroom dynamics involve the interaction between students and teachers or lecturers in any classroom community. The purpose of studying classroom dynamics is to learn how to set up a positive classroom atmosphere where students feel comfortable learning and communicating with other students and with the teacher or lecturer. Good classroom dynamics consist of the engagement of everybody in the classroom. This is not a completely natural situation, so it must be set up according to a plan and also with the current technology intervention.

The era of 21st century is often regarded as an era of technology. Technology, today, plays a very important role in our life. It is seen as a basis of the growth of an economy. An economy that is poor in technology can never grow. This is because technology makes our work much easier and less time-consuming. The impact of technology can be felt in every possible field and one particular field that had a large impact is Education (Raja, 2018). Technology is perhaps the strongest factor shaping the educational landscape today. Many school districts are showing support for increased levels of technology in the classroom by providing hardware such as tablets and computers, enhancing internet connectivity, and implementing programmes designed to improve computer literacy for both teachers and students. Naturally, students nowadays are drawn to technology. Everyone, including students, these days are constantly on their phones, laptops and gaming system. The use of technology in the classroom has the benefit of increasing academic achievement from the perspective of both the students and the educators (Courville, 2011). Early research shows that integrating online classroom games into regular classroom lectures contributes to improvements in student engagement (Wang, 2016).

Educational games are a great way to help encourage students to get involved in school. Sometimes, though, traditional classroom games (that is, ones that don't rely on technology) do not allow every student to fully participate. If a student shouts out the right answer, he might win, but the quiet students at the back of the classroom might try to hide or shy away rather than participate. Incorporating technology into the classroom creates a more interactive experience for all students. Digital games also make it easier to accommodate students with introvert issues, disabilities, or special needs so they don't feel left out of fun classroom activities.

Classroom engagement has been a "hot topic" since 1996 when the term was first mentioned. Twenty years later research is still continuing for the perfect answer to successful student engagement. In a previous study conducted in the Philippines, the use of technology in the classroom through e-learning was found to be a very effective tool and efficient framework for learning. This is especially true, particularly in rural and remote areas which are not easily accessible, yet there are plenty of things that need to be done to make technology to be acceptable in a developing country (Gorra & Bhati, 2016) What about Malaysia? How does technology (online classroom games) promote classroom engagement? How does it influence the students' classroom dynamics, engagement, motivation and also experience? Therefore, this study looks into investigating the effects of online classroom games, particularly the application called Kahoot! on students' classroom dynamics, engagement, motivation and experience.

BACKGROUND OF STUDY

Online Classroom Game

The use of technology in a classroom suggests many new characteristics that can be applied to make instruction more interesting to learners (Keller & Suzuki, 2004). It is usually assumed that new technologies can make modifications to instruction. Many proponents of e-learning consider that everyone should be prepared with basic knowledge of technology, as well as utilize it as a means for getting educational aims (E-learning, 2013).

One benefit of online reflection is the possibility to transcend the limits of time and space (Zieger and Pulichino, 2004). Highlighting its versatility and accessibility is commonly used as an argument in support of online reflection (Tsang 2011). This argument can also be used for economic reasons and can explain why decision-makers are easily convinced of the advantages of online education. Several researchers claim that group discussions online promote students' critical thinking (Jones and Ryan 2014; Saadé et al., 2012; Garrison et al., 2001; Wu and Hiltz 2004). However, it is important that the discussions are well structured and preferably led by a moderator (Yang 2008; Garrison and Cleveland-Innes 2005; Dysthe, 2001) since reflection does not come automatically.

Online learning literature is mostly concerned with students' engagement and motivation with learning. However, there are a relatively small number of studies, which include these factors in their research when looking into online learning effectiveness (Noesgaard & Orngreen, 2015). According to Joshua Stern, online learning is education that takes place over the internet. It is often referred to as "e-learning" among other terms. However, online learning is just one type of "distance learning" -the umbrella term for any learning that takes place across distance and not in a traditional classroom.

Classroom Engagement

According to Weaver (2017), we see inspired teachers supporting students to discover and pursue their passions and strengths and take risks in their learning. In this "learner-centred" approach, teachers empower students with

practices, principles, and content that engage them to think creatively, understand their emotions, communicate effectively, excel academically, and work with people who are different from themselves.

Harbour, Evanovich, Sweigart and Hughes (2015) viewed engagement as an important predictor of success. The more students engage in academic activities, the more they will be successful. When students are engaged in class, they can learn a lot of knowledge and information. Nevertheless, building engagement in class is challenging as students have their own behaviour and attitude, while lecturers must know how to tackle students' attention in class. Coates (2007) describes engagement as "a broad construct intended to encompass salient academic as well as certain non-academic aspects of the student experience". It comprises the following criteria; active & collaborative learning; participation in challenging academic activities; formative communication with academic staff; involvement in enriching educational experiences and feeling legitimated and supported by university learning communities. Besides that, many studies have looked at particular tools and technologies to improve engagement either in the classroom or online. According to Windham (2005), learners in the current era want to connect and communicate constantly and want an environment to support these connections. Educators from earlier generations might see forms of communication such as computer chatting or texting "as the opposite and the antithesis of contact," but for the Net Gen it "allows interaction with a variety of people and material".

To build engagement in a classroom, two aspects need to be focussed on; first from the student's aspect and second from the lecturer's aspect. According to Trowler (2010), student engagement is the investment of time, effort and other relevant resources by both students and their institutions intended to optimize the student experience and enhance the learning outcomes and development of students and the performance, and reputation of the institution. This study however, focuses to explore students' engagement through the usage of online classroom games.

Classroom dynamics
As mentioned earlier, classroom dynamics involves the interaction between students and teachers or lecturers in a classroom community. Classroom dynamics will exist when there is a good environment in class. According to Freeman (2014), the classroom environment also matters for teachers. It can have a big impact on the teacher's job satisfaction. Indeed, good teacher-student relationships are the most important influence on teachers' job satisfaction and sense of efficacy. A good environment can exist when students and lecturers have a good relationship and understanding with each other so that they can easily communicate in class. Furthermore, according to Sriraman (2018), classroom dynamics means the building of a classroom community and the creation of an active classroom culture. Classroom dynamics help students to develop skills in working together and creating an atmosphere in the classroom where students are encouraged to take risks. Teachers play various roles in a classroom, but the most important role is that of a classroom manager. If teachers are to perform well, they have to understand classroom dynamics. Classroom dynamics include student behaviour, emotions and imagination. It also includes the teacher's ways of presenting academic materials and student interactions. It helps in creating a positive classroom culture.

Motivation
Motivation is one of the aspects to build classroom engagement. In the new era now, a lecturer can build their students' motivation using technology. According to Ryan and Deci (2000), and according to the self-determination theory defining, motivation can be used as a determinant of individuals' behaviours. Motivation is one of the most important aspects that influence classroom engagement. According to Shore (2017), a motivational problem is not always easy to define even though teachers usually have no trouble recognizing it. One of the most important needs of students in performing their academic duties and activities is the level of motivation. In the event of excessive or insufficient motivation, it becomes difficult for individuals to actualize their personal needs and self-fulfillment (Sozer,2013).

In their study, Kim & W. Frick (2011) focused on changes in student motivation during online learning. The results of their study showed that motivation during self-directed e-learning (SDEL) was the best forecaster of positive change in motivation, which forecast learner agreement with SDEL. Crucial success factors for e-learning in developing countries demonstrate the significance of curriculum plans for learning performance. According to Majeski and Stover (2007), several authors have suggested specific ways to enhance online learning communities. Providing a welcoming e-mail or posting sets the tone for the class. Knowing an instructor is excited to teach the class creates excitement in the students who sign up for the course. However, El-Seoud, Mohamed, Taj-Eddin, Seddiek and Nosseir (2015), posited that incorporating technology in the learning process does not necessarily guarantee motivated students. In fact, online instruction has resulted in the student-teacher relationship becoming

less personal. Teachers are required to turn the classroom into an online environment. The question is, what exactly is required of teachers to motivate students in an online environment?

Experience
Experience is an important aspect of learning since with experience, teaching and learning will be easier. If the teacher does not have the experience, the learning process is difficult to be diversified and it is difficult to attract students to learn. Educators need to have experience in using existing technologies to attract more students to learn. This is because students are now more interested in learning using the technology. According to Dewey (2012), whatever the level of experience, we have no choice but either to operate in accord with the pattern it provides or else to neglect the place of intelligence in the development and control of a living and moving experience.

Consistent with previous studies (Huberman, 1992; Klassen & Chiu, 2010), results indicate that teaching experience is related to specific beliefs. In fact, self-efficacy for classroom management and student engagement was positively related to years of experience. This suggests that, on average, teachers increase their confidence in their abilities, which helps the teachers adopt autonomy-supportive and structuring practices.

Furthermore, in their study, Wurdinger and Carlson (2010) found that most college faculty teach by lecturing as very few of them learned how to teach otherwise. Although good lecturing should be part of an educator's teaching repertoire, the faculty should also actively involve their students "in the learning process through discussion, group work, hands-on participation, and applying information outside the classroom" (p.2). This process defines experiential learning where students are involved in learning content in which they have a personal interest, need, or want. Qualities of experiential learning are those in which students decide to be personally involved in the learning experience. This means that students are actively participating in their own learning and have a personal role in the direction of learning. Students are not completely left to teach themselves; however, the instructor assumes the role of guide and facilitates the learning process.

METHOD
Research Design
A qualitative research approach for this study was chosen because qualitative methods are especially useful in discovering the meaning that people give to events that they experience (Merriam, 1998). Specifically, the phenomenological method was used to understand the effects of online classroom games on classroom dynamics, the influence of online classroom games on students' engagement, motivation towards learning and students' experience.

This study, which was based on the constructivist paradigm, used a phenomenological strategy to explain the effects of online classroom games on classroom dynamics, the influence of online classroom games on students' engagement, motivation towards learning and students' experience. Constructivist researchers focus on understanding and reconstructing the meanings that people (including the researcher) hold about the phenomenon being studied (Guba & Lincoln, 1994). Constructivists create knowledge through interaction between the researcher and participants (Guba & Lincoln, 1994), using dialogue and reasoning as the primary methods of investigation. Finally, constructivist researchers return frequently to the sources of data, asking what they meant to the participant and trying to integrate those with their meaning to the researcher (Rudestam & Newton, 1992).

Phenomenology is effective in studying a small number of subjects to identify the core of their experiences with the phenomenon (Creswell, 2003) and to produce patterns and identify relationships of meaning that build new knowledge (Moustakes, 1994). Thus, for this study, semi-structured in-depth interviews were conducted with the long-distance learning students in University Technology MARA (UiTM), Puncak Alam, Selangor with twenty-five (25) students. The semi-structured in-depth interviews were conducted through *Whatsapp* application.

Sampling
The qualitative research methods used for this study include purposive sampling, open-ended interviewing, and systematic and concurrent data collection and data analysis procedures. Specifically, the grounded theory or constant comparative method (Glaser & Strauss, 1967) was used to analyse the data and discover the influence of online classroom games on students' engagement, motivation towards learning and students' experience.

DATA ANALYSIS

Analysis of data occurred in three phases. In the first phase, interview transcripts were reviewed several times, searching for "recurring regularities" (Merriam, 1998). In the next phase, the researcher highlights the quotes and phrases from the interviews that were significant to the study. The researcher then looks through the transcripts to find the relevant categories by using the constant comparative method (Glaser & Strauss, 1967). Next, the researcher then named, coded and labelled the transcripts according to each category (Merriam, 1998). After that, the researcher looked into the coded interviews and looked for relationships within and across the data sources. A table was developed to compare various coded interviews. Finally, the researcher will integrate and refine the categories until themes are solidified (Strauss & Corbin, 1998).

FINDINGS AND DISCUSSIONS

What effects do online classroom games have on classroom dynamics?

To build a good classroom engagement, we must look into the classroom dynamic. When we try to implement something new for students or educators, we must predict the effects of the implementation. This is to see whether it has a positive or a negative effect. The findings of this study demonstrate that the majority of the respondents agreed that online classroom games have a positive impact on classroom dynamics. Among the respondents, those named R1, R2, R3, R4, R5, R6, R9 and R10 understand the subject taught in the classroom better after playing a game application called Kahoot! According to Freeman (2014), the classroom environment does matter for both educators and students. Indeed, it can have a big impact on the educator's job satisfaction, for example, a good educator-student relationship is the most important influence on an educator's job satisfaction and sense of efficacy. A good environment can exist when students and educators have good relationships and understand each other. Quoting R2 and R5:

> *"It was fun and easier for me to understand and recall the topics/subtopics that lecturer taught in the class."* R2

> *"It is something out-of-the-box that considering as a new dimension of learning which this interactive way of approach can assist the students to understand the topics taught clearly."* R5

R1 and R2 also said that classroom dynamic is accessible. This is because Kahoot! is easier for all students and educators to access. Highlighting the versatility and accessibility of a platform is commonly used as an argument in support of online reflection (Tsang 2011). This study saw that the respondents are more attracted to the learning sessions where they only need a smartphone or other devices to access the internet.

> *"Accessible, very friendly apps, Kahoot! help student to understand topic more, at the same time can revised back the chapter we have learn."* R1

Besides that, the respondents mostly claimed that Kahoot! is much more fun and very interesting. Lecturers believe that their own influence is limited, except in trying to create interesting activities. In learning, there is a need and is important for the students to be interested in the classroom. This study saw an increase in respondents' interest in learning and deepening into some topics with the usage of Kahoot! For example, some of the respondents further explained that by incorporating Kahoot! into the subject, it makes it more fun to learn the subject.

> *"Make a classroom more fun. Students will give more attention in the class because they need to answer quiz on Kahoot! at the end of learning session."* R11

> *"Kahoot! is something different approach of learning which is very interesting way and help the students to learn and understand fast of the topic."* R9

The finding of this study demonstrated that using Kahoot! in the classroom makes learning more effective. According to Kakaris (2018), learning experience design can, and should, operate at several levels because individual learning experiences should be optimal with a minimalist approach that combines effective cognitive design with engaging emotional design. The formal resources should be designed to mesh with the task and provide effective information design and the social learning tools should be organized around the way the team coheres. When using Kahoot!, the respondents felt that it was easy to communicate with educators. It also gives the opportunity to respondents to voice their opinions and ideas. Moreover, it enhances the respondent's knowledge as acknowledged by one respondent as follows:

"Very effective for studying in class. Which of the topics we learned in the classroom will be tested to examine the understanding." R7

To what extent does the use of Kahoot! influence students' motivation towards learning?
Another way to enhance good classroom engagement is through motivation. When students or educators have the motivation to learn and teach, the learning process is easier to conduct. Everyone in the class needs to know how to increase their level of motivation for more dedication in the classroom. Kahoot! seems to influence respondents in terms of their motivation in learning. Students nowadays are easily bored with traditional formal learning which includes reading books and notes and listening to lectures. Combining the usage of a new online platform, which is something new and different, easily motivates students to learn.

The findings of this study demonstrated that Kahoot! This can increase the respondents' motivation in learning. Motivation levels are examined under three headings: lack of motivation, extrinsic motivation, and intrinsic motivation. According to R3:

> *"Kahoot! influence students' motivation towards learning with the highest score of the circle of classmates. Let say if the students in the classroom are all playing Kahoot!, it will appear the score of every students. Thus, it will motivate the students to always concentrate, focus and understand what they have learnt before in the previous class to avoid themselves to get lower score."* R3

> *"It will be as a wake-up call to the students, the games session are the best way to motivate them. Every student will try to be the first person to answer the question correctly and those accumulate the higher points will be the winner. The games are only the tools to ignite the motivation of the students on what are they learned of the day."* R5

In addition, respondents R3, R4, R6 and R10 tend to be more focussed in class as they are looking forward to scoring in Kahoot! According to Sriraman (2018), students are generally very energetic, and the teacher must plan to keep them active, attentive and focused; otherwise they may start to lose concentration and at times become restless. Not easy to tackle the focus of students in learning sessions. When they put their focus during lectures, they score better during Kahoot! session.

> "*During this games, students will try to find the rights answers and those who get the higher ranking will be appear on the screen. At the same time, this application will motivate the students to focus and understand what they have learn.*" R4

> *"During this game, student will try to answer the question correctly. Thus, in directly student will focus and understand what they learn."* R6

Two of the respondents, R7 and R10 said, Kahoot! Motivated them because they tend to be more excited to learn each chapter. Several authors have suggested specific ways to enhance the online learning communities by providing a welcoming e-mail or posting that sets the tone for the class. Knowing an instructor is excited to teach the class creates excitement in the students who sign up for the course (Majeski and Stover 2007).

> *"Learning with entertainment. In Kahoot! it's like playing games that will fight each other. So, students will be more excited and more aware of what they are learning."* R7

R10 felt that this programme is more exciting as students tried to win the game in each learning session.

> "*Students will become more focus during lecture before the game begin. Well, everybody is excited to win and want to get their name at the top of scoreboard".* R10

Does the use of Kahoot! influence students' engagement, and how?
One of the aspects to build classroom engagement is the engagement itself. As students vary in their interests and ideas, it is, therefore, not easy to build the engagement in the classroom. Based on this study, all of the respondents claimed that Kahoot! can influence students' engagement. One of the influences on the student's engagement is communication. To build engagement, communication plays a crucial role. Educators must know the technique of good communication when communicating with students. According to Windham (2005), today's learners want to connect and communicate constantly and want an environment to support these connections. Educators from "older" generations might see forms of communication such as computer chatting or texting "as the opposite

and the antithesis of contact," but for the current generation, it "allows interaction with a variety of people and material". From the finding of this study, respondents R2, R4, R6, R8 and R10 agreed that communication plays a crucial role in order to have good engagement in the classroom. For example, R4 and R8 claimed the following:

> *"Yes, because it's built up communication among students in the class to discuss and answer the questions."* R4

> *"Yes, Students and lecturers will communicate during the Kahoot! session."* R8

Another reason that respondents had given was quite interesting.

> *"When we use Kahoot!, students more attracted to the in classroom because this programme uses smartphone, computer and other gadget. This has contributed to sparking their intention to not skip class hence reducing the rate of absenteeism"* R11

> *"Yes, of course! By attracting students to use see the screen and understand the question and using their own smart phone to give the right answer. Kahoot! web itself can attract student to focus on the screen as the appearance are colorful."* R11

In this qualitative study, according to R3, Kahoot! can be a good mechanism as it can improve the learning process in the classroom. When the learning process is improved, the engagement in the classroom will increase. King (2014) found that students rated thorough and timely instructor feedback on their work as most valuable so that they can make improvements in their learning process. Mini videos and screen-casting are techniques to increase instructor visibility that have been believed to bring many pedagogical benefits.

> *"Yes, does influence students' engagement because it is a game-based student response to encourage students' engagement. The students are being competitive healthily between each other to enhance classroom dynamics and improve overall students' learning process*" R3

How does the use of Kahoot! enrich learning according to students' experiences?
Another aspect to build the classroom engagement is experience. This aspect is one of the important aspects because when students or educators have experience in managing classroom learning by using technology, it will make the learning system easier. It also makes it easier and easy to conduct the class. Respondents described that they enjoy and have more fun using Kahoot! in class.

The researcher tracked four (R1, R2, R4 and R11) of the respondents who agreed that Kahoot! are attractive as students in this generation are more prone to technology, using gadgets and exploring new technological platform and sites. Online education has attracted the attention of educators, where some educators used online platforms as an instructional tools for the expression of ideas, opinions, and experiences and for promoting dialogue on a wide range of academic topics (Garrity, Jones, Vander, Zwan, de la Rocha, & Epstein, 2014; Wang, 2008).

> *"New knowledge, it is simple and attractive application that student can use to do revision and recall the topics. It's also saves time".* R2

Furthermore, in this study, the researcher found that one of the respondents mentioned that Kahoot! is a new method of teaching and students are usually more excited and more engaged to explore new things. Respondents too will be more excited to explore and educators placed their focus on teaching session and giving the best in teaching. According to Sudjana (2009), the teaching method is a way that teachers use in interaction with students during the lesson. This interaction process will run well if the students are active in following the learning.

> *"Good game, new method of teaching and make student more understand*." R6

Two of the respondents answered that Khaoot! is a very interactive programme. According to Sriraman (2018), classroom dynamics would include student behaviour, emotions and imagination. It also includes teachers' ways of presenting academic materials and student interactions. It helps in creating a positive classroom culture hence, the students will focus more in the classroom. Interactive is a two-way communication and response to a user's action and request. Kahoot! allows a two-way flow of information between a computer and a computer user.

> *"Kahoot! is very interactive way and students can learn and practiced how to answer the questions within time given. It's also can assist students how to remember each topic/lesson in easy way".* R9

The students are expected to be more engaged and confident with the subject as the goal is enhancing students' abilities to learn, how to learn and become lifelong learners. As learning is also to develop students' interpersonal skills and self-confidence through the face to face interactions with educators and classmates, Kahoot! makes it fun in a casual way where students will be more comfortable participating.

CONCLUSION AND RECOMMENDATIONS

Using online classroom game-based technology which is Kahoot! is proven to be effective in enhancing language skills as well as useful in initiating and fostering classroom engagement. From the results, it is found that the students have grasped the classroom objective of mastering synonyms based on their textbook. From the students' responses, it is found that the students seem to be motivated and to be more attentive and become more engaged in classroom participation through Kahoot! It also assists in realising communication among the students, especially when played in groups. Language skills are also enhanced through the game. All of these responses show that classroom engagement can be accomplished while playing online classroom games. Through these findings, it is evident that online classroom games should be implemented in the classroom from time to time to engage the students in classroom participation.

This research has made some significant contributions in terms of theory building towards assessing the improvement of quality teaching, classroom engagement and involvement among students and lecturers using online classroom learning. This will help not only in terms of improvements in teaching among lecturers but also in developing confident students, enhancing their learning abilities and to become lifelong learners towards this change. Future studies could be carried out to explore whether other subjects like sciences, law, accounting, business, and engineering will benefit from online classroom-based technology.

DECLARATION STATEMENT

The lead author* affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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CONFLICT OF INTEREST

The authors declare no self-interest in the study conducted.

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