

## Game Based Learning in A Psychology Classroom

### Pembelajaran Berasaskan Permainan dalam Bilik Darjah Psikologi

*Sidra Naim<sup>1\*</sup>, Norizan Abdul Razak<sup>2</sup>*

<sup>1</sup>*College of Continuing Education, Universiti Tenaga Nasional, 43000 Kajang, Selangor*

<sup>2</sup>*Faculty of Social Sciences & Humanities, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor*

*\*Corresponding author: sidra@uniten.edu.my*

*Received 4 August 2023*

*Accepted 4 September 2023, Available online 1 December 2023*

#### ABSTRACT

Game based learning is gaining acceptance in the classroom as it is a platform for students' engagement and immediate feedback which are very valuable. However, as creating such game platforms is very time- intensive, requires experience, as well as a big budget, the use of gamification within a higher institution tends to be minimal. This study looks at a gamification platform that requires minimal instructor investment, and limited instructor or students training, a quiz can be generated and played within minutes. This paper focused on the classroom dynamics, the students' engagement, the students' motivation and the features that affect learning in terms of using the gamification platform. This qualitative paper will present the findings of students engaging in active learning using gamification in Psychology of Thinking class as well as the observations of the educator throughout the sessions. This paper's findings are useful to add to literature on the usage of gamification in a psychology classroom.

Keywords: Blended Learning, Game Based Learning, Gamification, Kahoot!, Learning Via Gamification, Psychology of Thinking

#### ABSTRAK

Pembelajaran berasaskan permainan semakin diterima di dalam bilik darjah kerana ia merupakan platform untuk penglibatan pelajar dan maklum balas segera yang sangat berharga. Walau bagaimanapun, kerana mencipta platform permainan sedemikian adalah sangat intensif masa, memerlukan pengalaman, serta bajet yang besar, penggunaan gamifikasi dalam institusi yang lebih tinggi cenderung menjadi minimum. Kajian ini melihat platform gamifikasi yang memerlukan pelaburan pengajar yang minimum, dan latihan pengajar atau pelajar yang terhad, kuiz boleh dihasilkan dan dimainkan dalam beberapa minit. Kertas kerja ini memberi tumpuan kepada dinamik bilik darjah, penglibatan pelajar, motivasi pelajar dan ciri-ciri yang mempengaruhi pembelajaran dari segi penggunaan platform gamifikasi. Kertas kerja kualitatif ini akan membentangkan dapatan pelajar yang melibatkan diri dalam pembelajaran aktif menggunakan gamifikasi dalam kelas Psikologi Pemikiran serta pemerhatian pendidik sepanjang sesi. Penemuan kertas ini berguna untuk menambah literatur tentang penggunaan gamifikasi dalam bilik darjah psikologi.

Kata kunci: Pembelajaran Teradun, Pembelajaran Berasaskan Permainan, Gamifikasi, Kahoot!, Pembelajaran Melalui Gamifikasi, Psikologi Pemikiran

## INTRODUCTION

Teaching has grown rapidly in the past few decades. Of course, one of the trends that have grown the most is technology in the classroom. Emergence of digital media has further expanded teaching and learning and what it entails. There are various pedagogical approaches that provide a foundation of learning without any boundaries. It is most probable that the use of games in a classroom would have been done for generations. However, it is recently that digital gaming came into the picture and created a whole new platform for educators to engage in.

Game-based learning has already been utilized in many different levels of learning and has proven to be a tool to increase students' interest. It can be disappointing to observe some educators who avoid using digital games, and cite various reasons like a lack of time, money and expertise in order to fully integrate digital games into their teaching. This research wants to continue to explore this theme and look at a gaming platform which has no cost, only requires a few clicks to begin using as the solution, and to motivate other educators to bring in the game into their classrooms as well. Furthermore, this paper will investigate the effectiveness of using gamification in learning Psychology and to identify a model of learning with games.

## BACKGROUND

York & deHaan (2018) have emphasized that the current generation of young people have been immersed in a world permeated with networks and digital technologies, and because of this they behave differently to earlier generations, and it can be said that their brain structure is also different. It is highlighted that these group of people think differently, they learn differently, they exhibit different social characteristics and have different expectations about life and learning. "The new generation of students are said to prefer receiving information quickly, relying on communication technologies, often multitasking and having a low tolerance for lectures, preferring active rather than passive learning" (York & deHaan 2018). Gamification and game-based learning are very popular mobile and technological trends that use game elements to promote desired behaviors and drive corporate learning outcomes. This method is built on constructivist learning, which predicates the need for experiential learning via social interaction with the environment and peers (York & deHaan 2018; Parra & Garcia 2022).

Furthermore, the Engagement Theory is a framework for technology-based teaching and learning (Kearsley & Schneiderman 1999). Its fundamental underlying idea is that students must be meaningfully engaged in learning activities through interaction with others and worthwhile tasks. While in principle, such engagement could occur without the use of technology, Kearsley and Schneiderman believe that technology can facilitate engagement in ways which are difficult to achieve otherwise. Macmillan Education ELT (2020), highlighted that the integration of gamification is simply "how you call things that starts to change attitudes from 'class' to 'new learning world.'"

Game-based learning has created a wonderful way to increase interest in the classroom as well as being used in various levels of learning. According to Premanand (2014) and Khushvaktova et al. (2022), game design elements are the result of positive psychology and increased

motivation. Gamification was originally coined with the focus of integrating social and/or reward aspects of games into software. Gamification includes the application of elements such as scores, badges and scoreboard despite being used in different devices. This enables the learners to play with their peers and understand whether the lesson has been learnt or not. Gamification in the classroom holds out a lot of promise since language teachers seek new ways ‘to determine the proficiency level of a student’ (Theisen 2013 & Khushvaktova et al. 2022).

According to Premanand (2014), the self-determination theory which is the basis of the nature and quality of motivation are determined by satisfying three basic needs: autonomy, competence, and relatedness. The evolution of mobiles will be a stepping stone to enable technology to reach into the hands of any person willing to learn from anywhere (Premanand 2012). This in turn emphasizes the role of internalized forms of motivation, such as intrinsic motivation (interest), which would lead to higher quality engagement and learning (Parra & Garcia 2022). Gaming platform further provides engagement, motivation and rewards through learners' participation, with a game-based pedagogy. The blended learning approach means that as well as the social experience created through asking/answering questions in a physical setting. “The rewards that students receive are a form of feedback that serves to clearly demonstrate the ‘incontestable value’ of the learner's prowess, providing a favorable form of self-conception (‘I'm the best at this’) and gratification, alongside the accompanying social rewards” (Premanand 2014). According to Zainuddin et al (2020), the usage of reward is an added incentive to the students to focus on gaining the course objective as set by the lecturer.

Parra and Garcia (2022) argues that well-designed video games are learning machines and schools, workplaces and families should utilize games and game technologies to enhance learning. When a student is playing a game, they become so engrossed that they are not even directly aware that learning is happening from the game. Wang (2014) has summarized that games can mainly be integrated in education in three ways:

*“First, traditional exercises or tasks are replaced by letting students play motivating games giving the teacher an opportunity to monitor the students’ progress in real time. Second, game development can be used to learn other subjects like design patterns, literacy, software architecture, computer science, and mathematics and physics. Third, games can be made an integrated part of a traditional classroom lecture to improve learning, motivation and engagement.”*

It can be seen that both teachers and students tend to do better and be more motivated in the teaching and learning environment when some of technology is being applied. According to Icard (2014), game-based learning can be used as the optimum platform to engage students not only for reviewing class content, but for active learning as well. It is essential to create an environment where students can think critically and be engaged for a higher level of learning. Educators need to apply various strategies and teaching methods to ensure a learning atmosphere which caters to different learning styles. This is the challenge, as it can be a very difficult task for an educator to find a game platform which is effective, runs smoothly, within an acceptable budget and engages students, all at the same time. (Chien-Hung et al. 2014).

Hence, it is the technology creators’ task to create content that has both knowledge and competitive fun. Previous studies have also suggested that learning can be made more valuable when the competitive nature of a game is manipulated to make learning more interesting. (Icard 2014). Furthermore, students gain a lot of advantages from “using digital games in the

classroom by learning how to handle success and failure as well as how to use critical thinking and problem-solving skills” (Dellos 2015).

Various different researches on the application on Kahoot! in learning has been done in the past few years. Premanand (2014) who investigated the use of the game in language learning and reported that game-based learning engages students’ attention. Dellos (2015) reviewed the game as a resource that provides teachers an opportunity to create quizzes that engage students in content knowledge in a competitive game play format. Furthermore, Wang (2015) looked at the wear out effect of a game-based student response system and positively reported that the game manages to boost students’ engagement, motivation and learning after using it repeatedly for five months. Stige (2016) also looked at using the same gaming platform for teaching and promoting active learning in the teaching of psychology to higher education students. However, it is important to note that Stige ended his research by highlighting that Kahoot! is “less useful tool in promoting active learning in a large lecture setting, particularly relating to the possibility to provide feedback on more complex, reflection-based questions.

Hence, it can be summarized that Kahoot! is the gamification which has been used all over the world, which fits all the criteria above as well as easy to use, fun and challenging to engage students into active learning in the classroom. This paper will explore further on how effective is the utilization of Kahoot! in teaching Psychology in a Malaysian classroom setting.

The objective of the paper is to investigate the effectiveness of using gamification in learning Psychology following the research question below:

1. How is the classroom dynamics affected with the application of Kahoot?
2. How is the students’ engagement with the application of Kahoot?
3. How is the students’ motivation affected with the application of Kahoot?
4. What are the features that affect the use of games in learning?

### KAHOOT! GAMIFICATION PLATFORM

Kahoot! is a digital game where educators can go and create quizzes, discussions or even surveys. All an educator needs to do is to access Kahoot!, create an account and proceed to create quizzes step by step by utilizing the template which has already been provided. The process starts by clicking “Quiz” under the “Create new Kahoot!” tab. The educator then fills in the details about the quiz, info like the quiz name, short description about the topic, and who the quiz is created for from a drop-down list (Graham 2015).

Next, the educator clicks “Go” and can proceed with typing in the question, possible answers and marking which one of the answers are correct. There are also elements that can be added to the quiz such as Youtube videos, pictures and music to further develop the students’ engagement in the game. A drag and drop option is provided to add pictures or an image can be uploaded by selecting “choose file” and choosing a specific image. A YouTube video can even be played during a specific period of time or a portion of the video by adding it to a question. This can be done by placing a URL address in the box requiring a website link.

Once the question is added, and the teacher has added any other multimedia features that are required, the teacher may add up to four answers for the students to choose from. The teacher is also required to tick on the correct answer before adding new questions to the quiz. Both the questions and the answers have character limits of 80 characters for questions and 60 characters for the answers. The teacher may also adjust the amount of time the students have to answer

each question and how many points each question is to be allocated to. Each question has a standard preset at 30 seconds and the worth of each question is set at 1,000 points. Once the teacher has completed the question, they can select the add question button at the bottom of the page. By selecting this option, the teacher can add another question and continue to add questions until they have completed their quiz. After adding the last question to the quiz, the teacher selects “Save & continue” and will be asked regarding a few settings concerning language, privacy settings and the primary audience. There is also an option to include a description of the quiz as well as the difficulty level of the quiz. (Dellos 2015).

After the steps are completed, the teacher can include an image or video to display when the quiz is presented to the class by either the drop and drag option of an image or adding a URL YouTube video link in the box at the bottom of the page. The YouTube video will play while students are signing in to play the quiz. By selecting “Done,” the teacher now has the option of playing the game with their students, previewing the quiz or editing the quiz. A URL address is provided for the quiz to be shared on any social media. The quiz can also be shared on the community page for other Kahoot! users. Educators can access public Kahoots on the menu bar and search for quizzes that match their needs.

After creating the quiz, teachers log into their account and retrieve their created quizzes under “My Kahoots.” A PIN code will be displayed, and students join the quiz by opening the main Kahoot! webpage at a very short url – kahoot.it and inserting the said code as well as typing in a nickname. For an academic setting, it is advisable to request the students to key in their names, and avoid nicknames which are vulgar or unrecognizable to others. The question will be displayed on the teacher’s monitor and needs to be projected so the whole class is able to see. The answers are given a specific symbol and color, and students choose the answer by clicking on the symbol on their respective devices.

Scores as allocated when the students get a correct answer, as well as for answering quickly. Once all students have keyed in their answer, or the time is up, the correct answer will be shown and after that a leader board of 5 top participants will be displayed. The educator can easily choose the pace of the quiz, and take time between questions to discuss with the students regarding the correct and wrong answers. At the very end a podium displays the top three scores, and the students are awarded with badges of gold and silver medals.

According to Thomas (2014) Kahoot! is the best platform for both students and educators as it is fast and easy to access. Educators can utilize Kahoot! to introduce new content or even to review old ones. Data can be collected and reviewed as an Excel document to gauge student’s understanding of content. Kahoot! can be used for a variety of assessments and projects including formative assessments, diagnostic assessments, research projects and presentations (Thomas 2014).

## METHODOLOGY

### DATA COLLECTION

#### Sample

There is a total of six students who were involved in this study. These six students took Psychology of Thinking during semester 3 of the academic year. All of them are 17-year-olds, with 5 males and 1 female. Kahoot! was utilized from the very first class and 4 other times during the semester. The Kahoot! quizzes utilized in the classes functioned as a formative

assessment tool and were created based on various Psychology chapters covered in the course outline.

This includes Introduction to Psychology with 6 questions, Approaches to Psychology with 15 questions, Thinking, Neurons & the Brain with 8 questions and finally Motivation & Emotion with 9 different questions. Hence it can be said Kahoot! was played almost every week throughout the semester.

### Qualitative Method

To investigate deeper on the impact of Kahoot! on the classroom dynamics, and students' motivation and engagement, data was collected via qualitative research design. Observation was conducted for 30 hours throughout the semester and interview was done face to face and via email at the end of the semester. The observation checklist was prepared to guide the researcher to collect data. The interview questions were adapted from a survey questionnaire by Wang (2015). Below is the list of questions which were asked during the interview.

1. Were you able to easily join in the game and use a mobile device to play the game?
2. Was it fun to play the game?
3. Do you concentrate more when playing against other players?
4. Were you engaged while playing?
5. Would you like Kahoot! to be utilized in other lectures?
6. Did you find yourself more positive towards the topic after the game?
7. Did you learn something from playing the game?
8. Did you face any difficulties or challenges while playing the game?

Meanwhile, this study considers the approach of semi-structured interview because this approach provides flexibility to present any supplementary questions to the participants during the interview session in relation to the topic discussed. Moreover, this approach does not limit participants' responses to a certain depth (Dornyei 2007). For this study, the order and wording may not be exactly similar to the established procedure despite a nearly similar number of questions are posed to the participants during the interview. There may be more probing questions for the participants in order to acquire in-depth insights on the issues discussed. Face-to-face (FTF) interviews provide opportunity for an information-rich communication between interviewer and interviewee (participant) because the non-verbal language of participants can be observed as well (Gibson & Brown, 2009). In brief, the interview sessions in this study will follow a specific list of issues or themes with the researcher taking on the role of interviewer, who will put forward a series of open-ended questions and supplementary questions for the interviewee (participant) to respond, when necessary (Kvale & Brinkmann 2009).

## FINDINGS & DISCUSSION

### RQ1: Classroom Dynamics

From the observations of the researcher as an educator, the students looked very excited to be introduced to this game for the first time. They were quick to log into the website URL, and proceeded to key in the game id and their nickname without any further instruction. Even though, out of the six students, only one had played Kahoot! Previously while studying in the U.S. Throughout the utilization of the game, the atmosphere of the classroom was fun and positive towards learning, the students were focused and cared to see who got the highest score.

This is supported by the findings of the interview. When asked whether it is fun to play the game during the interview, amazingly all six of the students answered in agreement. All of

them mention various reasons for it being fun, from it being something new and interactive to being able to engage with the lecturer and other students. One student elaborated very well on how he felt about the game -

*It was very fun. The music, scoreboard after each question, some funny quotes, features like fire beside your name when you answer correctly in a row of questions, and the excitement of answering the question in time and faster kept me from being bored. (R2, 7<sup>th</sup> June 2017)*

*Yes, because you can get the answer immediately, and it is shown on screen who can get the highest score or lower. (R3, 8<sup>th</sup> June 2017)*

The students were also asked if they concentrated more when playing against other players and all of the six students answered yes. All of them mentioned wanting to get higher marks, enjoying the challenge, atmosphere of the classroom and competition with other players.

*Yes, because a wrong answer or lateness in choosing the correct answer would have made me fall back in the standings. (R1, 5<sup>th</sup> June 2017)*

*Yes. There was the challenge. There was a competition of who will answer fast and accurately. (R2, 7<sup>th</sup> June 2017)*

*Yes, it's fun to score more marks than the rest and get bragging rights. (R4, 9<sup>th</sup> June 2017)*

It can be summarized that the students enjoyed the excitement of playing the game and the competition of playing it with their classmates. Being able to get real live feedback and immediate score is the icing on the cake.

#### RQ2: Students' Engagement

As the educator, it was not difficult to get the students to join in the game, even for the first timers, as all they required was the game pin. Most of them managed to join and play the game without any additional assistance. No one required any additional one to one assistance from the instructor.

Similarly, when asked if they could easily join in the game and use a mobile device to play the game, all six of the students answered that it was easy for them to use the game. One of them elaborated on how he easy he felt about joining the game –

*I can easily join the Kahoot! just by using my mobile devices. Because it's mobile and tablet friendly. All I need to do is just download the apps and I can also use a browser to browse the website and enter the pin to play and no account needed for the player. (R3, 8<sup>th</sup> June 2017)*

*Yes, the process to join the game is easy and straightforward. (R4, 9<sup>th</sup> June 2017)*

It could be seen during the Kahoot! game sessions, that everybody was ready with their mobile phones and were very focused on the games. There was no need for the educator to prompt the students or to chide the students to be focused on the game. In the interview, when asked “*Were you engaged while playing?*”, again all six of them answered in agreement. Some mentioned it was due to the pace of the game, the novelty of a new game, being interested in the topic as well as not wanting to lose.

*Yes. I can be really engaged when it comes to my fav topic and so. I don't feel bored while playing but looking forward to the next game when I'm finished playing. (R3, 8th June 2017)*

*Yes, I was engaged due to the fast pace of the game, there wasn't any time for my mind to wander off. (R4, 9th June 2017)*

There were ample opportunities for students to learn more during and after the session, where the educator will check the students' level of understanding as well as making sure the students can recall information from the specific chapter correctly. When someone got a question wrong, the educator will take the time to ask in detail on why an answer was wrong or right.

Similarly, when asked if they found themselves more positive towards the topic after playing the game, all of the students answered in agreement. The students responded -

*Yes. I find myself more understanding about the topic because the question would be really straight to the point (question and answer) and when you get a correct/wrong for a particular question you'll remember. (R3, 8th June 2017)*

*Yes. I understand better and am more prepared with the exam question style. (R5, 7th June 2017)*

Next, the students were asked "Did you learn something from playing the game?", all of them answered that yes, they did learn something from the game. Interestingly, what they learned was subjective, one mentioned learning to be more alert, another mentioned learning to respect their classmates, and the rest mentioned being able to understand more about the chapter and psychology concept covered that particular week.

*Yes. Kahoot! encourage me to look up to the question within the time given, I learned to be more alert. (R, 8th June 2017)*

To sum up, the students were thoroughly engaged, they were focused on the questions and getting the right answers as well as being in the leaderboard. They were also better able to understand the topic taught through asking more on answers they got incorrect on. The game also taught them other skills like being alert, focused and communicative with others during the class.

### RQ3: Students' Motivation

As soon as a Kahoot! session ended, the educator would promptly be requested by the students to play another round of it, even though the students are aware that only one Kahoot per topic was created weekly. Once they persuaded the educator to browse through featured Kahoots and play the ones related to memory as that was a chapter from the syllabus. It can be observed that the students are very motivated in using the game.

In line with this, when asked whether they would like Kahoot! to be utilized in other lectures, interestingly all six of them agreed.

*Yes, I want every lecture class to implement this game as this game promotes blended learning. It also takes away boredom." (R1, 7th June 2017)*

*Yes. It's because it's a fun way to test the understanding of students about a chapter rather than giving a piece of paper with some questions called a quiz. (R2, 7th June 2017)*



Finally, the students were asked “*Did you face any difficulties or challenges while playing the game?*”, the answer was mixed. Half the students answered they did not face any difficulty playing the game as it’s straightforward. However, another half of the students (n=3), mentioned that internet connection was a hindrance in playing the game and sometimes one is stuck not being able to join or proceed to the next question -

*Yes, it could be connected sometimes and also while playing you can get stuck while everyone moves forward to the next question. (R3, 8<sup>th</sup> June 2017)*

*Yes. The internet connection was the only annoying problem. (R2, 7<sup>th</sup> June 2017)*

*Yes. But some of my friends did not manage to play the game fully because of weak internet connection. (R1, 5<sup>th</sup> June 2017)*

Overall, it can be seen that both the educator and students found it very easy to implement and use Kahoot! during their Introduction to Psychology classes. It can be said that the classroom dynamics are affected by usage of Kahoot! in the classroom by being more fun and active. Students’ engagement and motivation increased by utilizing Kahoot! in the classroom. The students did want to continue the use of Kahoot! in lecture even after frequent usage citing that it is definitely better and more interesting than a traditional paper quiz. The students did face difficulties in using Kahoot! in terms of unstable and weak internet connection. However, this did not affect their classroom dynamic, engagement or motivation while utilizing the gaming platform.

## IMPLICATIONS OF THE RESEARCH

Game-based learning is a best practice in education and finding ways to integrate competitive games in the classroom that promote learning is essential for educators in the twenty-first century. From the findings of the research, it can be said that various factors such as motivation, technological skills, classroom dynamics, low affective filter, being user friendly and cost effective, engagement of students are involved during learning via gamification as shown in Figure 1. All of these elements affect the implementation of games in the classroom to some degree.

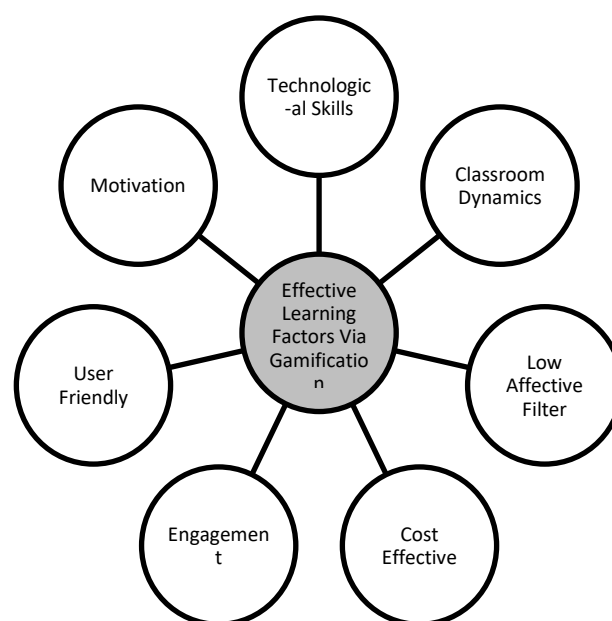


Figure 1. Effective Learning factors via Gamification (Kahoot!)

Furthermore, it is also suggested that the educator look into the strength of wireless internet connection available in their respective faculties and to look for alternatives such as providing portable hot-spot to those unable to connect. This will ensure the educator is well prepared in the case of an internet problem. However, this issue is the only one found in this study. Students cited more on the advantages of using the game and wanted to continue using the game in other classes. In short, Kahoot! took student engagement to a whole new level by engaging every student to challenge themselves.

## CONCLUSION

It is proven that gamification helps students to learn in a low affective filter environment. Thus, this enhances the absorption and the acquisition of knowledge. Due to its positive effect, it is recommended that games or any other edutainment should be encouraged to be applied in the classroom of tomorrow. Educators who are short on time, lack a big funding and are unable to use a specifically designed education gaming platform are more than welcome to use this gaming platform. This is due to the fact that redesigning the classroom from the conventional to the current pedagogical trend requires the element of gamification.

The example given in this paper, Kahoot!, is cost effective, user friendly, accessible anytime and anywhere and is suitable for both small and large groups. Even though Stige (2016) has argued that students are not able to provide more “complex, reflection-based questions”, it definitely beats other platforms which require extensive use of resources and the traditional paper quiz. More research in the utilization of gamification in the classroom should be conducted. Specially, additional research can be done on the effectiveness of Kahoot! in a large lecture setting in a Psychology class.

## REFERENCES

- Dellos, R. 2015. Kahoot! A digital game resource for learning. *International Journal of Instructional Technology and Distance Learning*. 12 (4) 49 – 52.
- Dornyei, Z. 2007. *Research Methods in Applied Linguistics, Quantitative, Qualitative, and Mixed Methodologies*. Oxford: Oxford University Press.
- Chien-Hung, L. & et al. 2014. Adding social elements to gamebased learning. *International Journal of Emerging Technologies in Learning*, 9(3), 12-15. doi:10.3991/ijet.v9i3.3294
- Gibson, W. J. & Brown, A. 2009. *Working with Qualitative Data*. London: Sage Publications.
- Graham, K. 2015. TechMatters: Getting into Kahoot!(s): Exploring a Game-Based Learning System to Enhance Student Learning. *LOEX Quarterly*, 42 (3). 6-7.
- Icard, S. B. 2014. Educational technology best practices. *International Journal of Instructional Technology and Distance Learning*. 11(3), 37-41.
- Kearsley, G. & Schneiderman, B. 1999. Engagement theory: A framework for technology-based learning and teaching. *Educational Technology*, 38(5), 20. Retrieved from <http://home.sprynet.com/~gkearsley/engage.htm>.
- Khushvaktova, N & Shegay, A & Duisenov, N. 2022. Methodology of Teaching English at University: Principles of Game Methods. *International Journal of Innovative Research in Science Engineering and Technology*. 11. 1606. 10.15680/IJIRSET.2022.1102109.
- Kvale, S., & Brinkmann, S. 2009. *InterViews: Learning the craft of qualitative research interviewing* (2nd ed.). Sage Publications, Inc.
- Macmillan Education ELT. 2020. Effective gamification [Advancing Learning Webinar] YouTube. Retrieved January 18, 2022, from <https://youtu.be/YZvoBJBoLUg>.

- Parra, X. C., & García, F. A. 2022. Integrated gamification model in a constructivist learning environment for the promotion of Creative Skills. *Creativity. Theories – Research - Applications*, 9(1), 1–25. <https://doi.org/10.2478/ctra-2022-0001>.
- Premanand, E M. 2012. *Tablet– A Pill for Virtual Education*. CEC, New Delhi. 124 – 127.
- Premanand, E. M. 2014 Gamification in the classroom. *International Journal of Innovative Research in Computer Science & Technology*. 2 (5). 52-55. ISSN: 2347-5552.
- Stige, H. S. 2016. «Kahoot!» as a tool for adjusting teaching to match students' knowledge level and promoting active learning in a lecture setting . Retrieved November 30, 2017, from [http://bora.uib.no/bitstream/handle/1956/15649/UPED-skrift\\_Stige\\_2016.pdf?sequence=1](http://bora.uib.no/bitstream/handle/1956/15649/UPED-skrift_Stige_2016.pdf?sequence=1).
- Thomas, C. 2014. Kahoot! Retrieved May, 2017, from <https://www.graphite.org/website/kahoot>.
- Theisen, T. 2013. "New Spaces New Realities: Expanding Learning Any Time, Any Place," *Foreign Language Annals* 46, No. 2.
- Wang, A. I. 2015. The wear out effect of a game-based student response system. *Computers & Education*, 82, 217-227. doi:10.1016/j.compedu.2014.11.004.
- York, J., & deHaan, J. W. 2018. A constructivist approach to game-based language learning. *International Journal of Game-Based Learning*, 8(1), 19–40. <https://doi.org/10.4018/ijgbl.2018010102>.
- York, J., deHaan, J. Childs, M. and Collins, M. 2022 'How is gamification like being trapped in the Matrix? And what is the 'real-world' of game-based learning?'. *Digital Culture & Education*, 14(3), 35–54.
- Zainuddin, Z., Chu, S. K., Shujahat, M., & Perera, C. J. 2020. The impact of gamification on learning and instruction: A systematic review of empirical evidence. *Educational Research Review*, 30, 100326. <https://doi.org/10.1016/j.edurev.2020.100326>.