Kahoot – A Game- Based Formative Assessment Tool During the Covid-19 Movement Control Order

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Abstract

The rapid development of technology has influenced the current system of education. The existence of various digital learning platforms online enables the teachers nowadays to implement them in teaching and learning as well as testing and evaluation. Kahoot is one of the digital learning platforms that mostly used by higher institutions students to assess their learning. Thus, a research conducted to investigate the usability of Kahoot as a formative assessment tool in ESL primary classroom during Covid 19 Movement Control Order period. The research employed mixed method approach whereby semi-structured interviews and survey questionnaire used as data instruments. There are 20 Year 4 pupils participated and responded to the questionnaire, while three of them and an English teacher responded to the interview. The findings show that most of the respondents coincided that the application of Kahoot enables them to learn English in a fun way, increase their English knowledge, capable to do the sharing of English knowledge to other people and increase their motivation and engagement during this pandemic period. In a classroom context, Kahoot has high potential in supporting and enhancing teaching and learning for both teacher and pupils with its outstanding features, especially during the pandemic period.

1. Introduction

Advanced technology development in this era has caused transformations in people's life especially the way they acquire knowledge (Graham, 2015). In line with the execution of 21st century learning, most educators nowadays are keen to adapt technology into their teaching and learning. Technology has been the focus in most of the higher institutions to help ESL learners to improve their learning and language proficiency. We have seen the introduction of language learning via Internet through multimedia learning, online learning, Web-based learning, ICT, Computer-Mediated Communication (CMC), Technology Enhanced Language Learning (TELL), the use of social media in language learning and gamification method learning. Most of these technologies are normally used at tertiary level and secondary level. However, it is very rare to be used at primary level. If these technologies had given a positive impact to the higher level of education, there is a need to explore how these technologies can be adapted at primary level. Even though there were some negative views which stated that using ICT for teaching material is a waste of time as stated by (Melor et al., 2000), many years have passed and today, technology is seen as a necessity tool for enhancing the quality of education. Due to that, the society demands for teachers who are capable of integrating ICT into their regular educational practices (Cozar et al., 2015).

In the year of 2020, when people are exploring and expecting for new emergence of technology in various fields, the whole world is attacked by a virus which called as Corona and worldly known as Covid-19. Due to that, all people are advised to remain staying at their home to mitigate the spread of the virus. In Malaysia, the Prime Minister of Malaysia also announced to have a nationwide Movement Control Order (MCO) starting on 18 March 2020. All private and government working sectors, schools, colleges, and higher-learning institutions in Malaysia are instructed to close right away. However, teaching and learning should be on going during Covid-19 pandemic (Chin, 2020). No matter how hard the situation is, pupils deserve to have their rights to learn so that they will not be missing out and still able to catch up the syllabus that has been set for this particular year. Therefore, Malaysia's Ministry of Education advised the teachers and educators to carry out teaching and learning via online from home.

Even though the learning process is carried out online, testing and evaluation are still required wherenever the teaching occurs, since assessment and evaluation are essential components in teaching (Basol & Balgalmis, 2016). The pupils are still needed to be assessed to know how much progress they have made after a cycle of teaching and learning session. Then, after knowing at what stage they are in, the teacher can plan out any enrichment or support activities to help them. Instead of doing traditional assessment, using only papers and pens, the integration of technology to carry out online assessment is seemed to be more practical and accessible during this challenging period.

It is indeed new to many of the teachers and has caused them to quickly shift their practices. The introduction of digital game-based learning tool in the education field has helped many educators in the process of teaching and learning. There are many types of digital game-based learning such as Padlet, Quizizz, Kahoot, Plickers and Wordwall which are available online.

According to Lunden (2018), Kahoot is among the most popular within game based learning. Not only popular, Kahoot has been an alternative that is famous in replacing regular forms of assessment, usually formative assessments stated by Dellos (2015). Kahoot is not only a free assessment program to increase the participation of pupils in a lesson, but it is also can be used as a digital formative assessment tool as stated by Barnes (2017).

In addition, Kahoot is a new formative assessment tool that is viable and practical to make learning fun and enjoyable, thus motivating students to learn (Ruiz & Toaza, 2020). The implementation of Kahoot to assess the pupils in learning is indeed a booster for them to keep motivated and engaged in doing online learning at home during the pandemic. This is because lack of motivation can result in a reduction of learning outcomes and a negative atmosphere in the classroom (Liu et al., 2012). When pupils become demotivated, they are most likely difficult to engage with the lesson because they cannot find the purpose of learning. As mentioned by Jamilah and Maslawati (2017), active engagement supposed to be the learners involving themselves in the learning process by teachers permitting them to analyse and reflect on the activities that are happening in the classrooms.

Therefore, in order to assess and track pupils' progress in learning and at the same time to promote motivation and engagement during online learning at home, it has encouraged the researcher to investigate in the aspect of integrating Kahoot as digital game-based learning tool to assess ESL sub- urban primary school pupils' learning during Covid-19 Movement Control Order (MCO) period. Even though Kahoot is among the most popular within game based learning (Lunden, 2018), but it is totally a new thing to sub-urban primary school pupils particularly in the researcher's current school. The researcher chose Kahoot because it has never been used before by other teachers in that school. The introduction of Kahoot to the pupils in a sub-urban school area is seen as a new exposure to the pupils to experience another digital game-based tool other than Quizizz. Thus, this study is to identify: a) How does using Kahoot help pupils in learning English during Movement Control Order (MCO) period? and b) What are the perceptions of primary ESL pupils towards the use of Kahoot in learning English during Movement Control Order (MCO) period?

2. Literature Review

2.1 Theoretical Background

Connectivism is a new theory that is designed and specified for the digital era like today as proposed by Siemen (2005). It is based upon the idea that knowledge is networked and so the act of learning takes place inside virtual networks and communities through social interaction. In other words, it is a networked model of learning. In the context of this study, which is to investigate the usability of Kahoot in learning English during the pandemic of Covid-19, pupils should maintain their connection with their teachers, learning community or technology in making sure their learning is constantly on going. Thus, the use of digital platform like Kahoot is believed can promote self-learning at home among the pupils according to Wang and Lieberoth (2016).

2.2 Digital Game-Based Learning

Digital game-based learning tools that we can freely access today such as Kahoot, Quizizz, Socrative and Padlet, have their own uniqueness and attractions to target many more users to

use the applications. Basically, in aspect of education, the emergence of all of these applications helps many teachers all over the world in creating a fun yet meaningful learning atmosphere in classroom. Moreover, most research papers on this subject show that game-based learning has a positive impact as opposed to conventional methods of learning (Wang & Lieberoth, 2016; Jui et al., 2011).

2.3 The Usability of Kahoot

There are many ways of using Kahoot either in class or out of class. It can be used as a starter at the beginning of a lesson, a tension breaker in the middle of a lesson or as a closure to recap the topic that has previously been taught. Woodard and Mabry (2018) found that the most useful usage were to revise old and new materials, to obtain preliminary knowledge baselines and to provide interactive element to teach and start a discussion. Kahoot is not only a free assessment program to increase the participation of pupils in a lesson, but it is also can be used as a digital formative assessment tool as stated by Barnes, R. (2017). In addition, Kahoot is a new formative assessment tool that is viable and practical to make learning fun and enjoyable, thus motivating students to learn (Ruiz & Toaza, 2020).

2.4 Motivation and Engagement

Motivation and engagement play an important part in gamification. Previous research studies always discuss on how gamification could influence someone's motivation. A study by Hanus and Fox (2015) that was conducted among the college students figured out that gamification affected students' motivation and performance and imminent interest in gamification. Other than that, more recent studies have also found that game-based learning can improve students' motivation, foster learning engagement and provide effective feedback (Plump & LaRosa, 2017; Wang, Zhu, & Saetre, 2016).

2.5 Benefits of Using Kahoot

Previous studies have highlighted the discussion on the perceptions of English learners and teachers in using Kahoot in teaching and learning session. A study discovered that interesting features like audio and points in Kahoot could attract the students to concentrate, engage, enjoy, motivate, perceive learning, and create classroom dynamics (Wang et al., 2016). Another study which collating Clicker (a paper quiz) and Kahoot to different size of classes to review the knowledge, has shown momentous improvement in aspects of motivation, engagement, enjoyment, and concentration (Wang et al., 2016). Besides, Chaiyo and Nokham, (2017) also has revealed significant finding which is by playing Kahoot, it could improve students' engagement, concentration, perceived learning, enjoyment, motivation and satisfaction.

In addition, as stated by Turan & Meral (2018), students who were using Socrative were less engaged than students who were using Kahoot. It is also supported and mentioned by Geoksun and Gursoy (2019), Kahoot had bigger impact on the students' engagement compared to Quizizz. Furthermore, there is another study mentioned about online formative assessments and focused on diverse delivery methods and psychological benefits (McLaughlin & Yan, 2017). In this study, Kahoot was depicted as a dynamic game-based student response system compared to some other gamification tools in the terms of its additional support of music, pictures, videos scoring, and ranking.

2.6 Challenges of Using Kahoot

Among the challenges mentioned in the previous study are students have to equip themselves with extra information in order to complete one Kahoot session and less feedback given by the teacher on the Kahoot session have caused a drawback for the learners as stated by Mohd, et al, (2019). In addition, unreliable internet connections, lack of support and resources, not enough knowledge and incompetent in using technology, constrained to obtain reasonable access to classroom technology or other school resources (Adnyani et al., 2020; Ningsih & Mulyono, 2019). Most articles mentioned that internet facilities are not really convenient and slow internet connection are the main challenge when using Kahoot.

Moreover, having hard times in creating and designing quizzes in Kahoot due to its unfamiliar features, and since the scoring shown is depending on how fast the students able to answer the quizzes and some students just simply guessed the answers without thinking, and several senior teachers mentioned it is hard to integrate new technology into their teaching due to lack of training (Nguyen & Yukawa, 2019; Ningsih & Mulyono, 2019; Cetin., 2018).

3. Methodology

This study employed a mixed-method approach in which the researchers collected quantitative and qualitative data using survey questionnaires, semi-structured interviews, and teacher's reflective journal.

3.1 The Respondents

Purposive sampling was used in selecting the respondents in this study. A total of 20 pupils and an English teacher from a sub-urban school in Kulai District were selected for this study. The pupils are Year 4 primary pupils. They are from the same class and the teacher is the one who is currently teaching them. The reason why they were selected for this study is because they are the only class in standard four that has smaller pupils' enrolment which is 20 and they consist of mixed ability pupils compared to another one class. They are also very committed in learning and willing to give full cooperation throughout the study.

3.2 The Setting

Kahoot application was integrated as a form of formative assessment, which carried out after each lesson of English subject was delivered for 4 weeks. There were 4 sessions of Kahoot were prepared for the pupils to evaluate pupils' comprehension on the topic of the day and to ensure they were paying attention during the lessons. Each lesson was within one hour and the Kahoot sessions were started after one-hour lesson ended. The pupils were given ample time to answer the questions and they must finish each Kahoot session before the next lesson started.

3.3 Research Instrument

There were three research instruments being used in this study which are survey questionnaire, interview and teacher's reflective journal. The items in the survey questionnaire were adapted from Cetin (2018) and there are 12 items in the survey questionnaire to get to know pupils' general opinions and their perception towards Kahoot in learning English. A pilot study was carried out to determine the reliability of this questionnaire and the Cronbach Alpha value is 0.90. It showed the questionnaire is significantly reliable as stated by Vaske (2017), an excellent indication of a good internal

consistency must be with the measure of more than or equal to 0.8. The data later were exported to Microsoft Excel, analysed using descriptive statistics and presented in the form of tables, percentages and means.

In order to get more richer data, the researcher conducted semi-structured interview with three pupils from different proficiency level group and an English teacher. In this study, to enhance the validity of the findings, the interview transcriptions was returned to each interviewee who involved in the semi-structured interview to review and check their statements during the interview and verify every detail of information written in the interview transcription. Teacher's reflective journal also was collected from the English teacher which consists the details of four-week lesson, her observation on pupils' response, her feelings on the lessons and any issues raised when conducting the assessment using Kahoot. The qualitative data were analysed using Thematic Analysis by Braun and Clarke (2006).

3.4 Research Procedure

All respondents were given inputs like a normal lesson based on the CEFR syllabus. After each session, the respondents logged into Kahoot using their own username and completed the assessment prepared by their English teacher. After all four sessions finished, the respondents were given three days to answer and return the survey questionnaire, which was uploaded via Google Form. Then, three respondents from different proficiency level group and an English teacher were interviewed in different session which took approximately 20 minutes for each interview. In addition, teacher's reflective journal was collected and analysed.

4. Results and Discussion

The first section presents the findings with regards to the first research question - How does using Kahoot help pupils in learning English during Movement Control Order (MCO) period? Table 1 summarises all the responses in the form of percentages and means.

Table 1. Percentages and Means of Learning English during MCO

No	Items	Yes (%)	Sometimes (%)	No (%)	Mean ($\bar{x}$)
5	I like to learn English using Kahoot.	10 (50%)	9 (45%)	1 (5%)	1.55
6	I think my English knowledge increases when using Kahoot.	10 (50%)	8 (40%)	2 (10%)	1.60
7	I can share what I have learnt in English subject to other people after using Kahoot.	9 (45%)	6 (30%)	5 (25%)	1.80
8	I can concentrate in playing Kahoot quiz.	10 (50%)	9 (45%)	1 (5%)	1.55

4.1 Impact of Kahoot in Learning English During MCO

In general, most of the respondents agreed upon the inclusion of Kahoot application in learning English by answered "Yes" to all the questions. The highest mean is 1.80 for item 7 whilst the lowest is 1.55 which represents item 5 and 8.

Most of the respondents could accept the use of Kahoot in learning English during MCO period. Item 5 is further supported by the statements noted by the P1, P10 and P15 during the focus group interview session. P15 who represents advanced pupil group in the classroom expressed that, "I think it (Kahoot) makes me to learn more and I can challenge myself to get high score when answering the quiz." In the meantime, P10 who represents intermediate pupil group said that "I love it and it is so fun so I'm not sleepy." Other than those two pupils, P1 as a low achiever in the classroom also mentioned that, "I enjoy Kahoot. Not boring."

The respondents who answered "Yes" for item 6 think that their English knowledge is increased through their Kahoot gamification experience. This is because of they have to revise and refer to their notes and previous tasks on the topic that they have learnt before participating in the Kahoot sessions. As mentioned by one of the respondents in the interview, P15 responded "I can understand the topic and learn better. Hmm recall my memories about previous topic. Read more. Think faster." In the meantime, there were 10% (n=2) responded that they did not think that Kahoot has caused their English knowledge increased. It probably caused by no face to face interaction between the teacher and the pupils during the MCO period. To make it worse, those pupils who having parents who were working during daytime would feel left behind as they had to wait for their parents to come back home to catch up with the lessons.

Moving on to the next item when the respondents were asked whether they can share what they have learnt in English subject to other people after using Kahoot, 45% (n=9) of the respondents voted for 'Yes' and only 25% (n=5) of them voted for 'No'. After making preparations for the Kahoot session, it somehow helps them to learn something about the topic, although not so much, it must be something they can share with. As noted by the P10 in the interview, "…. when teacher uses it (Kahoot), hm I think I get to learn new thing and tell my friends about English."

Having virtual learning at home is definitely not easy for the young learners. Looking at the perspective of Connectivism theory, pupils should maintain their connection with their teachers, learning community or technology in making sure their learning is constantly on going. This is because pupils need extra guidelines and endless support from their teacher and guardians. Learning during MCO period requires the teacher to be more creative and helpful in many ways to ensure the learning is still taking place as the teaching and learning should be on going even during Covid-19 pandemic (Chin, 2020).

4.2 Perceptions Towards the Use of Kahoot

The second section presents the findings with regards to the second research question - What are the perceptions of primary ESL pupils towards the use of Kahoot in learning English during Movement Control Order (MCO) period? Table 2 summarises all the responses in the form of percentages and means.

Table 2. Percentages and Means of Perceptions Towards the use of Kahoot

No	Items	Yes (%)	Sometimes (%)	No (%)	Mean ($\bar{x}$)
1	I can use the Kahoot easily.	8 (40%)	12 (60%)	0	1.60
2	I think the Kahoot is enjoyable.	10 (60%)	9 (35%)	1 (5%)	1.55
3	I've got a better understanding of the subject after I've used the Kahoot Application.	9 (45%)	9 (45%)	2 (10%)	1.65
4	The Kahoot was interesting.	11 (55%)	9 (45%)	0	1.45
9	I feel excited whenever my teacher uses Kahoot to teach English.	10 (50%)	8 (40%)	2 (10%)	1.60
10	I like Kahoot best when I can see my name in the podium as the winner among my classmates	12 (60%)	7 (35%)	1 (5%)	1.45
11	I like Kahoot because I can compete with my classmates	9 (45%)	6 (30%)	5 (25%)	1.80
12	If I have a chance, I would love to use Kahoot in other subjects too.	12 (60%)	6 (30%)	2 (10%)	1.50

4.2.1 General Opinions About Kahoot (Item 1, 2, 3, 4, 12)

Based on Table 2 above, Item 1 shows that 40% (n=8) of the respondents agreed that they could use the Kahoot easily, meanwhile another 60%(n=12) responded for 'Sometimes'. This is probably because Kahoot application is still new for most of the pupils and they just learnt about Kahoot this year. This is mentioned by P10 during interview session, "I never know about Kahoot, I never use it before."

Furthermore, item 2 presents that 60% (n=10) respondents admitted that the Kahoot is enjoyable, 35%(n=9) responded for Sometimes they think the Kahoot is enjoyable and only 5%(n=1) responded for No. Interestingly, this item is correlated with item 4 "The Kahoot was interesting" which agreed upon by majority of the respondents. The percentage for the respondents to respond Yes for the statement is 55% (n=11) and another 45% (n=9) responded for Sometimes. This finding shows that if the pupils think the Kahoot is enjoyable, most probably they will also find that the Kahoot was interesting. As noted by P10, "I love it (Kahoot) and it is so fun" and supported by P1, "I enjoy it. Not boring."

Moving on to item 3, there were 45%(n=9) of the respondents responded for Yes and Sometimes and another 10%(n=2) responded for No. However, majority of the respondents responded that they would love to use Kahoot in other subjects in school which the percentage for Yes is 60% (n=12), 30%(n=6) and 10% (n=2) responded for Sometimes and No respectively. The findings reveal that using Kahoot to get better understanding of English subject may work effectively to some of the pupils. This is basically depending on one's learning preferences and intelligence. A study by Mohd et al. (2019) highlighted that students have to equip themselves with extra information in order to complete one Kahoot session and less feedback given by the teacher on the Kahoot session have caused a drawback for the learners. However, the findings in the previous study by Wang and Lieberoth (2016) discovered that interesting features in Kahoot such as audio and points could attract the students to concentrate, engage, enjoy and perceive learning.

4.2.2 Motivation and Engagement (Item 9, 10, 11)

There are 50% of the respondents feel excited whenever their teacher uses Kahoot in English lesson and only 10% of them denied to feel the same. Furthermore, 60% of the respondents admitted that whenever they see their name in the podium as the winner, they like it. Moving on to item 11, 45% of them agreed upon the statement that they like Kahoot because they can compete with their classmates. This finding reveals that most of the respondents are competitive and high spirited learners. In the previous study by Chaiyo and Nokham, (2017) also has revealed similar finding which is by playing Kahoot, it could improve students' engagement, concentration, perceived learning, and enjoyment.

The findings in the SQ are supported by question 7 and 8 of the interview which explores the respondents to reflect on their motivation in learning English using Kahoot. Question 7 was asked initially, "What do you like the most about using Kahoot in English class?" then followed by "Do you think that you have become more interested with the lesson compared to before?" From the responses given, all of them agreed that using Kahoot allows them to have a new purpose and be engaged with the lesson. They mentioned that they feel enthusiastic to get the highest score when answering the quiz. This is because they want to see their names in the podium as the winner. They also mentioned that Kahoot makes them to always be prepared for English lesson, become more active learner and excited user.

"I like the most when my teacher shows the winner of the quiz. I always wanted to know who is above me and who got the highest score" (P15), "I like the moment when I see my name in the podium. I know I am smarter than my friends" (P10),

"I like the music. It's good. Fun" (P1), "Yes, I think I am. I always get ready for the English lesson" (P15), "Yes, I become more active. I can compete with my friends." (P10), "Yes, I am excited to use it." (P1).

In order to make learners become motivated to learn, the lesson supposed to be able to fulfil their needs and interests and ESL pupils who have negative attitudes towards learning English will make it harder for them to acquire the language (Williams & VanPatten 2007; Krashen 2013). Hence, the teacher should ensure the pupils are motivated to learn by lowering their affective filter through providing a fun digital game-based learning like Kahoot. If the learners are interested or their needs are being met, they are going to engage in

learning. When that happens, they prone to be an active learner who tries to connect every information they get in a lesson with their prior knowledge or experience. The more learners learn in a way that excites them, the more they want to explore and that is where the motivation comes in.

In terms of engagement, Kahoot makes the pupils to do more reading practice on the topic of the day. P15 noted in the interview, "Every time my teacher inform 'we are going to have quiz for today!' I will read and study a bit harder. I try to remember what we have learnt. I do revision for English topics." This also shows that they put extra effort to learn and understand the topic by recalling the inputs they have learnt. This finding is parallel with a few previous studies. In the previous studies reported that Kahoot was able to help students in doing preparations for their examination (Iwamoto et al., 2017), that Kahoot increased students' interest in participating in learning (Budiati, 2017), that the students felt more motivated and confident, and they felt more secured and safer (Tsymbal, 2018).

5. Conclusion and Recommendations

The integration of Kahoot as one of the gamification tools is proven to have a good potential in the educational setting. It is effective in motivating the students and engaging them with the lessons in the classroom. Instead of focusing to the challenges as it could be fixed later on, all of us should focus on the benefits that it brings into the education. Besides, the findings of this research are believed to provide more ideas and exposure to the future researchers, educators, learners and the administrators on the implementation of Kahoot and to contribute new insights in terms of choosing suitable-game based learning applications to be used in ESL primary classroom.

In addition, this study was only used in a small scale of study with only 20 pupils involved from a sub-urban school located in Johor. Therefore, the findings are solely depending on the response given by the respondents in that particular school. Therefore, future researchers can choose schools with homogeneous or different characteristics. Studies can be done with a larger number of students from different types of schools or schools from different states, so that the findings could be generalized.

In the future studies, respondents of various backgrounds namely age, programs, geographical location, and skills could be included, so that there is a more comprehensive pool of data that would further enhance the necessity of the research. Other than that, other types of digital assessment tools for instance Quizizz, Plickers, Wordwall and others could also be utilised in language classrooms to study their usability in learning English during the pandemic period. In a couple of years later, other game-based learning applications might be more relevant and outperformed Kahoot as they would be more comprehensive and interactive to suit the needs of our pupils.

References

Adnyani, K. E. K., Adnyana, I. W., & Murniasih, N. N. (2020, January). Teacher and Students' Perception on Using Kahoot! for English Learning. In *3rd International Conference on Innovative Research Across Disciplines (ICIRAD 2019)* (pp. 62-67). Atlantis Press. https://doi.org/10.2991/assehr.k.200115.011

Arif, F. K. M., Zubir, N. Z., Mohamad, M., & Yunus, M. M. (2019). Benefits and challenges

of using game-based formative assessment among undergraduate students. *Humanities and Social Sciences Reviews*, *7*(4), 203-213. https://doi.org/10.18510/hssr.2019.7426

Barnes, R. (2017). Kahoot! in the classroom: Student engagement technique. *Nurse Educator*, *42*(6), 1. https://doi.org/10.1097/NNE.0000000000000419

Basol, G., & Balgalmis, E. (2016). A multivariate investigation of gender differences in the number of online tests received-checking for perceived self-regulation. *Computers in Human Behavior*, *58*, 388-397. https://doi.org/10.1016/j.chb.2016.01.010

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psycholog*y*, 3*, 77-101. https://doi.org/10.1191/1478088706qp063oa

Budiati, B. (2017). ICT (information and communication technology) use: Kahoot program for English students' learning booster. *In Proceedings education and language international conference* (Vol. 1).

Chaiyo, Y., & Nokham, R. (2017). The effect of Kahoot, Quizizz and Google Forms on the student's perception in the classrooms response system. In International Conference on Digital Arts, Media and Technology (ICDAMT) NJ: IEEE, 178-182. https://doi.org/10.1109/icdamt.20177904957

Çetin, H. S. (2018). Implementation of the digital assessment tool kahoot in elementary school. *International Technology and Education Journal*, *2*(1), 9-20

Chin, C. (2020, March 2). Learning mustn't stop with Covid-19. *The Star Newspaper*, p. 1.

Cózar, R., Zagala, J., & Sáez, J. M. (2015). Creando contenidos curriculares digitales de ciencias sociales para educación primaria. una experiencia TPACK para futuros docentes. Educatio Siglo XXI 33(3), 147-168. https://doi.org/10.6018/j/240921

Dellos, R. (2015). Kahoot! A digital game resource for learning. *International Journal of Instructional Technology and Distance Learning, 12*(4), 49-52.

G€oksün, D. O., & Gürsoy, G. (2019). Comparing success and engagement in gamified learning experiences via Kahoot and Quizizz. *Computers & Education, 135*, 15-29. https://doi.org/10.1016/j.compedu.2019.02.015

Graham, K. (2015). TechMatters: Getting into Kahoot!(s): Exploring a game-based learning system to enhance student learning. *LOEX Quarterly*, *42*(3), 4.

Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers & education*, *80*, 152-161. https://doi.org/10.1016/j. compedu.2014.08.019

Iwamoto, D. H., Hargis, J., Taitano, E. J., & Vuong, K. (2017). Analyzing the efficacy of the testing effect using Kahoot™ on student performance. *The Turkish Online Journal of Distance Education, 18*(2), 80-93. https://doi.org/10.17718/tojde.306561

Jui-Mei, Y., Chun-Ming, H., Hwang, G.-J., & Yueh-Chiao, L. I. N. (2011). A game-based learning approach to improving students' learning achievements in a nutrition course. *TOJET: The Turkish Online Journal of Educational Technology, 10*(2), 1.

Krashen, S. D. (2013). *Second language acquisition: Theory, application, and some conjectures*. Cambridge: Cambridge University Press.

Liu, O. L., Bridgeman, B., & Adler, R. M. (2012). Measuring learning outcomes in higher education: Motivation matters. *Educational Researcher*, *41*(9), 352-362. https://doi.org/10.3102/0013189X12459679

Lunden, I. (2018). Education quiz app Kahoot says it's now used by 50% of all US K-12 students, 70M users overall (Vol. 2019). TechCrunch.

McLaughlin, T., & Yan, Z. (2017). Diverse delivery methods and strong psychological benefits: A review of online formative assessment. *Journal of Computer Assisted Learning*, *33*(6), 562-574. https://doi.org/10.1111/jcal.12200

Melor, M. Y., Maimun, A. L., Chua, P. L., & Ismail, S. W. (2000). "Language Learning via ICT: Students' Experience." *Proceedings of the 5th WSEAS/IASME International Conference on Educational Technologies (Edute' 09) Language.*

Nguyen, T. T. T., & Yukawa, T. (2019). Kahoot with smartphones in testing and assessment of language teaching and learning, the need of training on mobile devices for Vietnamese teachers and students. *International Journal of Information and Education Technology, 9*(4), 286-296. https://doi.org/10.18178/ijiet.2019.9.4.1214

Ningsih, S., & Mulyono, H. (2019). Digital Assessment Resources in Primary and Secondary School Classrooms: Teachers' Use and Perceptions. https://doi.org/10.3991/ijim.v13i08.10730

Othman, I., Salleh, N. M., & Norani, N. A. M. (2013). The Implementation of school based assessment in primary school standard curriculum. *International Journal of Education and Research, 1*(7), 1-10.

Plump, C. M., & LaRosa, J. (2017). Using kahoot! In the classroom to create engagement and active learning: A game-based technology solution for elearning novices. *Management Teaching Review*, *2*(2), 151-158. https://doi.org/10.1177/2379298116689783

Ruiz, I. H., & Toaza, K. G. (2020). The experience of using the Kahoot! With students who are starting to program. In *ideas* 3(4), 23-29

Shaaruddin, J., & Mohamad, M. (2017). Identifying the effectiveness of active learning strategies and benefits in curriculum and pedagogy course for undergraduate TESL students. *Creative Education, 8*(14), 2312-2324. https://doi.org/10.4236/ce.2017.814158

Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning.*

Tsymbal, S. (2018). Gamified training sessions as means of enhancing students'motivation in learning English. *Psychological Journal, 17*(7), 151-161. https://doi.org/10.31108/1.2018.7.17.10

Turan, Z., & Meral, E. (2018). Game-based versus to non-game-based: The impact of student response systems on students' achievements, engagements and test anxieties. *Informatics in Education, 17*(1). https://doi.org/10.15388/infedu.2018.07

Vaske, J. J., Beaman, J., & Sponarski, C. C. (2017). Rethinking internal consistency in Cronbach's alpha. *Leisure Sciences*, *39*(2), 163-173. https://doi.org/10.1080/01490400.2015.1127189

Wang, A. I., & Lieberoth, A. (2016). The effect of points and audio on concentration,

engagement, enjoyment, learning, motivation, and classroom dynamics using Kahoot!. *In Proceedings from the 10th European conference of games based learning*. Academic Conferences and Publishing International Limited, p. 78

Wang, A. I., Zhu, M., & Sætre, R. (2016). The effect of digitizing and gamifying quizzing in classroom*s. In European conference on gamesbased learning*. Paisley, Scotland: Academic Conferences and Publishing International.

Williams, J., & VanPatten, B. (2007). Early theories in second language acquisition. In *Theories in Second Language Acquisition: An Introduction*. New Jersey: Lawrence Erlbaum Associates, Inc. https://doi.org/10.4324/9781410615299

Woodard, R., & Mabry, J. (2018). Give and receive immediate feedback and kickstart discussions with Kahoot! A successful classroom teaching tactic that can be replicated by other instructors. *Teaching Theology & Religion*, *21*(4), 303-303. https://doi.org/10.1111/teth.12457

Zarzycka-Piskorz, E. (2016). Kahoot it or not? Can games Be motivating in learning grammar? *Teaching English with Technology, 16*(3), 17.

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