Interactive game “Kahoot!” as the media of students’ vocabulary assessment

Hadijah 1, Bambang Widi Pratolo 2, Rondiyah 3
1, 2, 3 Magister Program of English Education, Universitas Ahmad Dahlan, Yogyakarta, Indonesia
1hadijahh639@gmail.com
2bambang.pratolo@pbi.uad.ac.id (corresponding author)
3rondiyah572@gmail.com

Received: November 25, 2019; Accepted: February 16, 2020; Published: March 14, 2020

Abstract

This research aims to investigate students’ perspectives on using the interactive game “Kahoot!” as the media of vocabulary test at one of the public senior high schools in Yogyakarta Indonesia. It was qualitative research with five voluntarily participating students as the participants. An in-depth semi-structured interview was applied as the data collection technique. The theme-based analysis was used in this study. The finding shows that first, Kahoot! is more practical for a vocabulary test. Second, the game can attract the students’ attention to the test. Third, it helps the students to be more active in the classroom and the last, the game makes the students more enthusiastic in doing the test. However, this research also found some negative sides of using Kahoot!; first, the students become less confident with their score, especially when they get lower scores than other students because the scores were displayed on the leader board in Kahoot! application; second, some students had a lack of knowledge in using the application; and the last, the time was limited. This study implies that the use of Kahoot! in the EFL classroom can be an alternative for teachers to teach vocabulary and provide fun learning activities for the students.

Keywords: interactive game; Kahoot! application; media; vocabulary; vocabulary assessment
How to cite this paper (in APA style): Hadijah, Pratolo, B. W., & Rondiyah. (2020). Interactive game “Kahoot!” as the media of students’ vocabulary assessment. *Journal on English as a Foreign Language, 10*(1), 84-102. https://doi.org/10.23971/jefl.v10i1.1670

DOI: https://doi.org/10.23971/jefl.v10i1.1670

In English language learning, the acquisition of vocabulary is a significant phase to improve language skills further. To assess the students' vocabulary skills, teachers commonly use traditional instruction that is asking the students to look for the definition of a word in the dictionary and write sentences. Such instruction makes the students frustrated because they have to organize the word into a sentence (Palmer et al., 2014). Furthermore, teachers are also common to ask the students to memorize 10-15 words and perform them in front of the class. Teachers then take the score based on how many words the students have memorized (Kilickaya & Krajka, 2010). Using this way, students will forget what they have memorized because they do not practice or use the words in their daily life. Such problems happened because teachers did not understand what the students need in the teaching and learning process. In this globalization era, it should be understood that students today have different needs than those in the past.

Nowadays, the application of technology should be considered in English language teaching to improve the students’ motivation and interaction in learning (Licorish et al., 2018; Santosa, 2017; Wang & Lieberoth, 2016; Zarzycka-Piskorz, 2016). It is a challenge for language teachers to use technology as tools for general assessment (Godwin-Jones, 2015). Teachers believe that integrating technology in teaching will help students in the learning process. Students will be bored when teachers cannot develop good teaching and learning activities. Therefore, teachers are expected to use technology in the classroom to create enjoyable learning. The use of smartphones in teaching language has a different sense for the students; they become more enthusiastic and interested in using the phone to update their daily life rather than as educational tools. Applying vocabulary instructions by using technology can improve students' scores in the test (Sharma & Unger, 2016; Yip & Kwan, 2006). One of the technologies that have been used is Kahoot!
Kahoot! is a game-based learning platform that purposes as a responsive system for students, providing an interesting way for the students to practice vocabulary that they already learned (Dellos, 2015). Kahoot! also allows teachers to make quizzes that are possible for the students to submit their answers via tablet, smartphone, or computer. The application will display the students' scores for their right answers.

The use of Kahoot! in teaching the English language has been widely recognized by the researchers. Nguyen and Yukawa (2019) found that Kahoot! has a positive impact on English language learning. The use of Kahoot! improves the students' motivation and attention to English language learning (Coca & Slisko, 2013). Papastergiou (2009) also found that using a game in teaching is more appealing and valuable for the students' performance. However, this study was limited in investigating the students' perspective in using an interactive game, Kahoot!, as the media of vocabulary assessment. This study aimed to investigate the students' perspective of using Kahoot! to assess the students' vocabulary skills, as well as to understand how it can influence the students' vocabulary.

Kahoot! is a response system for students that promote them to be active in the teaching and learning process as it is one of the game-based platforms (Dellos, 2015). Some researchers consider Kahoot! as a game-based response system for students because it integrates students' response and game-based learning (Wang, 2015). Kahoot! permits the teachers to create an online quiz that can be accessed via tablet or smartphone (Dellos, 2015; Graham, 2015). The response system of Kahoot! also allows the students to answer the questions without real name through the application (Wang, 2015). It makes Kahoot! fun learning application not only for students but also for teachers.

The use of an anonymous account is a good way to engage the students' activity in answering the questions in the classroom (Stowell & Nelson, 2007). After the students answer the questions, teachers can see and evaluate the students' work directly using Kahoot! (Wang, 2015). This way allows teachers to know how the students do the test directly, and it makes further instruction more effective. Caldwell (2007) stated that students and teachers have positive responses towards the use of Kahoot! in the teaching and learning process. It shows that Kahoot! is effective as an assessment tool for it can report to teachers on which parts students are strong and on which parts they still need remedy.
Kahoot! provides the students with media to be competitive in getting a high score with its interesting sound effects and music (Wang & Lieberoth, 2016). Besides, teachers can arrange the points in every question and students can answer correctly to get a high score (Dellos, 2015). While the test runs, students will compete with their classmates to reach a high score (Dellos, 2015). The research conducted by Wang and Lieberoth (2016) showed that Kahoot! can encourage the students to be more active and make them enjoy learning in the class.

The effects of music audio in Kahoot! engages the students’ participation while using it; they are interested when the teacher put some music in the application. Using Kahoot! in teaching vocabulary is considered effective for students. They do not only finish the test but also improve their vocabulary and at the same time get fun from learning (Medina & Hurtado, 2017).

National Reading Panel (2000) in the US suggest teachers use and integrate technology for teaching vocabulary. Many online learning tools can be used including the game of education and online graphics which can be used by the teachers in the vocabulary instruction to make the learning process more interesting and effective (Sharma & Unger, 2016). As one of the online educational applications, Kahoot! is professionally designed to help students more engaged with the lessons and provide fun. It is also effective to teach vocabulary. To understand the potential effectiveness of Kahoot! as a learning tool, teachers can organize a game-based learning model to teach the students (Kiili, 2005). Kahoot! can be organized as the instruction tool to assess the students' vocabulary skills and support the teachers to give direct instruction.

Many researchers have put much attention on investigating the use of technology in teaching vocabulary (Chotimah & Rafi, 2018; Huang, 2015; Licorish et al., 2018; Nguyen & Yukawa, 2019; Pratolo & Solikhati, 2020). Huang (2015) conducted a similar study of using technology through games on the computer in vocabulary acquisition. Two classes were selected as the participants of his research. One class became control and the other class became an experiment. For the class experiment, the researcher used vocabulary instruction using technology through games on the computer. The results of the class experiment showed that there was a significant difference in the students' vocabulary of both classes. The experimental class was identified to be more leading than the control class. So it can be concluded that teaching vocabulary by using technology has a good impact on the students’ vocabulary skill mastery.
Another similar study was conducted by Nguyen and Yukawa (2019). They explored the use of Kahoot! to test and revise what students have learned in class, to determine the probability as a complement to existing material. The results showed that no teacher or student used Kahoot! in testing or assessment, only one teacher had heard of Kahoot!. There is a significant difference between Nguyen and Yukawa (2019) research and the current research. Nguyen and Yukawa (2019) selected Vietnamese teachers and students as the subjects of the research to investigate the use of Kahoot! in the assessment of language teaching and learning, and the data collection technique which they used was questionnaire. This study, on the other hand, only focused on the five students of a public senior high school in Yogyakarta, and the data collection used was in-depth semi-structured interviews.

Chotimah and Rafi (2018) also conducted a similar study, specifically on Kahoot! as the alternative media in teaching reading. The study was a qualitative research which aimed to investigate the use of Kahoot! as the media of teaching reading. The instruments used were observation, field notes, and questionnaires. The results showed that several activities can be used in teaching reading by using Kahoot! which can be used for individual and group activities. Based on the two questionnaires given to the students, most of them enjoyed learning.

To conclude, some similar studies were held to investigate the use of Kahoot! in English language teaching. Kahoot! application is mostly studied in the teaching context. The current study, on the other hand, aims to investigate the use of Kahoot! as a teaching media. In addition, several studies have investigated the use of Kahoot! in English language teaching in general, but not specifically in the vocabulary test. The need for using Kahoot! in a vocabulary test is because the students can use Kahoot! as media in acquiring a new vocabulary during the test. Conversely, Kahoot! is considered as a media that is able to make the students easier in understanding the test. Based on that issue, this research aims to investigate the students' perspective of using an interactive game, Kahoot!, in 4.0 era for testing the student's vocabulary in a private senior high school in Yogyakarta. Accordingly, this study attempted to investigate the following research questions, “Does the use of Kahoot! improve students' vocabulary mastery?; and, in what way does Kahoot! enhance students' motivation towards vocabulary learning?” The result of this study would be beneficial for EFL teachers especially in choosing effective gamification-based applications which are educative, exciting and fun for the students. This would
also tell the teachers what aspects need anticipation to make sure the learning process runs well.

METHOD

Research Design

This research was a qualitative study conducted under the interpretive research paradigm. There was no numeric data processed; only non-numeric data such as sentences, statements, or documents were used. In other words, the objects of this research were basically in the form of qualitative entities such as perceptive, social phenomena, and problems which deal with students’ perspective (Creswell, 2012). In the current study, it is the perspectives on using Kahoot! as the vocabulary test.

Participants

Five students of a public senior high school (SMAN 1 Pundong), Bantul, Yogyakarta, Indonesia became the research participants (see Table 1). Respecting the confidentiality of research participants on paper, the researchers addressed the participants by their initials rather than their real names. The selection of the participants was based on their involvement, engagement, and participation in classroom activities. The ones chosen as the participants in this study were those who were also outspoken which mean they could express their minds, ideas, and opinions clearly.

| No | Initials of participants | Criteria |
|----|--------------------------|----------|
| 1  | EP                       | Active in class, show high motivation, enthusiastic |
| 2  | N                        | Active in class, show high motivation, enthusiastic, well engaged |
| 3  | IA                       | Highly motivated, actively involved in classroom activities, enthusiastic |
| 4  | NA                       | Activated actively, showed high interest |
| 5  | AZ                       | - Cooperative and informative in giving feedback  |
|    |                          | - Actively involved in classroom activities |

Instrument

Qualitative data were collected through semi-structured interviews. The semi-structured interview was meant to give an opportunity to the researchers
to dig the information deeper through follow-up questions based on the responses of the participants. The questions in the interview were developed based on the research question or the objectives of this study. In detail, the questions in the interview were mainly about their experiences in using Kahoot!, how much they were interested, how Kahoot! improved their vocabulary, etc. (see Appendix). The interview was done intentionally in Indonesian so that the participants did not find any hindrances in expressing their ideas. In-depth interviews were used to obtain detailed information about the participants’ perspective and behavior during and for after using the Kahoot! or explore problems in depth in regard to their experience Kahoot! (Boyce & Neale 2006). To conduct semi-structured interviews, the interview protocol as a basis for the initial questions is prepared in advance.

**Data Collection**

The data collection started with the identification of information needed to answer the research questions. During the teaching-learning process, the researcher who was also the temporary teacher identified the students who were actively involved, showed serious engagement in the learning process and responded actively to the teacher’s questions. There were more than five students who met these criteria but only five of them were chosen due to the availability of the participants. All the interviews were recorded and saved in MP3 files which then were transcribed. The interview transcription was then analyzed based on emerging themes.

**Data Analysis**

The researchers analyzed the data from the interviews by using five steps from Creswell (2012) which include collecting data, preparing data, reading through data, coding data, coding for the themes and coding for description to be used in the report. To analyze the collected data, all the interviews were transcribed and shown to the interviewee to double-check if what was written was he meant. This was also intended to give an opportunity if he wanted to change his mind. This member checking is significant to ensure the validity of the data. These data transcriptions were then read carefully and grouped into categories and themes and analyzed deeply.

**FINDINGS**

This finding section is presented based on the research questions proposed earlier. To answer the first research question which deals with
whether the use of Kahoot! improve students’ vocabulary mastery, two themes were identified; students’ responses to the use of Kahoot! and practicality of Kahoot! as a vocabulary test. While to answer the second research question dealing with in what way Kahoot! enhance students’ motivation towards vocabulary learning, three themes emerged; attracting the students to focus on the test, helping the students to be more motivated and active, and making the students more enthusiastic.

Kahoot! improves students’ vocabulary mastery

Two themes related to the finding were identified. The first theme deals with the responses of the participants to the use of Kahoot! as media for a vocabulary test. The data presented in this theme were from two participants who expressed their opinions that Kahoot! was good to test their vocabulary and helped them understand vocabulary better. The other theme deals with the practicality of Kahoot as an application of a vocabulary test. Two participants shared their experiences that Kahoot! was fun and interesting and could improve their vocabulary.

Responses to the use of Kahoot! as media for vocabulary test

Based on the analysis of the result of the interview conducted on the students’ vocabulary test, it was found that the students believed that Kahoot! is efficient for doing the test. They also felt that Kahoot! is one of the good technologies for making the learning process more enjoyable. During the interview, one of the questions asked was, "What is your opinion on using an interactive game for vocabulary test?" This question was deliberately asked to know the basic understanding of the students. The response of the students was positive.

The students had a relatively similar perspective on using Kahoot! for a vocabulary test. N, one of the students, mentioned that using Kahoot! in vocabulary test is good and more efficient than using traditional instruction. Students only need to choose the correct answer and click it without preparing any pen or book to do the test. Meanwhile, another participant, EP, had an opinion that Kahoot! is not familiar to her, but when she was asked to use it, she felt easier to understand and operate it. Also, the students prefer to use Kahoot! than traditional instruction because there are supporting media that can make them understand the test such as pictures and videos. The students believed that the supporting media in Kahoot! help them understand the test, as EP pointed out during an interview session:
Hmmm .... I think Kahoot! is good to test vocabulary, because when I got difficulties in understanding the words, there is a picture that can be considered as the meaning of the word on the test.

Also, N added that:

.... Using Kahoot! for vocabulary test was good for me, it makes me understand the test better than using a traditional test.

Based on the students’ assumption, Kahoot! supports the teaching and learning process, especially for vocabulary test as it has many pictures that support students' understanding. Besides, it makes the students more enjoyable during the test.

**The practicality of Kahoot! for vocabulary test**

Students really agreed on the practicality of Kahoot! compared to the traditional instruction in the vocabulary test. Not only easy to understand but the test can also improve students' vocabulary thought Kahoot!. There are many icons that the students can use such as videos and pictures. Also, students can independently asses their score. The students felt satisfied with what the teacher composed in the set of questions. The students could enjoy the test and felt no burden to do it. The students stated that Kahoot! gave them fun in learning. Besides that, Kahoot! made the students more enthusiastic about finishing the test and competitive to get the highest score. In this case, EP pointed out:

I prefer to use Kahoot! Because it is practical in answering the test and just clicking on the option that I thought is the correct answer.

AZ also explained:

.... With fun and interesting test through Kahoot! I felt my vocabulary improved without my awareness. I think it did not only happen to me.

The data from both participants clarified about the effectiveness of Kahoot! in improving the students’ vocabulary but also the practicality of this gamification-based application to teach vocabulary.
Way of Kahoot! Enhancing Students’ Motivation towards Vocabulary Learning

Three themes were emerging from the finding. The first deals with how Kahoot! attracts the students to focus on the test, the second deals with how Kahoot! helps the students to be more motivated and active in the classroom, and the third deals with how Kahoot! makes the students more enthusiastic in the vocabulary test.

Attracting the students to focus on the test

The use of Kahoot! has a positive impact on the students’ vocabulary skill as it makes them more focus, and pay more attention to the test. While doing the test, the students can only focus on Kahoot! since there is no time for them to take a break. It is good in improving the students’ vocabulary skill because the students are motivated to prepare themselves in facing the test by learning the material given by the teachers. In an interview session, IA told:

... I thought Kahoot! makes me pay more intention to the vocabulary test, if I do not focus on the test, it will affect my score. So, I always focus on doing well in Kahoot.

Also, N added:

Hmmm…. I really like the Kahoot!; It’s fun. Every time the teacher played Kahoot!, I always asked him to increase the volume. The music is so encouraging.

Additionally, NA gave opinion:

I always felt tense and excited after the test and when Kahoot! announced the winners.

The data from IA, N, and NA confirmed that Kahoot! attracts them not only in doing the test but also in waiting for the announcement of the winners. This moment made them so excited, especially with the encouraging music.

Helping the students to be more motivated and active in the classroom

Kahoot! makes students more active in the classroom, they become more enthusiastic to reach high score by trying to do the best in doing the test. It is proven by the students who were bored in learning; by using Kahoot!, they
found a different style in learning which makes them have more fun in doing the vocabulary test. Students argued that they are active in doing the test because they can learn and compete with each other to get a high score. Besides, their name can be displayed as the best scorer on the board.

Using Kahoot! also engage the students to widen their participation in the class because after doing the test, they can evaluate themselves by asking the teacher why their answers were wrong. This way can make the students aware of their difficulties in vocabulary so that they can get feedback from the teacher. After using Kahoot!, the students are enthusiastic about asking the teacher and making self-correction of their results of the test. It is as pointed out by EP:

I participate more in the classroom because I have to compete to get the highest score. Sometimes I did not use my real name, just used initial or fake name hahaha...

IA also gave opinion:

I don't know why but I always participated totally and felt so motivated to get the highest scores. That's why I always try to answer quickly. Very often, I discussed with friends if I am not sure about the answers.

In addition, NA explained:

I thought of using Kahoot! in the vocabulary test make me more active in finishing the test because it challenged me in doing the best to reach a high score.

Kahoot! fosters wider and more active student participation, and provides students with the opportunity to retain their most desirable personal choice of participation. Participants reported that when engaging with Kahoot!, they interacted more with peers around them. Participants pointed out that with Kahoot! in the classroom, they could decide the level of interaction that they felt comfortable with, either participating anonymously or overtly with friends, or other classmates.

*Making the students more enthusiastic in vocabulary test*

With the use of Kahoot! In the classroom, the students became more enthusiastic not only in doing the test but also in listening to the teacher’s
explanation. Students enjoyed the fun learning while doing the vocabulary test. Some factors are making them enthusiastic about finishing the test, including the pictures and video in the application. It makes them experience a different sense of testing and challenge them to understand the meaning of the pictures or videos. The videos and pictures in Kahoot! have a positive impact on the students’ enthusiasm. As mentioned by IA:

.... the use of Kahoot! As media of vocabulary testing definitely interested me, I could enjoy the test because it was different from the other ways of doing the vocabulary test that I did before.

Also, AZ mentioned that:

It was just a fun way of interacting and learning with our classmates and more useful to know our ability.

The data showed that the use of Kahoot! as a testing medium of vocabulary has exhibited the fact that the students became more enthusiastic not only during the test but also in the teaching and learning process. It might be due to their expectation that they would play Kahoot!. This explains that Kahoot! has succeeded in making the students more enthusiastic and motivated.

Negative Aspects of Kahoot!

This study revealed residual finding which deals with the negative aspect of using Kahoot! as a gamification testing application. The data from the interview showed some complaints from the students about the use of Kahoot! for testing tool in the classroom, especially for a vocabulary test. Some students confessed that they became less confident seeing their names on the last list which means that their scores were among the lowest. Some of them also complained about the time allocated for them to answer the questions which they thought too short. This has made them missed some questions and consequently did not get the scores. That is why their names did not move from the low list. As confirmed by N:

I am not confident when I get a lower score than others because everyone can see my scores on the scoreboard.

IA also confirmed that:
For me, one negative side of using Kahoot was the lack of adaption to technology. To be honest I didn't know how to use it then.

Additionally, EP gave opinion:

I think the limited time bothers my concentration during the test because I have to answer quickly to get a score. (Student-EP)

These two students raised issues about why they were not convenient with Kahoot as an online testing tool. For them Kahoot! made them lose confidence especially when they were not well prepared with the test. The insufficient time allocated to answer the questions and unfamiliarity to Kahoot! has also made them failed in the test these two issues caused their scores low and their names listed on the last list.

The findings show that the use of Kahoot as an online tool to assess student's vocabulary has affected the students' attitude towards learning English as well as their vocabulary mastery. The data from all the participants have proved that there has been significant improvement in their learning motivation, enthusiasm, activeness in the classroom and their engagement towards English subject. They have shown a positive attitude which affected their achievement in vocabulary learning. Their vocabulary mastery was also identified to improve. This might be due to their favorable reactions towards the use of Kahoot! as a vocabulary learning assessment in the classroom. The negative responses in time setting could be minimized through more careful consideration by the teachers especially in setting up the time for the test. The use of Kahoot more regularly in the classroom would also help the students be familiar with how to do the test using this application.

DISCUSSION

This section deals with the discussion of the findings and provides answers to both research questions. The first research question deals with whether Kahoot! Improve students' vocabulary mastery and the second one deals with how Kahoot! enhance students’ motivation to learn vocabulary.

Using technology in a vocabulary test has been proven effective in language learning (see Nguyen & Yukawa, 2019). The results of this study corroborate the findings of research conducted by Nguyen and Yukawa (2019) addressing the use of technology to increase students’ vocabulary mastery in
language learning. This study also figured out that students prefer the use of technology in learning English as they can improve their motivation to learn. This finding is consistent with the research of Licorish et al. (2018), Dellos (2015), Wang and Lieberoth (2016), and Zarzycka-Piskorz (2016) that Kahoot! can be used as a media of learning for the future because many positive influences have been generated during the use of Kahoot! in the classroom. The study showed that students exhibited positive responses, were good at participating in the learning process and competitive to reach a high score.

The finding of this study also supports the research of Nikbakht and Boshrabadi (2015) which suggest the use of technology in English language classrooms by teachers, especially for vocabulary instruction. Students had difficulty in understanding the content of the questions given, but students were more attentive and serious in doing the test when they were assisted by Kahoot!. This study identified that the participants preferred to use Kahoot! rather than be involved in the traditional instructions normally given by the teacher. This study also proved that Kahoot! helped them to learn vocabulary and to make them enthusiastic during the test.

Students felt that Kahoot! made them more enthusiastic and focused on doing the vocabulary test. Kahoot! helped them to be more attentive during the test which allowed students to stay focused on the questions in Kahoot!. Consistent with this finding, Kiili (2005) further emphasizes the importance of student response systems, like games, to generate and test students' ideas in completing tests. These findings show that by exploring answers to the questions and understanding why they are right or wrong, students produce deeper understanding that greatly enhances their involvement and ability to remember because the students received direct feedback via Kahoot! application. These results are interesting because there are indications of deep learning outcomes after playing Kahoot! even after the class was over. For this purpose, designing a question for Kahoot! tends to be an integral part of deep learning. Therefore, the instructor's question of designing skill is perceived to be an essential factor in achieving the most significant value of online tools like Kahoot!. This suggests that teacher’s ability in digital literacy is so significant especially in the 21st century (Pratolo & Solikhati, 2020).

The results of this study show that Kahoot! motivates students to get involved and encourages interaction in the classroom for both students and teachers. The finding corroborates the studies of Zarzycka-Piskorz (2016), Wang and Lieberoth (2016), and Licorish et al. (2018). Students are motivated to
pay attention to the vocabulary test that they want to do well at Kahoot!. This motivates students to be involved in the tests that the teacher has given. Kahoot also stimulates competition in classrooms where students are encouraged to see their names on the leader board and thus it leads them to be more considerate during the vocabulary test. The effect of increasing attention and competition is consistent with Wang's (2015) findings, where students demonstrate more attention and motivation for using game-based student response. Furthermore, teachers must also strike a balance between testing students on new content to maintain their attention and maximizing the effectiveness of Kahoot! as a learning tool.

Unfamiliarity with the Kahoot! as the testing application has made the students failed in the test. This finding was in line with Pratolo and Solikhati (2020) which found that the students were not ready with technology. The unreadiness with the technology could partly be caused by school policy, unavailability of facilities and unfamiliarity to the new technology. In this study, it was very clear that using the new technology for the first time could cause the students to be anxious which affects their performance in the test. This problem could easily be solved by both the teachers and the students. The more familiar the students with the technology, the more confident they are in using it to assist learning.

CONCLUSION

This study aimed to investigate students' perspectives on using Kahoot! in vocabulary tests. The results of the study indicated that the use of Kahoot! in learning generates a positive outlook and attitude towards vocabulary test. Students agree that the benefits of Kahoot! greatly affect their vocabulary. Students feel that by using Kahoot!, they are more interested and focused on the vocabulary test. Kahoot! also motivates them to be more competitive to reach the top names on the leader board of Kahoot!. In this study, students also think that the questions displayed on Kahoot! are more interesting because some pictures or videos support their understanding of the questions. With pictures and videos, it is easy for students to understand the content of the question given. Students also think that they can monitor their work directly and get feedback from the teacher so that students can correct their mistakes. Students also think this method is very helpful for them in knowing their abilities on the vocabulary test. This study suggests that the teacher should be considerate enough to choose the appropriate and contextual content. Good contents are those related to students’ daily life and cover what they have learned. However,
not only does this study found a positive aspect but also the negative ones. During an interview with students, they mentioned that they were not confident with their scores, especially when they got low scores as the scores would be shown on the leader board. The students also expressed that they needed more time to be familiar with the application. For further research, investigating the implementation and effectiveness of other gamification-based applications in the EFL classroom might be very useful for English teachers.

REFERENCES

Boyce, C., & Neale, P. (2006). Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input, Monitoring and Evaluation - 2. Pathfinder International. Retrieved from http://www2.pathfinder.org/site/DocServer/m_e_tool_series_indept_h_interviews.pdf?docID=6301

Caldwell, J. E. (2007). Clickers in the large classroom: Current research and best-practice tips. *CBE—Life Sciences Education*. 6(1), 9–20. https://doi.org/10.1187/cbe.06-12-0205

Chotimah, I. C., & Rafi, M. F. (2018). The effectiveness of using Kahoot as a media in teaching reading. *JurnalElink*, 5(1), 19-29.

Creswell, J. W. (2012). *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston: Pearson.

Dellos, R. (2015). Kahoot!: A digital game resource for learning. *International Journal of Instructional Technology and Distance Learning*, 12(4), 49-52. https://doi.org/10.1.1.694.5955.

Godwin-Jones, R. (2015). Emerging technologies the evolving roles of language teachers: trained coders, local researchers, global citizens. *Language, Learning and Technology*, 19(1), 10-22. Retrieved from https://eric.ed.gov/?id=EJ1051677

Graham, K. (2015). TechMatters: Getting into Kahoot!(s): Exploring a game-based learning system to enhance student learning. *LOEX Quarterly*, 42(3), 6-7. Retrieved from https://commons.emich.edu/loexquarterly/vol42/iss3/4

Huang, S. (2015). Mixed-method research on learning vocabulary through technology reveals vocabulary growth in second-grade students. *Reading Psychology*, 36(1), 1-30. https://doi.org/10.1080/02702711.2013.808723

Kiili, K. (2005). Digital game-based learning: Towards an experiential gaming model. *The Internet and higher education*, 8(1), 13-24. https://doi.org/10.1016/j.iheduc.2004.12.001
Lai, C. H., Lin, Y. C., Jong, B. S., & Hsia, Y. T. (2014). Adding social elements to game-based learning. *International Journal of Emerging Technologies in Learning, 9*(3), 12-15. https://doi.org/10.3991/ijet.v9i3.3294

Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students’ perception of Kahoot!’s influence on teaching and learning. *Research and Practice in Technology Enhanced Learning, 13*(1), 1-23. https://doi.org/10.1186/s41039-018-0078-8.

MendezCoca, D., & Slisko, J., (2013). Software Socrative and Smartphones as tools for implementation of basic processes of active physics learning in classroom: An initial feasibility study with prospective teachers. *European J of Physics Education, 4*(2), 17-24.

National Reading Panel. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups*. Rockville, MD: NICHD Clearinghouse.

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

Nikbakht, E., & Boshrabad, A. M. (2015). Analysing the potential of social networking sites on EFL learners’ vocabulary mastery: A situated-learning approach. *Theory and Practice in Language Studies, 5*(8), 1635-1641. http://dx.doi.org/10.17507/tpls.0508.13

Palmer, J., Boon, R. T., & Spencer, V. G. (2014). Effects of concept mapping instruction on the vocabulary acquisition skills of seventh-graders with mild disabilities: A replication study. *Reading & Writing Quarterly, 30*(2), 165-182. https://doi.org/10.1080/10573569.2013.818890

Papastergiou, M. (2009). Digital game-based learning in high school computer science education: Impact on educational effectiveness and student motivation. *Computers & education, 52*(1), 1-12. https://doi.org/10.1016/j.compedu.2008.06.004

Pratolo, B. W., & Solikhati, H. A. (2020). The implementation of digital literacy in Indonesian suburban EFL classes. *International Journal of Scientific & Technology Research, 9*(1), 1508-1512.

Santosa, M. H. (2017). Learning approaches of Indonesian EFL Gen Z students in a Flipped Learning context. *Journal on English as a Foreign Language, 7*(2), 183-208. https://doi.org/10.23971/jefl.v7i2.689
Sharma, S. A., & Unger, S. (2016). Employing web 2.0 technologies to support students’ academic vocabulary acquisition. *Michigan Reading Journal*, 48(3a), 17-29.

Stowell, J. R., & Nelson, J. M. (2007). Benefits of electronic audience response systems on student participation, learning, and emotion. *Teaching of Psychology, 34*(4), 253-258. https://doi.org/10.1080/00986280701700391

Wang, A. I. (2015). The wear out effect of a game-based student response system. *Computers & Education, 82*, 217-227. https://doi.org/10.1016/j.compedu.2014.11.004.

Wang, A. I., & Lieberoth, A. (2016). The effect of points and audio on concentration, engagement, enjoyment, learning, motivation, and classroom dynamics using Kahoot! In T. Connolly, & L. Boyle (Eds.), *Proceedings from the 10th European Conference of Game Based Learning* (pp. 737-748). Reading, UK: Academic Conferences and Publishing International Limited.

Yip, F. W., & Kwan, A. C. (2006). Online vocabulary games as a tool for teaching and learning English vocabulary. *Educational media international, 43*(3), 233-249. https://doi.org/10.1080/09523980600641445

Zarzycka-Piskorz, E., (2016). Kahoot it or not? Can games be motivating in learning grammar? *Teaching English Technology, 16*(3), 17–36.

**Authors’ Brief CV**

**Hadijah** is pursuing a master degree in the Magister Program of English Education UAD. She obtained her bachelor degree from UNDIKMA and now she is working on her thesis project on the effectiveness of Google Classroom for students’ writing skills. Her research interest includes the use of technology in EFL classes.

**Bambang Widi Pratolo**, is a senior lecturer at the Magister Program of English Education Universitas Ahmad Dahlan. He obtained his Doctor of Philosophy (Ph.D.) on TESOL from Monash University Australia in 2015. His research interest includes, but not limited to Curriculum and Material Development and Digital literacy.

**Rondiyah** is pursuing a master degree in the Magister Program of English Education UAD. She obtained her bachelor degree in English Education in 2018.
Her research interest includes the use of technology in EFL classes. Now she is working on her thesis project on peer tutoring feedback by using WhatsApp.

Appendix: Semi-structured interview guidelines

Please express your own perception when you answer the questions.

1. Do you know what kinds of media used in English language teaching? Please explain!
2. Is it the first time for you to use Kahoot! application as the media in learning English? Please explain!
3. Does Kahoot! increase your vocabulary? Please explain! In what way?
4. What are the benefits of Kahoot! application for your vocabulary learning? Please explain!
5. Are you interested in using Kahoot! application for testing your vocabulary? Please explain!
6. Is the use of the Kahoot! application able to increase your motivation? Please explain!
7. What are the challenges of using Kahoot! application in learning English? Please explain!
8. How do you overcome the problem of timeliness in answering questions in Kahoot! application? Please explain!