

The Use of Kahoot! as Formative Assessment in Education

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<https://doi.org/10.24071/ijels.v5i2.2862>

ABSTRACT

Technology appears as one of the significant tools to create a meaningful process in all fields of life for living things, one of which is education. This situation drives related parties to create game-based learning platform for education. One of the emerging game-based learning platform used in education is Kahoot!. Educationally relevant game, such as Kahoot! makes students learn academic content with a lot of excitement. Recently, Kahoot! is used as a tool for formative assessment. Formative assessment is useful to improve students' attainment. This study aims to investigate the effectiveness of Kahoot! used as formative assessment in education. This paper will elaborate the theoretical review as well as the application that underlay the hypothesis. The result of the study shows that Kahoot! is an alternative tool of interactive formative assessment. Kahoot! is feasible and practical to make learning fun and enjoyable because it has many benefits for education.

Keywords: *education, formative assessment, Kahoot!*

1. INTRODUCTION

In this modern era, there are various attempts that have been made to promote welfare and prosperity in human life. Technology appears as one of the significant tools to create a meaningful process in all fields of life for living things. Education is one of the most important fields which is supported by technology. Technology offers variety of convenience strategies in the process of teaching and learning for teachers and students. It acts as a stimulant to provide facilities and infrastructure in order to obtain a pleasant learning atmosphere for anyone.

In connection with the increasingly advanced time nowadays, the demand of humanity is also increased in the education field, particularly for young learners. Mostly, young learners are very keen to the technology development. Students will be

more excited to use tools rather than reading or writing manually. This situation drives related parties to create a platform that can be used for everyone. In this case, *Kahoot!* is to boost motivation and promote learning in more fun and exciting ways. Prior studies which uncover that utilizing Kahoot! to improve learning in the study process is more compelling than utilizing traditional media especially in this modern era. As Licorish, et al (2017) say, Kahoot! gives students more chances to draw in with the instructor, companions and address content by giving a fun stage on which to connect with, in a way moving the classroom dynamics. (p. 762). Through this, students will be involved and participated in the learning process actively.

To make this paper organized, it is partitioned into five sections, namely introduction, theoretical review, application, the use of Kahoot! as formative assessment, and conclusion. The first part is introduction which comprises the general use of technology in education field. The second part is the theoretical review which discusses about the theories that are used to support the application and its use as formative assessment in teaching learning process. The third part is application which gives the features of Kahoot! and its use. The fourth part is the use of Kahoot! as formative assessment. The last part is conclusion which reinforces the general investigation of this paper.

2. THEORETICAL REVIEW

This chapter discusses the theories which support this research. In this section, there will be three theories which are presented as the guidelines for the researchers. The theories in this chapter are (1) Kahoot!, (2) formative assessment, and (3) English language teaching.

2.1 Kahoot!

Kahoot! has become prominent in the technology industry since its debut on March 2013. In October 2018, Kahoot! has been valued at 2.55 billion (\$300 million) following its latest financing round. It has been successfully reported to have billions cumulative participating players and active unique users (Batchelor, 2018).

Kahoot! was founded by several talented entrepreneurs. Johan Brand, Jamie Brooker and Morten Versvik decided to put their heads together to make learning awesome. In a joint project with the Norwegian University of Technology and Science, they teamed up with Professor Alf Inge Wang, and were later joined by Norwegian entrepreneur Åsmund Furuseth (Kahoot, 2019).

According to its Company Blog, Kahoot! is a game-based learning platform which is used as educational technology in schools

and other educational institutions. One of the types in Kahoot! is multiple-choice quiz that allows users to have access of it through a web browser, smart phone, or the app itself. Since the use of Kahoot! for educational purpose has been improving, the following section will explore the roles of Kahoot! in education.

2.2 Kahoot! for Education

In the previous section, it has been mentioned that Kahoot! is a game-based quiz that mostly used in educational technology. Since Kahoot! is an innovation in technology industry, its emergence has become significance attention for millennial. When it comes to learning using technology, learners find a lot of enjoyment and excitement. In this case, Kahoot! is an easy application to use with learners gathered around a common screen such as an interactive whiteboard, projector or a computer monitor. Besides, the site can also be used through screen-sharing tools such as Skype or Google Hangouts. The game is simple. It means that all players connect using a generated game PIN shown on the common screen and use a device to answer questions created by a teacher, business leader, or other person (Kahoot, 2019). It is also stated that digital games can be good twenty-first century learning tools because they share similar characteristic with successful learning environment. The statement is supported by the fact that using technology including computers, personal tablets and smart phones improve the students' engagement and active participation in the classroom in an effective way (Salen & Zimmerman, 2003). In the same way, educationally relevant games make students can learn academic content while having fun. It also gains some specific academic achievements benefit, builds academic confidence, develops their social and problem-solving skills and also promotes teamwork and cooperation (Cameron & Bizo, 2019).

In line with technology, Kahoot! is considered also as an interactive game that can be used to test student's knowledge

(Wang & Lieberoth, 2016). The term of games for some people is a tool to help relaxing mind. It is a growing fact that games have become an object which everybody from any professions could enjoy (Wright, Betteridge, & Buckby, 2006). It is further emphasized that games is an engaging and challenging activity in which students can play through interaction with others. The terms of game's joyfulness have prompted ideas from many experts to seize upon games for any specific purposes such as education, advertisement, and business (Richard-Amato, 1988). Applying games as learning media has generated some multiple perspectives. We could not agree more that games are a complex genre of a learning method. The use of games in educational context, such as Kahoot! this day is by no means a new phenomenon. Since the students are interested more in such an engaging activity, therefore, teachers are more concerned in seeking another way of an interactive method. A game is one of the attentiveness.

In Kahoot! platform, free options always exist for the students to use their freedom. Other than that, teachers can create multiple-choice quizzes that they present to students in a game based environment (Kahoot, 2019). Teacher can also select quizzes from a bank of thousands of games created by other educators. As cited by Richard-Amato (1988), Kahoot! is a student's response system that engages the students through game-like pre made or impromptu quizzes, discussion, and surveys. Students do not need an account to join the quiz on Kahoot!. It's only the teacher to have an account to create the quiz. In addition, fast and easy access makes Kahoot! beneficial to both students and educators for engaging the students' understanding in their introduction of the new content (Melanie Ciussi, 2018). The use of Kahoot! can be variety in terms of assessment and projects such as formative assessment, diagnostic assessment, research project and assessment.

2.3 Formative Assessment

In language teaching, there are two functions of assessment that are commonly identified; formative and summative assessment. The idea that assessment can help learning is definitely not new, but what is sometimes called formative assessment, or assessment for learning, is one of the most powerful ways of improving student achievement (William, 2013). Formative assessment, formative evaluation, formative feedback, or assessment for learning, including diagnostic testing, is a range of procedures conducted by teachers during the learning process in order to modify teaching and learning activities to improve student attainment.

Formative assessment typically involves qualitative feedback (rather than scores) that focuses on the details of content and performance (Crooks, 2019). The formative assessment is increasingly being emphasized in the academic world. In order to improve students' learning on subject matters, the formative assessment should be seen as an important element to facilitate the learning process. Therefore, the formative feedback should be properly designed to improve students' understanding on the subjects (Ismail & Mohammad, 2017).

In addition, it is aimed for evaluating students in the process of "forming" their competency and skill with the goal of helping them to continue the growing process. In order to achieve the formation, it is important by considering the delivery (by the teacher) and internalization (by the student) of appropriate feedback on performance, with an eye toward the future continuation (or formation) of learning (Brown, 2004). Other than that, the main purpose of formative assessment is to improve students' learning and should be seen as a part of the learning process.

Some educational researchers have shown that providing high quality feedback on student's work is a very powerful way of raising the standard of student work

(Wiliam, 2013). There are three elements that are crucial to the effectiveness of formative assessment (Sadler, 1989): helping students to recognize clearly the desired goal (understand what is required); providing students with evidence about how well their work matches that goal; and explaining ways to close the gap between the goal and their current performance. Feedback on assessment cannot be effective unless students accept that their work can be improved and identify important aspects of their work that they wish to improve. Self-monitoring is a key component of the work of all professionals. Therefore, if we want our students to become professional learners and professionals in their fields, we should actively promote self-assessment. For instances, students are asked and encouraged to critically examine and comment on their own work. Assessment can become more dialogue than monologue, and can contribute powerfully to the educational development of students (Sadler, 1989).

Furthermore, student's motivation is crucial to learning. Assessment is one of the major influences on student's motivation. It is important to anticipate and try to optimize the motivational effects of feedback on assessment. Besides, assessment can promote learning if it fulfills the following requirements: involving learning goals understood and sharing by both teachers and students; helping students to understand and recognizing the desired standards; involving students in self-assessment; providing feedback which helps students to recognize next steps and how to take them; and building confidence that students can improve their work (Ismail & Mohammad, 2017).

3. APPLICATION

The application that is used in this paper is Kahoot!. It is a popular platform which is currently utilized as a tool of learning for people from all over the world. This

application offers many features that permit every age to freely access it. The reason is because Kahoot! is available in many different languages (English, French, China, etc.). Therefore, it is very helpful for everyone from many different countries who are willing to access this application. In addition, Kahoot! makes it easier for everyone to open it from their smart phones. People can search for it from the internet browser or download it from play store. All of these are the evidence that Kahoot! is very encouraging for the process of learning and business for various parties in the world.

There are some ways of leaning in which Kahoot! offers to construct enjoyable and meaningful atmospheres. That is why it is highly recommended for those who are dealing with education field. Kahoot! surveys learning process of students by helping in giving the evaluation. The teacher can design quizzes based on his preferences so that the students can respond to the questions directly. The quizzes might be provided with pictures and recordings, and the instructor can control the pace of play. Both the teacher and the students can also monitor the scores on the screen after answering each question and also at the end of the quiz. Further, Kahoot! divides different types of questions that occupy the process of learning. They are quiz, jumble and survey which can be accessed freely. Each of them will be discussed in a different section below.

3.1 Quiz

Quiz provides multiple choice question(s) with at least one correct answer. The use of quiz is to present topics and compensate students to choose the right answers. It highlights the right or wrong answers and flipping focuses on or off. There will be a scoreboard between questions to demonstrate the present top-scoring players by the time the quiz is played.

3.2 Jumble

Jumble offers questions where students place four answers in the correct order. The challenge is similar to quiz, yet here the students are ordered to put in answers in the right order in spite of choosing only one right answer.

3.3 Survey

Survey sets multiple choice question(s) with no correct answer. In contrast to a quiz, survey does not have right or wrong doled out to answers, and there is no focuses framework or scoreboards. In any case, survey observes a visual chart between questions appearing many students pick each answer. Survey can be utilized to discover what understudies definitely know (or simply learned) without rivalry, and the visual chart can be seen to control the conversation which is provided there.

3.4 Discussion

Discussion is very useful when the teacher needs to rapidly ask spontaneous questions. It can record answers for later analysis, especially in making a dialog. This is quite the same as survey, yet with a farthest point of just one question. Exchanges plan to get you through structure the inquiry and into facilitating it rapidly. However, discussion can only be accessed through paying not like the other three that can be accessed freely.

After discussion about the four types of Kahoot!, it is important to make an account first. Creating the account is easy and fast. It can be done through some steps, such as:

1. Go to <https://getKahoot!.com/>.
2. Select *Sign-Up* at the upper left of the screen.
3. Fill in the account details to set up a personal account.
4. Decide how you will utilize Kahoot! from one of these, such as an educator, understudy, work, or socially.
5. Sign up with your *Google or Microsoft* account or with your email.

6. Select sign-up for K-12 instructors at the base of the select arrangement page.
7. You are presently prepared to make and play!

4. THE USE OF KAHOOT! AS FORMATIVE ASSESSMENT

The integration of technology becomes a necessity for an effective teaching and learning process. One way that technology can be an important element in teaching and learning process is, for example, by improving the ability to provide ways to assess the students' skill and knowledge, especially in this modern era, where classroom activities should motivate and encourage students to learn through digital platform. With the integration of technology and its role in education, the significant contribution of using technology in teaching and learning process makes the improvement of teaching methods, classroom interaction, as well as teaching and learning assessment which positively impacts the students' skill and knowledge.

Regarding to technology and its role in education, one of the ways in utilizing technology in classroom situation is by using game-based learning. Game-based learning has become more common in education. One of the well-known and emerging game-based learning platforms used in education institutions is Kahoot!. As stated by Wang & Lieberoth (2016), Kahoot! can be used as a formative assessment tool, for example, by monitoring or reviewing students' skill and knowledge, having interactive teaching and learning activities, and adjusting ongoing process of students' understanding of the lesson,

As mentioned above, Kahoot! can be used to do formative assessment by monitoring or reviewing students' skill and knowledge. Since Kahoot! offers practicality and simplicity to be used or implemented in the classroom activities, a teacher can create many kinds of Kahoot! quiz, for example,

quiz or jumble. Students merely need to use their smart phones or personal computers connected to the internet and they will be able to have an access to Kahoot! quizzes easily as well. Here, a teacher has roles as facilitator and reviewer of students' skill and knowledge. A teacher is as facilitator because he or she is the only one who creates and provides the quizzes for the students. Moreover, a teacher is as reviewer because he or she can do reviewing or monitoring to the improvement of students' skill and knowledge as well as the students' response system in the classroom by using Kahoot!.

The use of Kahoot! as a formative assessment tool can build up interactive teaching and learning activities which may lead to the positive impacts towards students' motivation and achievement. Besides, it can also break the old teaching and learning activities in which teacher becomes the most dominant person in class or students are only using books for their learning resources. Thus, using of game-based learning, such as Kahoot! in the classroom, creates fun and excitement learning environment which, eventually, aids the learning process. Students also feel excited when Kahoot! is used in the classroom as it has many eye-catching features and gives interesting feedback about their responses. Moreover, using Kahoot! saves the learning time as teacher can create each quiz by setting the time limitation without giving burden to the students when they have to do it. Giving all students in classroom equal opportunity to participate in doing the quizzes is also one of the successful learning goals for many teachers. Therefore, using Kahoot! as a tool for formative assessment is a huge factor in creating an effective learning environment that promotes learning.

As a formative assessment tool, Kahoot! can also be used to adjust the ongoing process of students' understanding of the lesson. Here, Kahoot! provides students with just in time specific and non-evaluative feedback that can enhance their

motivation as well for improving their performance. A teacher might have to strive in engaging their students in order to measure their current understanding and to correct misconceptions by utilizing multiple kinds of Kahoot! such as quiz, jumble, survey, and discussion. A teacher also gets equally benefit from applying formative assessment using Kahoot! as he is provided with the opportunity to assess their teaching and learning effectiveness, and accordingly, adjust or modify his classroom activities. In other words, using Kahoot! as a formative assessment tool promotes benefits for both a teacher and students in the classroom.

5. CONCLUSION

Integrating technology in the classroom situation definitely gives great impacts for both teachers and students, especially by using or implementing game-based learning such as Kahoot!. Kahoot! can also be used as an interactive formative assessment tool that is feasible and practical to make learning fun and enjoyable because it has many benefits such as doing students' improvement monitoring, creating an interactive teaching and learning environment, and promoting students to learn new things provided by teachers using many types of quiz from Kahoot!. Besides, teachers can also check, adjust, or modify their teaching effectiveness. Thus, schools, universities, or other educational institutions are recommended to start using Kahoot! as an alternative tool of formative assessment to nurture students' learning, help teachers save learning time, and provide direct feedback to the students' performance so that students are motivated to improve their skill and knowledge as well.

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