

# A Systematic Review of Kahoot: Perceptions and Challenges among English Learners and Teachers.

Siti Nor Aisha Rosdy, Melor Md Yunus

<sup>1</sup>Faculty of Education, Universiti Kebangsaan Malaysia, 43650 Selangor, MALAYSIA, <sup>2</sup>Faculty of Education, Universiti Kebangsaan Malaysia, 43650 Selangor, MALAYSIA

Email: sn.aisha93@gmail.com, melor@ukm.edu.my

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## Abstract

The advancement of technology has influenced the current system of education. The existence of various digital learning platforms online enables the teachers nowadays to inject some elements of fun and competitive into teaching and learning. One of the digital learning platforms available today is Kahoot!. Thus, a systematic approach is used to assess the English learners and teachers' perceptions and challenges in using Kahoot!. This paper was analysed and synthesised thoroughly with 23 articles chosen from the year 2016 until 2020 from two databases namely Eric and Google Scholar. The result shows that qualitative was the most used method in investigating the perceptions and challenges of using Kahoot! among English Learners and Teachers. This review investigates the perceptions of English learners and teachers in any level of education in using Kahoot!. In addition, the challenges in implementing Kahoot! are also being mentioned and analysed in this review.

**Keywords:** Kahoot, Systematic Approach, English Language, Perceptions, Challenges.

## Introduction

The rapid development and improvement of current technology in this era gives effects to the field of education. Advanced technology development has caused transformations in people's life especially the way they acquire a knowledge (Henrie, Halverson, & Graham, 2015). In line with the execution of 21<sup>st</sup> century learning, most teachers nowadays are keen to adapt technology into their teaching and learning. With constant progress of technological advancement, there are many learning applications have been created that can be used by 21<sup>st</sup> century teachers to integrate games into their teaching and learning session in the classroom. The integration of games in learning has led to the invention of many game-based learning applications. As stated by Zarzycka-Piskorz (2016), it is mainly about the use of game features and the design of game techniques in non-game settings. In addition, even though the initiative has been taken for years from the teachers to bring a fun and dynamic student-centered classroom, but engagement and full participation from students are still vulnerable (Serbessa, 2014). Through game-based learning, it is proven that the students can be fully participated into the learning. Due to its 'play nature', game-based

learning is believed to enable the students to garner full attention and promote their knowledge retention.

Pedagogical practices applied among the teachers today have been complemented with the existence of new technological tools such as Kahoot! Kahoot! allows the students to be competitive and challenge each other through its interactive set-up application. According to Wang, Zhu and Saetre (2016), Kahoot! signifies a new generation of student response systems that emphasizes on students' engagement and motivation via gamification. This type of learning tool is an apt platform to boost motivation and engagement which supports learning while evaluating the level of pupils' understanding of a lesson. According to Lunden (2018), Kahoot! is very popular between other game-based learning tools because there are over 70 million active users and has benefited 50% of K-12 of US students. In Malaysia, Kahoot! has become the talk of town around last two years among the primary school teachers. Most teachers agree that this type of application tool may promotes the metacognitive abilities, empathy and teamwork skills among pupils in the classroom.

Furthermore, teachers nowadays have taken the opportunity to utilise and integrate digital tools like Kahoot! into their teaching and learning to conduct students' assessment. There are two types of assessment in Malaysia CEFR primary classroom which are formative and summative. Instead of focusing on summative assessment, Malaysian ESL (English as a Second Language) providers have shifted that culture towards a more formative assessment that allows teachers to monitor and chart student learning and achievement according to Othman, Salleh & Md. Norani (2013). Through formative assessment, teachers able to review students' understanding level, get valuable information on their learning and then, use that information to modify their teaching methodology. With variations of digital tools nowadays, Kahoot! has been an alternative that is famous in replacing regular forms of assessment, usually formative assessments (Dellos, 2015). However, the challenges to carry out the formative assessment are definitely there especially to the novice teachers as well as the senior teachers who are still bewildered with the right process of carrying out the formative assessment in English CEFR classroom.

There are many previous studies that have been discussed and reported on the impact of using Kahoot! that have been published but so far, there are a few of recent studies particularly on the English learners' perceptions towards the use of Kahoot! and the challenges faced by the English learners and teachers when using this platform (Tan et al., 2019; Moncada et al., 2020). Therefore, the aim for this study is to synthesise the findings of previous studies pertaining the English learners' and teachers' perceptions towards the use of Kahoot! and the challenges faced by the English learners and teachers when adopting digital game-based learning tool, Kahoot! particularly in English subject. Thus, this paper is to identify: a) What are the English learners' and teachers' perceptions towards the use of Kahoot? and b) What are the challenges faced by the English learners and teachers in implementing Kahoot!?

## **Literature Review**

### **Kahoot!**

Kahoot! is one of the Game-based Student Response Systems (GSRS) which it turns a classroom into a game show where the teacher becomes the host, while the students are the contenders according to Wang, (2015). Putri, (2019) has added, Kahoot! has impacted positively on the interactions in the classroom, student motivation as well as engagement. The use of Kahoot! in education is not something new in other countries and higher- learning

institutions in Malaysia. 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). This game-based learning platform can easily be accessed via smartphones or PCs (Wichadee & Pattanapichet, 2018). As majority of pupils nowadays have the privilege to own a smartphone, therefore Kahoot! can be accessed at any time and place as long within the responding time set by the host. With its interesting infrastructure such as pictures, background sounds, videos and winner scoreboard, Kahoot! also provides the host with a selection type of assessment like quiz, discussion or questionnaire displayed under the heading "Create New Kahoot!" (Dellos, 2015). For the pupils to play, they can login the system with an access code and a username (Ismail & Mohammad, 2017). Once, they have finished, they may check their correct and incorrect answers as well as the highest scores in the class are displayed (Singer, 2016).

When Kahoot! was released, it is really different and has its own unique features compared to the rest of GSRS as it focuses on being a game-based platform (Wang., 2015). Yet, there are a number of other GSRSs that have incorporated similar features as Kahoot! in their platform. For instance, Socrative is a platform that is having many actual features as Kahoot! (Coca & Slisko, 2013). It offers a real-time formative assessment, whereby in order for the students to move their rocket as quick as they could, they have to answer questions given. Other than that, we also have Quizizz. It is quite similar to Kahoot! which is a game-based learning platform whereby the main dissimilarity is that both the questions and the answers are shown on the student devices and the students do not have to wait for other friends to proceed to the next question as stated by Chaiyo & Nokham, (2017). Besides that, Poll Everywhere is a live GSRS which based on cell phone texting technology used to collect responses from audiences to open questions or multiple-choice answers (Shon & Smith, 2011) just have added same attributes as Kahoot! through Poll Everywhere Competitions. The main unique feature between all the game-based student response systems (GSRS) stated above is that Kahoot! emphasizes further on students' involvement through a competitive and dynamic gaming-learning experience.

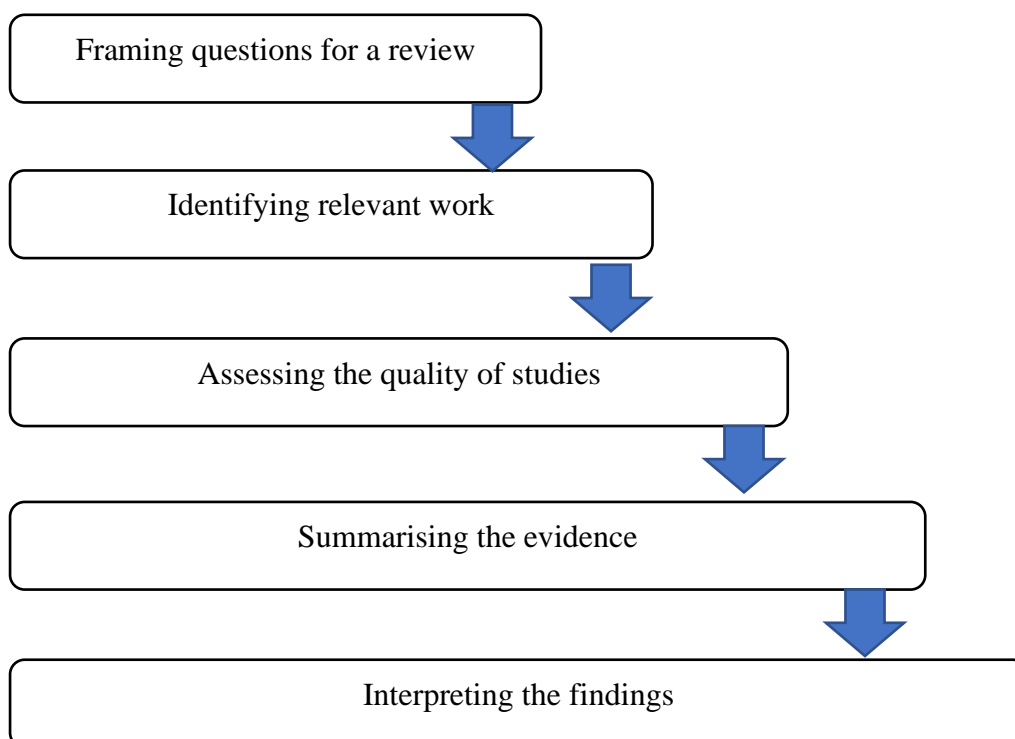
In the pursuit for literature review which Kahoot! was reported by the previous researchers, it was discovered in one literature review mentioning about the benefits of GSRSs such as GSRSs are able to afford interactivity, increase students' performance in academic, and full engagement, however, the main issues are waiting time, practical drawbacks and academic inefficacy (Aljaloud et al., 2015). They stated that: "On the other hand, some SRS applications such as Kahoot! have synthesized the best aspects of SRS and smartphone applications by introducing a competitive game element to SRS" by Aljaloud et al. (2015). Besides, there is another literature review 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. Lastly, one literature review studied on the use of mobile-based assessments by Nikou & Economides, (2018). Most of the reviewed articles indicated a noteworthy effect on the motivation, attitude and learning performance of the students. Thus, it is necessary to have more research especially from the teachers' perspectives in investigating the main issues and problems pertaining the negative perceptions towards mobile assessment.

## Method

This systematic review has chosen articles from two databases which are Eric and Google Scholar. The researcher has started searching for the articles related to this review since March 2020. The intention of the systematic literature review focused on the area of digital tool used which is Kahoot!, in the context of English learners and teachers' perceptions and their point of view on the challenges. Therefore, in this review, the researcher applied the five phases of Systematic Literature Review proposed by Khan (2003). According to Khan et al (2003), this method would be able to help researchers to analyse in depth, do fair evaluation and synthesising of the complex ideas.

Figure 1. illustrates the phases of Systematic Literature Review:

**Figure 1. Phase of Systematic Literature Review**



### Phase 1: Framing questions for a review

The advancement of technology has caused so many of learning applications have been created that can be used by 21<sup>st</sup> century teachers which enable the learners to play while learning such as Kahoot!. Therefore, the researcher has defined two research questions: a) What are the English learners' and teachers' perceptions towards the use of Kahoot? and b) What are the challenges faced by the English learners and teachers in implementing Kahoot!?

### Phase 2: Identifying relevant work

There are two steps needed in identifying relevant work. First, the researcher needs to collect all relevant articles. Second, the researcher needs to choose suitable articles that fit the inclusion and exclusion criteria. The search was restrained to full-text articles and peer review journal articles in order to better evaluate between sources (Baran, 2014). Thus, in order to ensure comprehensive data collection, the researcher used two databases in this

study, which were Google Scholar and Eric. They were used to search for the articles published from year 2016 to 2020.

### Phase 3: Assessing the quality of studies

The researcher must be precise and particular in the selection of articles to make sure the validity of this systematic review. The inclusion and exclusion criteria are important and act as a guideline for the researcher in searching for the suitable articles. Therefore, Table 1 shows the inclusion criteria and the exclusion criteria:

Table 1

#### *The Inclusion Criteria And The Exclusion Criteria*

The Inclusion Criteria	The Exclusion Criteria
➤ Learning English by using Kahoot!	➤ Not learning English using Kahoot!
➤ Research methodologies used are qualitative, quantitative and mixed method	➤ No findings could be found
➤ Research samples from different levels of education	➤ Did not use Kahoot! in teaching and learning.
➤ Teaching and learning using Kahoot!	➤ No challenges of using Kahoot!
➤ Published between 2016 till 2020	➤ The articles were not published between 2016 and 2020

### Phase 4: Summarising the evidence

In this phase, all the articles are found in two databases which are Google Scholar and Eric. The keywords “ESL learners’ perceptions towards Kahoot!” and “ESL teachers’ challenges in using Kahoot!” are used in the process of searching the relevant articles. The result showed a total of 73 articles based on the keywords used. Then, the researcher sorted the articles to non-English texts and removed 22 articles because unable to get access to the full text. Next, 26 articles were removed because they did not match with the criteria stated above. Finally, a total of 23 articles were selected and included in this paper.

### Phase 5: Interpreting the findings

Lastly, the final phase of systematic literature review is interpreting the findings. This is the phase where the findings were interpreted and analysed thoroughly. The data was categorised by using content analysis which are quantitative, qualitative and mixed method. A total of 23 articles that matched the inclusion and exclusion criteria were chosen. Table 2 shows the numbers of study based on three different methods from year 2016 to 2020. From the table, qualitative was the most used method whereas quantitative was the least used method.

**Table 2:***Numbers of study based on Methods*

Methods	Google Scholar and ERIC
Quantitative	5
Qualitative	11
Mixed Method	7

**Results****English learners' and teachers' perceptions on the use of Kahoot!**

Majority of the researchers have reported the perceptions of English learners and teachers on the use of Kahoot! and the discussion of each study is represented in the Table 3.

Table 3:

*Perceptions of English learners and teachers on Kahoot!*

No.	Authors	Discussion
1	Wang and Lieberoth (2016)	Audio and points could attract the students to concentrate, engage, enjoy, motivate, perceive learning, and create classroom dynamics.
2	Zarzycka-Piskorz (2016)	The effectiveness of the Kahoot! application in learning grammar was very high (90%). Kahoot! has affected the students positively in aspects of their excitement, engagement and learning experience.
3	Plump and LaRosa (2017)	Kahoot! is a user-friendly tool as it invites user interface and music. It allows its participants to be anonymous which students would feel less anxious and get to engage with the lesson.
4	Chaiyo and Nokham (2017)	Kahoot! significantly improved students' engagement, concentration, enjoyment, perceived learning, satisfaction and motivation.
5	Licorish et al (2017)	Kahoot! makes the students to feel excited, engaged, fun learning experience and efficiency.
6	Cutri et al (2016)	Classroom became more friendly and fun because students felt more relaxed to answer anonymously.
7	Goksun & Gursoy, (2019)	Kahoot! had given positive effect on students' engagement compared to Quizizz.
8	Budianti (2017)	Kahoot! increased students' interest in participating in learning and they told their other friends about the fun of using it.
9	Bicen & Kocakoyun, (2018)	Most students felt that Kahoot! improved self-motivation and they could enjoy the learning activity in the classroom.

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| 10 | Ismail Ibrahim, (2018)   | &     | Gamification gives a lot of benefits such as increase students' self-motivation and create a fun learning environment.   |
| 11 | Turan Meral, (2018)  | &     | Compared to students who were using Socrative, students who were using Kahoot! were significantly more engrossed in a lesson.  |
| 12 | Iwamoto et al., (2017)   | et    | Students found Kahoot! was able to help them to prepare for the exam.  |
| 13 | Tsymbal (2018)   |       | Students felt motivated, more confident, more secured and safer in class when using Kahoot!.   |
| 14 | Cetin, H. S. (2018)  | S.    | Teacher highlighted that Kahoot! application was able to develop students' reading skill in answering questions, attract students' attention, promote the use of technology, increase motivation and interest of students. |
| 15 | Arif, Fatin Kamilia Mohd, et al (2019)                         | Fatin | Students could put extra effort to revise lessons, felt less pressured to memorise all important points of a particular topic, figure out new information and increase students' retention power.                          |
| 16 | Zakaria, N. Y. K., Zaini, H., Hamdan, F., & Norman, H., (2018) |       | Collaborative learning is essential in adapting mobile game-based learning which it promotes students' self-confidence and motivation.   |
| 17 | Susanti (2017)   |       | Kahoot! was able to stimulate students to voice out their thoughts in class and avoid them from dozed off in the middle of a lesson.   |

### **Challenges faced by English Learners and Teachers in implementing Kahoot!**

Majority of the researchers have analysed and reported on the challenges in implementing Kahoot! from the perspective of English learners and teachers. The discussion of each author is presented in the Table 4 below.

Table 4:

*Challenges faced by English learners and teachers in implementing Kahoot!*

No.	Authors	Discussion
1	Putri, N. S. (2019)	Teachers felt it was hard to involve all students actively during learning activities when using Kahoot. They have to be well prepared before conducting teaching and learning activities and be careful with time allocated to play the game in a lesson.
2	Nguyen, T. T., & Yukawa, T. (2019)	Few teachers felt that it was time-consuming to create quizzes with Kahoot! application. Different levels of ages among the teachers influence their acquisition of technology. Senior teachers found it a bit hard to use the application.
3	Ningsih, S., & Mulyono, H. (2019)	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.
4	Çetin, H. S. (2018).	The competitive environment has caused problems among students because they would feel upset and sad when they were not the winner.
5	Adnyani, K. E. K., Adnyana, I. W., & Murniasih, N. N (2020)	The challenge mentioned by teacher is slow internet connection when accessing Kahoot!
6	Sezgin, F., & Sezgin, E. (2019)	Gamification tools cannot be used for all kinds of language skills.
7	Arif, Fatin Kamilia Mohd, et al (2019)	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.
8	Maesaroh.M, et al (2020)	Internet facilities are not very convenient for the students and teachers to use gamification tools in class.

**Discussion**

**RQ 1:** What are the English learners' and teachers' perceptions towards the use of 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 & Lieberoth, 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 & 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 & Gursoy, (2019), Kahoot! had bigger impact on the students' engagement compared to Quizizz. Majority of studies above have shown that Kahoot! had a positive significant in terms of motivation, concentration and engagement of the English learners. Not only to the learners, but teachers have the same perceptions as well. Susanti (2017) added on, other positive perceptions from the teachers about Kahoot! are Kahoot! was able to stimulate students to voice out their thoughts and opinions in class and make the students to become more active and less slumber.

Furthermore, many articles have reported that most students realised that Kahoot! has improved their self-motivation and increased sense of fun in the classroom (Bicen & Kocakoyun, 2018; Ismail & Ibrahim, 2018). Other studies also found that Kahoot! influenced students' involvement, anticipation, efficiency and learning experience positively (Licorish et al, 2018; Zarzycka, 2016). Some studies reported on the user-friendliness feature in Kahoot! that is able to attract students' attention, besides Kahoot!'s inviting user interface and music (Plump & LaRosa, 2017; Çetin., 2018).

Further 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 and they told their other friends about the fun of using it (Budiati, 2017), that the students felt more motivated and confident, and they felt more secured and safer (Tsymbal, 2018), and that classroom became more friendly and fun because students felt more relaxed to answer anonymously (Cutri et al., 2016). In the context of assessment, the benefits of playing Kahoot! that the students could put extra effort to revise lessons, felt less pressured to memorise all important points of a particular topic, figure out new information and increase students' retention power (Mohd, et al, 2019).

**RQ 2:** What are the challenges faced by the English learners and teachers in implementing Kahoot?

There are many challenges encountered by the learners and teachers in implementing Kahoot!. For instance, 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 et al, 2019). Most articles mentioned that internet facilities are not really convenient and slow internet connection are the main challenge when using Kahoot!.

Furthermore, the challenges mentioned by teachers included the teachers felt it is challenging to involve students actively during teaching and learning activities when using Kahoot, they have to be well prepared before conducting teaching and learning activities and be careful with time allocated to play the game in a lesson. (Putri, 2019). 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)

### **Conclusion**

A systematic literature review has been presented in this article analysing on the implementation of Kahoot! particularly in the learning of English. A total of 23 articles were selected by using two databases namely Google Scholar and ERIC. Overall, both learners and teachers give positive perceptions and feedbacks regarding the implementation of Kahoot! in teaching and learning. Majority of them mentioned that Kahoot! can increase their motivation, participation, engagement and feasible to use. In terms of the challenges, most learners mentioned that unreliable and slow internet connection is the main issue in using Kahoot!. On the other hand, some teachers also mentioned that it is a challenge to use technology in the classroom because of lack of support and training especially for the senior teachers. The main conclusion for this review is Kahoot! has positive impacts to both teachers and learners. However, there is still a room for improvement for the challenges mentioned. All the stakeholders and the administrators also should take the initiatives and play their role in order to ensure all the school facilities that support 21<sup>st</sup> century learning are working efficiently for both the teachers and learners.

### **Contribution of this Study**

This study has presented a new insight in discussing the English learners' and teachers' perceptions towards the use of Kahoot! and the challenges faced by the English learners and teachers when using this particular platform. The use of Kahoot! in learning and teaching English has proven to give more positive impacts to both teachers and learners. For them, Kahoot! makes English lesson to be more fun, meaningful and interactive which has led to the increment of motivation, participation and engagement level. Therefore, other teachers who have not yet applied Kahoot! in their learning can try it in their classroom with their students regardless of the subject they are teaching as it is feasible to use. Furthermore, the challenges mentioned in this study will also be an eye opener to all the stakeholders and administrators to be more committed in improving the school facilities such as internet connection and electronic devices which can be utilised at its maximum level in schools. Even though in a couple of years, Kahoot! might be outperformed by other Game-based Student Response Systems (GSRS) which are more inclusive and interactive to suit the needs of English learners, the future researchers might use this study as a guidance in exploring and comparing Kahoot! in terms of perceptions and challenges with the latest GSRS.

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