Gamification Functionality and Features of Kahoot! in Learning—ESL Teachers and Students' Perceptions

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Abstract

Kahoot! has emerged as one of the most successful learning gamification platforms and its use in Malaysia has been rising in recent years. However, there is a lack of research into the effectiveness of Kahoot! and other gamification platforms in Malaysia even as calls to increase its use continue to rise. This research intended to help fill this gap. The research examined the perceptions of students and teachers on gamification in general and Kahoot! in particular. It also examined the impact of Kahoot! features, Kahoot! functionality, and demographic factors on satisfaction with the use of Kahoot! in ESL teaching and learning in Malaysia. It was a quantitative study that contained two populations: ESL teachers and ESL students. A total of 150 participants were included in the study consisting of 50 teachers and 100 students from a primary school in Nilai. Structured questionnaires were used for the data collection for both populations. Statistical analysis was used in the research to make sense of the findings. The findings of this research have revealed that the Kahoot! features, functionality, and the use of Kahoot! has a positive feedback and perceptions from both the participants. Teachers believed Kahoot! to be a very successful tool for boosting passive students' involvement and promoting competitive learning. The main benefits of Kahoot!, according to teachers, include enhanced student involvement, improved classroom dynamics, higher motivation, rapid feedback, and higher energy levels throughout sessions. Demographic differences were also notable among teachers with younger teachers, those with less experience, and those of the male gender are more likely to hold positive perceptions towards the use of Kahoot!. Students said Kahoot was particularly good at building motivation and supporting and reinforcing learning. Among students, gender was a significant factor with boys being more receptive to the use of Kahoot!.

1. Introduction

English continues to play a critical role in the development of Malaysia as it is a key language of instruction and commerce in the country. The language is critical in the political, economic, and social domains in the country and the government has sought to strengthen the position and understanding of the language over the years. However, English in Malaysia is often learned as a second language or a foreign language (Ang et al., 2020). This has meant that, despite the fact that it is a compulsory language in the national curriculum, English proficiency in the country remains poor. The country is ranked at number 24 on English proficiency among countries where it is spoken as a second or foreign language which is lowly compared to Singapore at second place (Education First (EF), 2022). A key problem in this regard appears to be the issue of English literacy teaching. ESL literacy instruction in Malaysia has historically followed the initiation-response-evaluation (IRE) model in which students read silently, teachers ask questions, students respond, and the teachers evaluate the response of the students (Sidek & Wahi, 2018).

This approach has been heavily criticized by a series of studies which have blamed the approach for poor literacy outcomes among students (Nambiar-Gopal, 2005; Sidek, 2010; Che Musa et al., 2012; Sidek & Wahi, 2018). These studies have generally argued that the approach that is widely deployed in public schools is mechanistic and does not make sufficient cognitive demand to engage and motivate students. Sidek & Wahi (2018) specifically argued that "Due to such training, students' ability is limited to performing short-answer questions as well as literal recalls. As such they are unable to do inference and build connections among text ideas when processing academic reading texts" (p. 26). While calls by scholars and researchers for a system-wide radical shift in ESL teaching in Malaysia appear to have fallen on deaf ears, specific schools and teachers have adopted different approaches to improve ESL teaching and learning. The use of gamification through the use of programs such as Kahoot! has become more common in recent years particularly in the aftermath of the pandemic. Researchers such as Tan et al. (2022) and Lin et al. (2018) have noted that Kahoot! offers the opportunity to significantly enhance the teaching and learning of ESL in the country and have called for a more widespread adoption of the approach.

The emerging use of Kahoot! in ESL teaching and learning in Malaysia has been noted in different contexts (Lin et al., 2018). However, the use of this platform is a fairly recent occurrence in Malaysia with the most notable rise in use occurring in the aftermath of the pandemic. As such, there is a clear lack of suf-

ficient research into the effectiveness of the use of Kahoot! in the country. Additionally, very few studies have focused on the experiences and perceptions of teachers and students on the use of Kahoot! Only a few studies (such as Mustafa et al., 2018; Tan et al., 2022) on the perceptions of the use of Kahoot! in Malaysia are accessible via Google Scholar but these studies tend to only assess the perceptions of students and only focus on tertiary education. The assessment of the use of the program in primary and secondary schools is lacking in addition to the perspective of teachers. These are the gaps that this study intended to fill.

The research sought to answer the following questions:

RQ1: What are the general perspectives of ESL students and teachers regarding gamification in ESL teaching and learning in Malaysia?

RQ2: What are the perceptions of ESL students and teachers on the functionality and features of Kahoot! in ESL teaching and learning in Malaysia?

RQ3: What are the effects of Kahoot! features, Kahoot! functionality on student satisfaction in ESL teaching and learning in Malaysia?

2. Literature Review

2.1. Gamification and Kahoot!

Gamification refers to an approach to learning that seeks to enhance student enjoyment, engagement, concentration, and motivation by using video game design and game elements in learning environments (Lin et al., 2018; Tan & Tan, 2020). Gamification is a natural evolution of game based learning as it represents an adaptation of game based learning for the digital age. In the modern world, many students across the world play video games on digital platforms during their leisure time and gamification of learning seeks to take advantage of this trend (Resmayani & Putra, 2020). The fact that students enjoy video games and are highly familiar with the premise means that they can easily follow video based digital educational games and engage with them due to their entertainment value. It is part of a multisensory approach to teaching that is gaining traction such as the use of YouTube and other interactive platforms in teaching (Tamillarassi Stalin & Tan, 2020; Temban et al., 2021; Yew & Tan, 2020). Kahoot! is one of the most successful learning gamification platforms around the world. Kahoot! is a game-based digital learning platform that was developed in Norway in 2012 by Johan Brand, Jamie Brooker, and Morten Versvik (Resmayani & Putra, 2020). It is similar to other successful gamification platforms such as Wooflash, Blooket, or Quizlet (Yıldırım & Sadık, 2021). Games within the platform are called kahoots and can be accessed through a web browser or a digital application. The platform is interactive and essentially based on using user generated content (such multiple choice questions and trivias) as the basis for creating the games (Firdaus, 2021). The game is played via digital platforms such as projectors, interactive whiteboards, screen monitors or mobile phones and can even be played remotely through platforms such as Zoom (Yıldırım & Sadık, 2021). Players enter the game through a special pin and are awarded points based on

correct answers and other metrics. Kahoot! grew rapidly in use around the world after its launch in 2012. The platform was valued at more than $300 million (RM 1,318,800,000.00 (MYR)) and had an estimated 1 billion global users by 2018 (Resmayani & Putra, 2020). It was already in use in Malaysia at this time.

Empirical studies including experimental studies have affirmed that Kahoot! is effective as an educational tool and tends to outperform other similar platforms. For instance, Wang (2015) performed a quasi-experimental study of 252 students in Norway to establish the long term effects of using Kahoot! among students. The study was undertaken due to the concern that initial excitement due to the adoption of a new game based approach to learning could be behind the initial positive results and that this effect was likely to fizzle out over time. However, the study by Wang (2015) found that students' engagement, motivation, concentration, and learning after using it repeatedly for five months remained high due to the competitive nature of Kahoot! A subsequent Norwegian study by Wang et al. (2016), meanwhile, compared the effectiveness of use of Kahoot! and other game based learning approaches (a paper quiz and a simple polling system called Clicker in this case). The study was also a quasi-experimental study and included 384 students at the Norwegian University of Science and Technology.

Wang et al. (2016) found that the use of Kahoot! resulted in a statistically substantial elevation in motivation, engagement, enjoyment, and concentration compared to the other games although learning outcomes were found to be similar. A study by Wang & Lieberoth (2016), meanwhile, assessed the specific effects of various features and functionalities of Kahoot! on concentration, engagement, and motivation of students. The study was also a quasi-experimental study and had 593 participants. The study found that the use of audio and points (which make the games competitive) was particularly predictive of high levels of concentration, engagement, enjoyment, and motivation among the students. Studies in Malaysia by Aidoune et al. (2022), Pratiwi et al. (2021) and Hossain & Ghazali (2022) have also found that Kahoot! enhances student outcomes particularly in terms of student performance and motivation.

2.2. Students' Perceptions of Gamification and Kahoot!

There has been significant research into the perceptions of students on the use of Kahoot! In fact, most of the studies undertaken on Kahoot! in Norway has tended to centre on the perceptions of students. The studies by Wang et al. (2016), and Wang & Lieberoth (2016) all included student perceptions in some ways as they were mostly based on students' self-assessment of their levels of enjoyment, motivation, engagement, and concentration. Many other studies have specifically focused on students' perceptions of the use of Kahoot! with many of these studies being done outside Norway. The studies have tended to find that students hold positive perceptions towards the use of Kahoot!. A study by Bicen & Kocakoyun (2018) in Cyprus sought to establish the perceptions of students on the impact of the use of Kahoot! on their engagement and motiva-

tion. The study was a mixed methods research study of 65 university students in which the students reported that their interest in class and motivation for success rose due to the use of Kahoot! in their lessons.

A study in Vietnam by Dianati et al. (2020), meanwhile, compared students' perceptions on the use of Kahoot! Padlet, and Cirrus as a basis for the flipped classroom approach. The study was based on the Technology Acceptance Model and focused groups formed the basis for data collection in the study. The findings of the study revealed that students perceive Kahoot! to be the best of the three on ease of use for revision of learned concepts while the other two were found to be better in other regards. A qualitative research study in New Zealand by Licorish et al. (2018) also found that students perceive Kahoot! as having a positive impact on classroom dynamics, engagement, motivation and overall learning experience. A study in Nigeria, Africa by Idowu et al. (2021) also found that students perceive Kahoot! as having a positive effect on their learning experience. It is thus evident from these findings that students across the world perceive Kahoot! to be a positive tool that enhances their motivation, enjoyment, engagement, and concentration.

Studies on ESL and EFL students have also found largely similar outcomes. In her doctoral dissertation in Indonesia, Fatimah (2021) examined the perceptions of ESL students on the use of Kahoot! The study included 35 students from an English course of 247 students at SMAN 3 Pekanbaru. The findings of the study showed that students perceive Kahoot! as a key motivator for better performance and a cause of higher engagement and enjoyment of their course. Another study by Nurhadianti (2020) found that students of EFL perceive Kahoot! as having a particularly positive impact on classroom atmosphere and student engagement. Studies have also been undertaken in Malaysia. An earlier study by Mustafa et al. (2018) explored the perceptions of university students at University Malaysia Kelantan (UMK) towards the use of Kahoot! in an English teaching module. The quantitative study of 138 participants found that students preferred the use of Kahoot! to most other learning approaches, felt that Kahoot! enhances their learning of English, and promotes independent learning among the students.

2.3. Teachers' Perceptions of Gamification and Kahoot!

There has also been research into the perceptions of teachers on the use of Kahoot! to teach students although such studies have been rarer compared to studies on the perceptions of students. A study by Rajabpour (2021) was undertaken in Oman to assess the perceptions of teachers regarding the advantages and disadvantages of using Kahoot! to teach students. The study included only 13 participants from a population of 226 English lecturers at a leading university in the country. Qualitative data was collected in the study through face to face interviews and analysed using thematic analysis.

The outcomes of the study by Rajabpour (2021) revealed that the teachers perceive increased student engagement, improved classroom dynamics, higher

motivation, immediate feedback, and higher energy levels during lessons as the key advantages of Kahoot! respectively. The most notable disadvantages pointed out by the teachers in the study were access issues for the platform, students' use of other applications (such as using social media instead of playing the game), and bad design respectively. However, overall the study found that the teachers viewed the use of Kahoot! as more advantageous than disadvantageous in the teaching process. Finally, a study by Adnyani et al. (2020) is notable for being one of the few studies that examined the perceptions of both teachers and students within one study. The study included one teacher and her 32 students from a class in which Kahoot! was used. The class X MIPA 1 of SMA 4 Singaraja study was a mixed methods research in which a structured questionnaire was used in the data collection of the study.

The study by Adnyani et al. (2020) found that both the teacher and students rated the use of Kahoot! highly in terms of attractiveness, novelty, stimulation, dependence, efficiency, and perspicuity. Findings of the interview with the teacher indicated that she perceives Kahoot! as being far more advantageous than disadvantageous although the limitation on the number of characters available and issues of internet connectivity stood out as the main drawbacks of the use of Kahoot!.

2.4. Satisfaction with Kahoot! and Related Factors

It is notable that satisfaction with Kahoot! has not been widely explored in the extant literature. This probably owes much to the fact that most studies have focused on perceptions of students and teachers and perceptions are generally regarded as being indicative of satisfaction. In one of the few studies to focus on the issue, Spence (2019) examined the level of student satisfaction with interactive quizzing when using Kahoot! It is notable that the study was a pilot research indicating satisfaction with Kahoot! had not been widely researched prior to that research. The study included 300 first year radiology students in Canada and found that satisfaction was generally high. Notably for this study, the study indicated that demographic differences are predictive of satisfaction with male students and students of European ancestry being more satisfied with the platform. The study also indicates that specific features affect satisfaction given that if focused on the quiz aspect of the platform. In a separate study, Jakmanon (2021) examined student performance and satisfaction after the use of Kahoot! among university students in Thailand.

The quantitative research study included 38 undergraduate mass media students at Songkhla Rajabhat University as participants and used a structured questionnaire and assessment tests to collect data from the participants. The study found that student performance scores and student satisfaction scores rose substantially after the use of Kahoot! compared to before Kahoot! was used. These studies generally indicate that the satisfaction of students is high with regards to the use of Kahoot!. However, it is evident that there have been very few studies on the issue. It is notable that there have been limited studies on teacher

satisfaction with the use of Kahoot! as no study on this was accessible via Google Scholar. There is also a similar lack of research in relation to ESL teaching and learning. A lack of research is also evident in the case of Malaysia. There is a need to fill these gaps in the literature. This study will contribute towards filling these gaps in the literature and informing the practice.

2.5. Theoretical Model

This research was guided by the Uses and Gratification Theory. The Uses and Gratification Theory is used to explain what consumers do with mass communication from different media (Musa et al., 2015). It is based on the premise that consumers are not passive entities in media consumption and select and utilize different types of media for different needs and purposes. It is thus used to explain media choice, consumption, and the effects of the consumption (Vander-Molen et al., 2015). It was deemed suitable for this research as it shows features within the media (in this case Kahoot!) affect perceptions of users and their level of satisfaction. The theory is useful in showing why people use certain media over others and can thus be used to show why Kahoot! is the most successful of the gamification platforms. Researchers have found that the features and functionalities of media platforms are important in determining people's choices in using the media (Chang et al., 2022; Hong et al., 2020). The perceptions of people in relation to the features are thus the decisive factor. Ultimately, the theory posits that gratification is what people seek when using media platforms (Baabdullah et al., 2022). Gratification is related to satisfaction which would explain why the perceptions of features and functionalities of Kahoot! can be expected to affect satisfaction.

2.6. Conceptual Framework

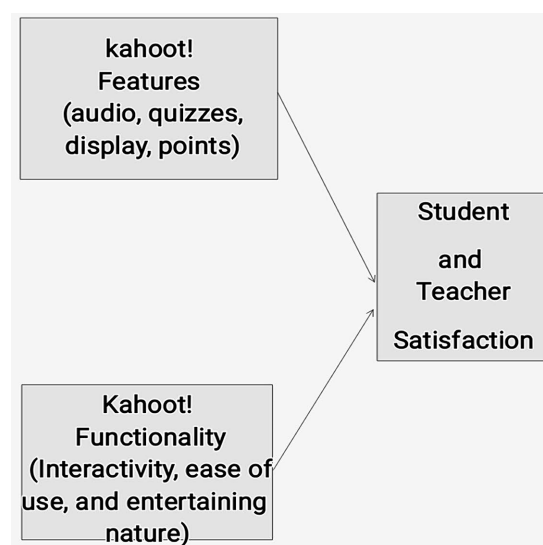Figure 1 below shows that model that is examined in this study based on

Figure 1. Conceptual scheme for this study.

the objectives of the study. This study proposed that Kahoot! features and Kahoot! functionality significantly affect student and teacher satisfaction in relation to the use of the platform. These proposed relationships are supported by the evidence in the extant literature and hypotheses have been developed for testing showing the relationships. The diagram thus effectively shows the relationships that are tested in this research.

2.7. Summary of Literature Review

This review has described gamification in general and Kahoot! in particular before exploring the relevant empirical research literature on student and teacher perceptions towards Kahoot!. It is clear that the Kahoot! platform has become popular around the world in recent years. Based on the evidence, it seems that the perceptions of teachers and students towards the platform are important reasons for the elevated popularity of the platform. The evidence has found that teachers and students across the world hold very positive perceptions and this has been associated with improved joy, motivation, attitude, and learning outcomes performance. However, it is notable that most of the studies into Kahoot! have been done in Northern European countries where the platform was invented. There is little research into its effectiveness in Asia in general and Malaysia in particular. The lack of research into its effectiveness within Malaysia is particularly stark.

3. Research Methodology

3.1. Research Methodology and Design

The quantitative, qualitative, and mixed methods research methodologies are the most commonly used in business and education research. The quantitative research methodology was preferred in the proposed study. This methodology is regarded as being more suited to hypothesis testing and making generalizations which are key aims of this study (Basias & Pollalis, 2018). Additionally, most of the related research studies that have been reviewed in the prior chapter have preferred the quantitative research methodology showing its suitability for this study. The methodology was thus more suited to meeting the aims of this study. The descriptive cross-sectional survey design was applied in this study together with the quantitative research methodology. This design was suitable because the study tested the hypotheses that have been proposed in a way that only shows whether they are correlated rather than showing whether the relationship between them is causal. The descriptive design is suitable for this purpose (Blair et al., 2019). The cross-sectional survey strategy allowed for the data to be collected in a way that facilitates this approach without being costly and time consuming. This strategy involves collecting data from a large group of participants simultaneously in a non-contrived environment (Blair et al., 2019). It is consistent with the descriptive design as there is little need for control of experimental conditions or participants in a study that seeks to show only a correlation and not a

causal relationship for which the experimental design would be more appropriate.

3.2. Unit of Analysis and Sampling

The unit of analysis for this research was teachers and students of ESL in Malaysia. The specific target population of the study was ESL students and teachers in a primary school in Malaysia. The study included both of these categories as it intended to understand the perceptions of both teachers and students of ESL. In this study, the recommendations of Comrey & Lee (1992) for estimating the suitable sample size for research where correlation analysis will be undertaken was used to estimate the suitable sample size. The researcher gave a series of sample sizes based on suitability and noted that a sample size of 120 or more participants is "good". The study thus included a sample size of over 150 respondents consisting of 50 teachers and 100 students. Convenience sampling was used in the research to include respondents.

3.3. Research Instrument

The research instrument that was deployed in this study is a structured questionnaire. A structured questionnaire is suitable as it is typically used to collect quantitative data that is non-numeric (structured data). The questionnaire of this study contained several sections. It had an introductory section which served the purpose of explaining the nature of the study for the benefit of the participants. The second section was the demographics section. The subsequent sections were used to collect data based on the objectives of this study. The demographic data was measured using a nominal scale while the Likert agreement scale was used for the other sections. The scale had a score of 1 to 5 ranging from "strongly disagree" to "strongly agree". The validity and reliability of the questionnaire was enhanced using various approaches. One way was by ensuring that all the items in the questionnaire are drawn from prior research studies. Another way was by having the supervisor of the study go through the questionnaire to ensure that the items that are selected are appropriate for the study. The internal consistency of the questionnaire items was assessed statistically to ensure that the questionnaire is reliable.

3.4. Data Collection Steps

Ethical clearance was first sought before the data collection commenced in the field. A primary school in Nilai was chosen as the location for data collection for this study. The school was selected because Kahoot! has been used at the school making it suitable for the study. The participants were informed of the terms of their participation before they were allowed to take part in the study. The questionnaire of the study was then distributed to the participants who were given as much as 20 minutes to fill it out and hand it back in. 50 teachers and 100 students from across different classes were included in the study.

3.5. Data Analysis

SPSS software version 29.0. was used in the statistical data analysis that was performed in this research. The Shapiro-Wilk test was used for the normality analysis while the Cronbach's alpha coefficient analysis test was used for the questionnaire reliability assessment. Descriptive statistics was also performed using means, frequencies, standard deviations, and ranges to summarise the findings. Linear regression and Pearson's correlation coefficient analyses were used for hypothesis testing. Significance for the regression analysis was set at $p = +/- .5$ while for Pearson's correlation coefficient analysis will be set at $r = +/- .1$.

4. Results and Discussion

4.1. Demographic Profile Analysis

The study assessed the demographic profile analysis of ESL students and teachers, in order to collect data according to the demographic profile of participants involved in the study (Table 1).

There were 62% male responses and 38% female respondents.

A grand total 66.7% of individuals surveyed were students, with 33.3% were teachers (see Table 2).

4.2. Gamification Satisfaction in ESL Teaching and Learning

The study assessed the general perspectives of ESL students and teachers regarding gamification in ESL teaching and learning.

Most respondents agreed (see Table 3) that they can communicate and work together with other team members when using Kahoot! team function with a mean of 3.91. The vast majority of respondents agreed that designing questions and response combinations using the Kahoot! template and including graphics enhance learning with a mean of 3.88. Most of the respondents agreed that Kahoot! linguistic question packages they have access to have improved language study with a mean of 3.76. Most respondents agreed that they would like that my

Table 1. Gender.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Female	57	38.0	38.0	38.0
Valid	Male	93	62.0	62.0	100.0
	Total	150	100.0	100.0	

Table 2. Participation.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Student	100	66.7	66.7	66.7
Valid	Teacher	50	33.3	33.3	100.0
	Total	150	100.0	100.0	

Table 3. Gamification satisfaction.

	N	Minimum	Maximum	Mean	Std. Deviation
I can communicate and work together with other team members when using Kahoot! team function.	150	1	5	3.91	.912
When I can design questions and response combinations using the Kahoot! template and include graphics, I learn languages more effectively.	150	1	5	3.88	1.036
The Kahoot! linguistic question packages I have access to have improved my language study.	150	1	5	3.76	1.085
I would like that my instructor use Kahoot! at least 2 times a week.	150	1	5	3.87	.981
By engaging on some duties, instructors may utilize Kahoot! to make better use of classroom time and assist students in becoming more independent.	150	2	5	3.88	.955
Valid N (listwise)	150				

instructor use Kahoot! at least 2 times a week with a mean of 3.87. Most respondents agreed that instructors may utilize Kahoot! to make better use of classroom time and assist students in becoming more independent with a mean of 3.88. Adnyani et al. (2020) found that both the teacher and students rated the use of Kahoot! highly in terms of attractiveness, novelty, stimulation, dependence, efficiency, and perspicuity. Unal and Unal (2017) revealed that teacher satisfaction is also an increasing concern and is derived from the overall concept of employee job satisfaction. Satisfaction among teachers and students is critical as it predicts factors such as motivation, engagement, and performance of both teachers and students. Student performance scores and student satisfaction scores rose substantially after the use of Kahoot! compared to before Kahoot! was used.

4.3. Kahoot! Features

The study assessed the perceptions of ESL students and teachers on the features of Kahoot! in ESL teaching and learning.

Most respondents agreed (see Table 4) that Kahoot! is a fun tool for learning about languages with a mean of 4.04. The vast majority of respondents agreed that they have a good attitude about studies when they play Kahoot! games with a mean of 4.16. Most of the respondents agreed that Kahoot! program enhances learning with a mean of 3.92. Most respondents agreed that they feel motivated when they play the Kahoot! game with a mean of 4.08. Most respondents agreed that Kahoot! program has question collections that are relevant to teaching with a mean of 3.91. Fatimah (2021) students of EFL perceive Kahoot! as having a particularly positive impact on classroom atmosphere and student engagement. Students felt that Kahoot! is most notably effective in inducing motivation and fostering and reinforcing learning.

Table 4. Kahoot! features.

	N	Minimum	Maximum	Mean	Std. Deviation
Kahoot! is a fun tool for learning about languages.	150	1	5	4.04	1.016
I have a good attitude about my studies when I play Kahoot! games.	150	1	5	4.16	.956
The Kahoot! program, in my opinion, enhances learning.	150	1	5	3.92	1.013
Whenever I play the Kahoot! game and keep competing with my colleagues to earn better scores, I feel motivated.	150	1	5	4.08	1.000
The Kahoot! program has question collections that are relevant to teaching.	150	2	5	3.91	.951
Valid N (listwise)	150				

4.4. Kahoot! Functionality

The study assessed the perceptions of ESL students and teachers on the functionality of Kahoot! in ESL teaching and learning.

Most respondents agreed (see Table 5) that students can find out regarding their areas of abilities and flaws that require attention with a mean of 3.94. The vast majority of respondents agreed that the pupils' learning may be evaluated in a fun and less demanding manner by using Kahoot! with a mean of 4.04. Most of the respondents agreed that Kahoot! is a cutting-edge tool made to get interested in studying with a mean of 3.51. Most respondents agreed that Kahoot! fosters a setting where learners may actively participate in the education process with a mean of 3.93. Most respondents agreed that Kahoot! is appealing, amusing, and can help with focus with a mean of 3.78. Dianati et al. (2020) study revealed that students perceive Kahoot! to be the best of the three on ease of use for revision of learned concepts while the other two were found to be better in other regards. students across the world perceive Kahoot! to be a positive tool that enhances their motivation, enjoyment, engagement, and concentration.

4.5. Correlation Analysis

A Pearson correlation evaluation was used to explore the relationship between Kahoot! features, functionality and satisfaction with the use of Kahoot! in ESL teaching and learning.

With a p-value of .000, it was shown that Kahoot! features and satisfaction with the use of Kahoot! were substantially connected (see Table 6). The Pearson coefficient was found to be .829. This demonstrates that Kahoot! features have a major impact on satisfaction with the use of Kahoot!. Enhancing Kahoot! features will thereby increase the satisfaction with the use of Kahoot! in ESL teaching and learning.

Having a p-value of .000, it was shown that Kahoot! functionality and satisfaction with the use of Kahoot! aspects were substantially connected (see Table 6). The Pearson coefficient was found to be .630. This demonstrates that Kahoot! functionality have a major impact on satisfaction with the use of Kahoot!. Enhancing Kahoot! functionality will thereby increase the satisfaction with the use of Kahoot! in ESL teaching and learning.

Table 5. Kahoot! functionality.

	N	Minimum	Maximum	Mean	Std. Deviation
Students can find out regarding their areas of abilities and flaws that require attention.	150	1	5	3.94	1.025
The pupils' learning may be evaluated in a fun and less demanding manner by using Kahoot!.	150	1	5	4.04	1.123
Kahoot! is a cutting-edge tool made to get interested in studying.	150	1	5	3.51	1.140
Kahoot! fosters a setting where learners may actively participate in the education process and sustain their desire to learn.	150	1	5	3.93	1.056
Kahoot! is appealing, amusing, and can help with focus.	150	2	5	3.78	.996
Valid N (listwise)	150				

Table 6. Correlation analysis.

		Gamification satisfaction	Kahoot! features	Kahoot! functionality
Gamification satisfaction	Pearson Correlation	1	.829**	.630**
	Sig. (2-tailed)		.000	.000
	N	150	150	150
Kahoot! features	Pearson Correlation	.829**	1	.530**
	Sig. (2-tailed)	.000		.000
	N	150	150	150
Kahoot! functionality	Pearson Correlation	.630**	.530**	1
	Sig. (2-tailed)	.000	.000	
	N	150	150	150

5. Conclusion and Recommendations

5.1. Conclusion

In Malaysia, English is frequently studied as a second language or as a foreign language. Digital gamification is increasingly being used in education. Since game-based learning contains predetermined learning objectives, it stands out from other types of educational games. One of the most popular learning gamification tools is Kahoot!. The adoption of Kahoot! has been boosted by student assessments of their fun, motivation, engagement, and focus levels.

Kahoot! is seen as improving students' learning experiences by them. The results show that Kahoot! is regarded positively by students all around the world as a tool that improves their motivation, enjoyment, engagement, and concentration. Students said Kahoot! was particularly good at building motivation and supporting and reinforcing learning. Teachers believed Kahoot! to be a very successful tool for boosting passive students' involvement and promoting competitive learning. The main benefits of Kahoot!, according to teachers, include enhanced student involvement, improved classroom dynamics, higher motiva-

tion, rapid feedback, and higher energy levels throughout sessions.

5.2. Limitations of the Study

Lack of funding was a barrier because no institution or entity sponsored the research. All study-related expenses were paid for by the researcher. The research was hampered at a certain point because of financial resource constraints.

5.3. Recommendations for Future Studies

The first suggestion is to broaden the study's sample size by increasing the population reach and duration of the investigation. The results on the usefulness of gamification in ESL learning and teaching will be more accurately generalized if the inquiry was made available to a large number of respondents. In order to interview a concerned party, compare the findings to previously conducted quantitative research, and come to a new conclusion, other researchers should use the qualitative study approach in their subsequent research. The researcher will be able to speak with subject matter experts first hand through qualitative research.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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