Attitudes and Perceptions of Kahoot as a Gamified Learning Tool in Higher Education

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Abstract
This study investigates respondents' attitudes and perceptions towards the use of Kahoot as a gamified learning tool in two classes of an Intermediate English Grammar course at one higher education institution in Makassar, Indonesia, A total of 39 respondents participated in the study, and data was collected through a 22-item survey questionnaire. The results showed that 98% of respondents felt that learning grammar through Kahoot as a gamified learning tool brought fun, challenge, engagement, and increased motivation to the Grammar class. The findings contribute to the growing body of research on gamification in higher education, particularly its potential to enhance student engagement and language learning outcomes in EFL contexts.

Keywords: *Gamification; Kahoot; Attitudes; Perception; English as a Foreign Language.*

Introduction

Teaching in the digital age necessitates the adoption of active approaches that offer students a visible involvement in the learning process (Khoiroh, 2022) and their educational experiences must be meaningful and widely applicable. It aimed at giving students opportunities for interaction, cooperation, competition, etc., because these aspects are typically associated with improved motivation during the teaching-learning process, as demonstrated by recent studies (Darling-Hammond et al., 2020; Rodríguez et al., 2019). Recent educational demands necessitate the adoption of innovative teaching strategies to enhance the learning process, one of which is gamification (Li et al., 2023), whose advantages in educational settings have been extensively documented.

Gamification research suggests that intrinsic motivation and competence, alongside physical rewards, significantly impact engagement (Hwang et al., (2017). Gaming methodologies enhance student learning achievement and motivation (Chiraz, 2022), with gamified flipped learning environments demonstrating improved student outcomes (Huang et al., 2019). Kahoot! is a gamified student response system that promotes motivation and engagement (Wang et al., 2015; Huckabee & Bissette, 2014; Muntean, 2011; Hwang et al., 2017; Amores-Valencia et al., 2022), facilitating learning

and comprehension assessment. It fosters active participation, commitment, and positive student relationships (Gokbulut, 2020; Urh et al., 2015; López-Belmonte et al., 2020), integrating digital technologies and communication for enhanced interdisciplinary skills (Aibar-Almazán et al., 2024). Furthermore, gamification tools like Kahoot! can enhance metacognitive capacities, empathy, and collaboration (Lin et al., 2018). This study investigates student attitudes and perceptions of Kahoot! as a gamification tool within a higher education in the Intermediate English Grammar course and to answer the research question: *How do respondents perceive Kahoot as an educational tool in the context of learning English as a Foreign Language (EFL)?*

Method

This study employed a descriptive survey design, utilizing both quantitative and qualitative data, to investigate perceptions of Kahoot! in higher education. The questionnaire, adapted from Tan Ai Lin, Ganapathy, and Kaur (2018), did a reliability analysis to ensure the internal consistency of the instrument, yielding excellent results and mitigating potential biases inherent in subjective survey measures. The current survey consisted of 22 items, three demographic data questions, and two open-ended questions specifically related to Kahoot!

This study was conducted at a higher education institution in Makassar, Indonesia. The program comprises 200 students; however, the sample for this research consisted of 39 third-semester students enrolled in the Intermediate English Grammar course, from two classes. This cohort included 27 female and 12 male respondents. The course employed a flipped classroom model, with bi-weekly, 45-minute sessions. Students were required to develop course material using Kahoot! and complete assigned tasks prior to each in-person meeting. These in-person sessions then focused on the practical application of the grammar concepts, addressing student questions, and overcoming challenges encountered during their independent learning.

Respondents created 22-semester course resources. Their Intermediate Grammar knowledge, understanding, and areas of difficulty were assessed in the first Kahoot session. There was another Kahoot quiz following each lecture. The 6-question quiz had a 30-second time limit. Fast feedback on each answer, the aggregate score, and the student's position, including the top five, was shown on a class-wide scoreboard. Forty-six Kahoot games were played this semester. To ensure student comfort, all games were adjusted to private settings for pleasant class play.

Result and Discussion

Table 1 Demographic Information

Category	Subcategory	Frequency	Percentage
Gender	Male	12	30.8
	Female	27	69.2
	Total	39	100
Age	19	13	33.3
	20	11	28.2

	21	8	20.5
	22	7	18.0
	Total	39	100
Prior exposure to Kahoot	Yes (Exposed)	16	41.0
	No (Not exposed)	23	59.0
	Total	39	100

Table 1 summarizes respondent demographics. The majority of participants were 19 years old (33.3%), followed by 20-year-olds (28.2%). Smaller groups were 21 (20.5%) and 22 (19.0%) years old. The sample comprised 27 females (69.2%) and 12 males (30.8%). Prior Kahoot! experience was reported by 59.0% of respondents, while 41.0% were new to the platform.

Table 2 shows overwhelmingly positive student attitudes toward Kahoot! All participants (100%) viewed Kahoot! as effective in education. While some disagreement (at least 10.24%) was noted across individual items, 98% of responses to 10 items demonstrated Kahoot's popularity. Respondents expressed frustration with connectivity issues, highlighting their eagerness and engagement with the competitive aspect of Kahoot! sessions. This engagement translated to increased focus during lectures. A majority also agreed on the value of Kahoot! in higher education and its potential for broader implementation.

Table 2 Respondents' Attitudes towards Kahoot!

No	Item	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
1	*I look forward to playing Kahoot!*	*0*	*2.5*	*5.1*	*35.8*	*53.8*
2	*I find Kahoot! Interesting*	*0*	*2.5*	*12.8*	*35.8*	*48.7*
3	*I am eager to learn via Kahoot!*	*2.5*	*2.5*	*5.1*	*41.0*	*46.1*
4	*I get annoyed when I cannot connect to Kahoot!*	*2.5*	*2.5*	*7.6*	*30.7*	*53.8*
5	*I focus on the items or questions in each Kahoot! session*	*0*	*0*	*7.6*	*41.0*	*49.7*
6	*I respond to each item or question in each Kahoot! session*	*0*	*0*	*7.6*	*38.4*	*51.2*
7	*I like the competitiveness in our Kahoot! Session*	*0*	*0*	*2.5*	*29.2*	*69.2*
8	*I am motivated by the prospect of winning in these Kahoot! Session*	*0*	*0*	*2.5*	*23.0*	*74.3*
9	*I pay more attention during lectures because I hope to win in the Kahoot! Session*	*0*	*0*	*2.5*	*35.8*	*58.9*
10	*There is value in using Kahoot! for teaching and learning purposes*	*0*	*0*	*5.1*	*20.5*	*74.3*
11	*Kahoot! should be used in higher education*	*0*	*0*	*5.1*	*33.3*	*61.5*

1: Strongly Disagree, 2: Disagree, 3: Slightly Agree, 4: Agree, 5 Strongly Agree

As indicated in Table 3 below, the respondents' perceptions of Kahoot! contribute to their learning and knowledge reinforcement. An interesting result

captured the last five items: 98% of the respondents expressed that Kahoot! did reinforce their learning. They indicated that the Kahoot! sessions aided them in reinforcing learning the gist of the information they had missed during lectures in terms of the following aspects—parts of speech, phrases and clauses, parts and types of sentences, subject-verb agreement, and tenses. A similar trend of 98% agreement was found for items 1 to 5, that Kahoot! session helps them foster their learning concerning parts of speech, phrases and clauses, parts and types of sentences, subject-verb agreement, and tenses. The respondents positively affirmed that Kahoot! session helped them foster their learning in the Intermediate English Grammar course.

Table 3 Respondents' perceptions of Kahoot!

No	Item	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
1	*Our Kahoot! sessions help me learn the gist of a) Parts of speech that I might have missed during lectures*	*0*	*2.56*	*5.1*	*38.4*	*53.8*
2	*Our Kahoot! sessions help me learn the gist of b) Phrases and Clauses that I might have missed during lectures*	*0*	*2.56*	*2.5*	*28.2*	*66.6*
3	*Our Kahoot! sessions help me learn the gist of c) Parts and Types of Sentences that I might have missed during lectures*	*0*	*2.56*	*2.5*	*25.6*	*69.2*
4	*Our Kahoot! sessions help me learn the gist of d) Subject Verb Agreement that I might have missed during lectures*	*0*	*2.56*	*5.1*	*41.0*	*51.2*
5	*Our Kahoot! sessions help me learn the gist of e) Tenses that I might have missed during lectures*	*0*	*0*	*0*	*46.1*	*53.8*
6	*Our Kahoot! sessions help reinforce (consolidate) my learning of a) Parts of Speech*	*0*	*0*	*2.5*	*30.7*	*66.6*
7	*Our Kahoot! sessions help reinforce (consolidate) my learning of b) Phrases and Clauses*	*0*	*2.56*	*0*	*41.0*	*56.4*
8	*Our Kahoot! sessions help reinforce (consolidate) my learning of c) Parts and Types of Sentences*	*2.5*	*0*	*0*	*35.8*	*61.5*
9	*Our Kahoot! sessions help reinforce (consolidate) my learning of d) Subject Verb Agreement*	*2.5*	*2.56*	*5.1*	*30.7*	*58.9*
10	*Our Kahoot! sessions help reinforce (consolidate) my learning of e) Tenses*	*2.5*	*2.56*	*0*	*30.7*	*64.1*

1: Strongly Disagree, 2: Disagree, 3: Slightly Agree, 4: Agree, 5 Strongly Agree

The questionnaire's open-ended sections provided diverse qualitative data. Regarding Kahoot's merits (Table 4), respondents cited its promotion of active class participation and Intermediate English Grammar review, improved focus ("It helps me understand the material better"), and low-pressure knowledge assessment ("It's a low-pressure method to assess my knowledge").

Table 4 What are the advantages of using Kahoot!

Topic	Quotations
Motivation	*"I'm more engaged when using Kahoot!."*
	"Kahoot! motivates me to actively participate in class and review the material."
	"I'm more engaged when using Kahoot!."
Fun	*"It's a fun break from traditional lectures."*
	"It makes learning interactive and exciting."
	"Kahoot! makes learning enjoyable and less stressful, which reduces my anxiety about tests and exams."
	"Kahoot! makes learning fun!"
Understand	*"Kahoot! clarifies key concepts."*
	"I grasp the information more easily."
	"Kahoot! allows me to actively participate in the learning process, which enhances my understanding and retention of the material."
	"It improves my comprehension."
Competition	*"It fosters a sense of community and friendly competition, which makes learning more enjoyable and motivating."*
	"Kahoot! makes learning competitive."
	"Kahoot! makes learning competitive."
	"I want to be at the top!"
	"The competitive aspect of Kahoot! makes learning more engaging and exciting."
	"I enjoy the friendly competition with my classmates and it pushes me to study harder."
Test the knowledge	*"It's a low-pressure way to test my knowledge."*
	"Kahoot! helps me review."
	"It helps me concentrate."
Focus	*"It improves my focus."*
	"Kahoot! keeps me focused."

Kahoot's downsides (Table 5) included frequent lag and instability, insufficient response time, and time-consuming setup. Some found it not universally engaging, citing a stressful competitive environment, distractions, and overemphasis on winning. Respondents disliked multiple-choice questions and noted Kahoot's superficial learning approach. Mobile layout issues, including navigation, image display, and distracting visuals were also common complaints, with one respondent disliking font size changes.

Table 5 What are the disadvantages of using Kahoot!

Topic	Quotations
Technical	*" Sometimes it lags,"*

	"Platform instability."
Time	*"Setting up takes time,"*
	"The time for each question is not enough"
Engagement issue	*"Not engaging for all learning styles."*
Competitive	*"Competitive atmosphere can be stressful,*
	"Distractions from other respondents,"
	"Too much focus on winning."
Limited Question Types	*"Multiple choice limitations"*
	"Lack of open-ended questions,"
Superficial Learning	*"Lack of in-depth analysis."*
Mobile Layout incompatibility	*"Layout issues on phones,"*
	"Difficult to navigate on smaller screens."
	"Images don't fit the screen."
	"Distracting visuals,"
Font Issues	*"Inconsistent font sizes,"*

Discussion

This research revealed generally positive student perceptions of Kahoot! as a gamified learning tool in Intermediate English Grammar. Participants appreciated Kahoot's ability to enhance engagement, competitiveness, and involvement, supporting previous findings on gamification's motivational benefits (Lin et al., 2018). Respondents noted increased motivation, with 74.3% driven by the competitive aspect (Wang et al., 2015), and improved lecture attendance. Kahoot! quizzes also reportedly enhanced understanding and retention of grammar concepts like speech, subject-verb agreement, and sentence structure, aligning with research on the positive impact of interaction and feedback (Zarzycka-Piskorz, 2016). Furthermore, Kahoot! facilitated self-paced grammar learning within the flipped classroom model.

Despite its benefits, some respondents criticized Kahoot! for technical issues like lag and platform instability, which hindered usability. Insufficient response time was also a concern, potentially causing stress and hindering engagement (Licorish et al., 2018). Furthermore, Kahoot's multiple-choice format may not suit all learning styles, particularly those preferring in-depth analysis. Therefore, while Kahoot! can complement various instructional approaches, it should be used in conjunction with diverse learning strategies.

While competition in Kahoot! can be motivating, it can also create stress and distraction (Dicheva & Dichev, 2015). Therefore, careful implementation is crucial for inclusive engagement. Cooperative game formats could balance competition and teamwork. This study demonstrates Kahoot's positive impact on EFL student engagement and comprehension, suggesting its value as a learning tool. To maximize

its effectiveness, instructors should address technical issues, time constraints, and diverse learning preferences.

Conclusion

This study demonstrates Kahoot's effectiveness as a gamified learning tool, significantly boosting EFL student engagement, motivation, and comprehension. Positive student attitudes suggest that game-based learning enhances language learning enjoyment and interactivity. However, instructors should address technical challenges, time constraints, and diverse learning styles. Future research could explore Kahoot's long-term impact on academic achievement and evaluate various gamification approaches across different educational contexts.

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