

**Students' Perception on Game-Based Learning Using Technology:  
Kahoot! As a Case Study**

**Ismail**

[ismailadelembo@gmail.com](mailto:ismailadelembo@gmail.com)

**Rusdin**

[surflakey@gmail.com](mailto:surflakey@gmail.com)

**Andi Prayudi**

[endompu@gmail.com](mailto:endompu@gmail.com)

**Taufik**

[taufikbima25@gmail.com](mailto:taufikbima25@gmail.com)

**STKIP Yapis Dompus**

**ABSTRACT**

There have been studies which exploring students' perception on the use of kahoot!. However, research on investigating students' opinion on the implementation of kahoot and students' recommendation for educational stake-holders is uncommon. This study relies on semi-structured interview data from 15 second-year students (10 female and 5 male) enrolling in the Introduction to Linguistics Class in English Education Department of STKIP Yapis Dompus. This study aims to explore the benefits of the use of kahoot, the barriers and students' recommendation to educational stake-holders for improvement. The data were analysed using thematic analysis adapted from (Braun & Clarke, 2006) which consists of 6 steps. The finding of this paper suggested that the implementation of kahoot in learning process had four benefits: Firstly, Kahoot creates fun and interested learning atmosphere. Secondly, it riggers students' attention and focus. Thirdly, it facilitates comprehension of material Taught. Lastly, Kahoot! fosters positive competitiveness among students. Additionally; there were two main barriers of using kahoot in this research: firstly, limitations on internet access. Secondly, not enough time to answer. The surprising conclusion of the research was that, all participants had never been exposed to game-based learning platform during their formal school (elementary and high school); they only were only exposed to game-based learning platform at this introduction to linguistics class. Therefore; all participants highly recommended to all lecturers and teachers to game-based learning platform in their teaching. This study relied on game-based learning platform kahoot. Therefore, similar study which explores other game-based learning platforms is highly recommended.

**Key words:** Perception; Game-based Learning; Kahoot

## INTRODUCTION

Technology is now present in practically every facet of our life as it plays a very crucial role in every aspect of human lives. In teaching-learning process, there are some reasons why students need to utilize technology; firstly, technology enables them in preparing for their jobs. Secondly, using technology in the classroom is an excellent technique to interact with all students who have different learning styles. Next, through cooperation, technology can enable students to improve their engagement with their peers and lecturers. Lastly, Technology allows students to have access to the most up-to-date material more quickly and conveniently (D. Mareco, 2017 as cited in Adnyani et al., 2020). It is indisputable that language is essential to human existence, (Ismail et al., 2022). Because traditional techniques of motivating students are no longer effective, instructors and educators must devise new strategies, (Bicen & Kocakoyun, 2018). With a favorable motivation or desire toward learning English, learners will discover a technique that will assist them to address obstacles encountered during the learning process, resulting in successful language learning, (Ismail, 2022).

Most scholars agree that game-based learning through technology is a remarkable solution to gain effective, fun, and interactive learning. Games are effective because they motivate users by emphasizing social, cognitive, and emotional outcomes, (Domínguez, et al., 2013). Another innovation of technology in education is game-based learning. There are many game based-learning platforms are used to enhance students' engagement, concentration, participation, and motivation in learning. Additionally; Gamification applications may be rationalized as being required for students to think, to establish alternative environments, and to create a competitive setting, (Icard, S. B. 2014, as cited in Bicen & Kocakoyun, 2018) One of them is Kahoot!. Since the Kahoot's initial introduction in 2013, there have been many scholars investigating how it effects on learning process. The use of Kahoot! can foster students' motivation, participation and experience as an active element in education. Then, Kahoot can have a positive effect on learning achievement, class dynamics, students' and teachers' attitudes and is suitable for interactive learning for students of all ages, (Ahmad et al., 2021; Amalia et al., 2022; Halim et al., 2020; Mahbub, 2020; Mahbubah & Anam, 2022; Robiyati et al., 2020).

Maintaining students' engagement in learning classroom is one of the intentions of implementation of Kahoot! in learning. To evaluate students' engagement in learning activity using game-based learning kahoot!, the concept by (Pino-james, 2017) is feasible to implement in which the concept focuses on the idea of how students behave, feel, and think a learning activity. The concept relies on three aspects: behavioral, emotional and cognitive engagement. Behavioral engagement entails student participation and involvement in learning activities, as well as positive attitudes of students throughout learning activity resolution. Emotional engagement includes interest, boredom, enjoyment, anxiety, and other emotional states, all of which can influence learners' involvement in learning or their

prolonged effort in playing games, such as in the setting of playing a game. Lastly, Engaging in effortful activities with purpose and strategy usage, making cognitive investments in learning, and engaging in metacognition and self-regulated learning are all examples of cognitive engagement.

This study aims to investigate students' perception on the implementation of Kahoot! in the tertiary sector, the barriers of using Kahoot!, and students' recommendation for educational stakeholders related to game-based learning using technology.

## **LITERATURE REVIEW**

### **Previous Related Study**

Since the initial introduction of game-based learning platform Kahoot! in 2013, there had many scholars investigating students or users' perception on the implementation of Kahoot! in learning. Firstly, Lofti & Pratolo, (2021) investigated the benefits and problems on the use of Kahoot! in learning English faced by students. The data of this research used open-ended interview to collect the data from 10 students of an Indonesian university. The result of this study are (1) inspiring children to study, (2) creating a positive classroom environment, (3) assisting pupils in focusing, and (5) promoting positive competition. The disadvantages of utilizing Kahoot! are (1) an inconsistent internet connection and (2) a lack of discussion space for students and teachers. Secondly, Mahbub, (2020) aims to illustrate undergraduate students' perceptions of Kahoot! in learning. A sequential explanatory study was used to accomplish this. N=21 undergraduate students from an Indonesian private institution. To investigate their impressions of this platform, a web-based five-point Likert scale questionnaire was created. A focus-group interview was also done to ascertain their deepest emotions. The findings revealed that they valued the incorporation of this technology into classroom education. Following that, the implications, conclusion, and limits were examined.

The next related previous study is (Robiyati et al., 2020); this study aimed to illustrate Students' perspectives on the use of kahoot in studying phonology, as well as suggestions for improving the use of kahoot in learning phonology. This qualitative study decided to use the survey for fifty-nine students of phonology class. The study's findings revealed that students' attitudes on the use of kahoot in phonology learning were favorable. The fourth research is Khairisya & Daulay, (2022); this study aimed to investigate students perception toward the use of kahoot in learnin. This qualitative research interviewed 20 students to obtain the data. This research found that the learners' view of utilizing Kahoot! was favorable since they found it enjoyable and interesting to focus on the lecture. Furthermore, Kahoot! enhanced students' interest and desire in studying, making it simpler for them to absorb the teacher's information. Based the related previous researches and other studies on investigating the use of kahoot in learning process, most of them looked at students' perceptions on the use of kahoot without illustrating students shared

voice for educational stake-holders related to implementation of kahoot. therefore; this research exploring students' recommendation for educational stake-holders related to game-based learning using technology

### **Perception**

Perception, according to Baron and Byrne (2014, as cited in Robiyati et al., 2020), is the process by which we seek to explain object perception. Perception is the process by which humans control and interpret the impressions of their senses in order to provide meaning to their surroundings. Perception is the process of determining the meaning of a stimuli. If the stimulus is an object, it is referred to as object perception; if the stimulus is a person, it is referred to as social perception. Perception, according to Hornby (2018), is a notion, a belief, or a picture that people have as a result of how they perceive and comprehend. However; perception in this research means that students' belief, impressions, or pictures toward the use of game-based learning using technology.

### **Game-Based Learning Using Technology**

Game-based learning using technology or well-known as gamification is a technology-based strategy implemented in learning activity to engage and motivate students to actively participate in learning process, (Cameron & Bizo, 2019). Moreover; gamification is defined as the application of game-based mechanics, aesthetics, and game thinking to engage people, motivate action, and promote learning, (Zhang & Yu 2021). Additionally; gamification is the application of game design principles in non-game contexts and is separated into three categories: (i) game mechanics, (ii) game characteristics, and (iii) game dynamics, (Ghawail & Yahia, 2022). In this globalization era, there have been many Game-based learning using technology which can really help teachers to teach effectively; such as quizzz, wordwall, quizlet, kahoot, google form, and many more. It has been argued that the application enables for an interplay between internal and external motivation; the built-in, naturally fulfilling drive to play a game in order to gain an external reward such as kudos or acclaim from others (zer and Bicen 2017).

### **Kahoot!**

Kahoot! is a game-based learning platform used to evaluate students' knowledge, for formative evaluation, or as a diversion from regular classroom activities. The platform is one of the most popular in game-based learning, with over 70 million monthly active unique users and played by 2.5 billion individuals from over 200 countries, (Wang & Tahir, 2020). Moreover; according to (Cameron & Bizo, 2019), Kahoot! is a well-known online multi-player real-time quiz software that allows students and lecturers to assess learning in a fun, rapid, and anonymous way. When compared to a paper exam and a physical 'clicker' setup, using Kahoot! was judged as more engaging, thrilling, and competitive, (Cameron & Bizo, 2019). According to Wang, (2015), Kahoot! is therefore a hybrid of audience responses, role-playing, and video and multimedia assistance. The goal of this literature review was to look at the impact of merging the concepts of a student response system with a video

game. Although other SRSs have gaming components, only Kahoot! has been created from the ground up as a video game

## **METHOD**

### **Design and Samples**

Since this study aims to investigate students' opinion on the implementation of Kahoot! in the tertiary sector and their recommendation for educational stakeholders related to game-based learning using technology, this research was carried out using a qualitative approach. 15 second-year students (10 female and 5 male) enrolling in An Introduction to Linguistics Class in English Education Department of STKIP Yapis Dompu took part in this study as participants. Because the probable pool of participants is already limited, the sample size is regarded acceptable for the selected (purposive) sampling strategy, (Marshall, 1996). First, it was told that the study was voluntary, and before to data collection. During the Introduction to Linguistics Class in academic year 2023-2024, the lecturer implemented Kahoot! four times in the learning process.

### **Instrument and Procedure**

To deal with the objectives of this research, the researchers utilized semi-structured interview to collect the data. As this study was required to obtain students' in-depth perception on the use of Kahoot! in Introduction to Linguistics Class, semi-structured interview is a suitable data collection tool to be employed in this research. Semi-structured interview is particularly well adapted to acquiring a more in-depth understanding of people's experiences, (Knott et al., 2022). The interview sessions were conducted in Indonesian language as the participants' native language in order to gain accurate data and to avoid misinterpretation. In order to protect the spoken data, the interviews were also recorded. The questions asked in this research were focused on students' experiences using kahoot, its influence on learning dynamic, and students' engagement in learning Introduction to Linguistics using Kahoot! and their shared voice for educational stake-holders related to game-based learning using technology.

### **Data Analysis**

After obtaining the data from the interviewees, the data were then evaluated using a thematic analysis which is a technique for detecting, analyzing, and reporting data patterns (themes). Steps of analyzing data, as what explained by (Braun & Clarke, 2006), consist of six phases: (1) Get acquainted with the data, (2) Creating the initial codes, (3) Looking for themes, (4) Themes to be reviewed, (5) Theme definition and naming, (6) Making the report.

## **RESULT AND DISCUSSION**

The main aim of this study was to explore to which kahoot! effect students' engagement, motivation, and learning introduction to linguistics. Engagement refers to students' attention, curiosity, focus, and interest during the course,. Motivation is the persuasion to participate and engage in the classroom. Learning

is defined as the information and skills gained by students as a direct result of their involvement and participation in the course, (Licorish et al., 2018). After analyzing data based on the 6 steps data analyze above, here are findings:

### **Benefits of Game-based Learning Platform Kahoot!**

#### **1. It Creates Fun and Interested Learning Atmosphere**

The interview analyze demonstrated that almost all participants in this study agreed that as a game-based learning platform kahoot! is interested to implement in the learning process. The participants enjoyed playing kahoot with some different reasons as follows:

*It is very fun activity playing Kahoot! in the classroom while studying, we can directly see our names and ranking in the slides that can motivate us to do the best in the game, (Student 7).*

*I enjoyed the learning process using Kahoot! as it has cute and funny emoticons, such as skulls, zombies, brain images, etc, (13)*

*It is interested because the visualization or the Kahoot design is colorful that refreshes my eyes, (Student 15)*

The findings imply that colorful visualization, cute and funny emoticons, and seeable ranking made the learning process of Introduction to Linguistics using kahoot interested and fun. This finding also supported by ....

#### **2. Kahoot Triggers Students' Attention and focus During Learning**

Based on the interview analysis, it appears that all 15 participants in this study agreed that using Kahoot! increased focus and positive attention in the classroom. Some participants informed that playing kahoot requires them to stay focus on the learning process as the time limit for answering the question can be seen.

*One of things that made me to stay focus on kahoot! is that the time limit for answering the question can be seen by all participants so that if we want to pass others' ranking, we need to stay focus then do well in the kahoot! (Student 2)*

*By responding to questions and taking part in quizzes and discussions, I believe using Kahoot! encouraged my involvement and participation during lectures, in contrast to traditional classroom settings where conversations are frequently dominated by a small number of extraverted students, so those required me to stay focusing on the learning process, (Student 10).*

From the findings above, it can be concluded that using kahoot! in learning introduction to linguistics course motivated participants or students to keep attention and focus on the learning process as every student wanted to be the winner in that game-based learning.

### **3. Kahoot Facilitates Comprehension of Material Taught**

Every participant acknowledged that Kahoot! was a helpful learning tool that improved their overall educational experience. During the interviews, the participants expressed gratitude for the way Kahoot! helped them with their learning. They stated that playing Kahoot can help students think critically in addition to helping them learn the materials that the lecturer is teaching. Additionally, they stated that Kahoot! broadened their understanding.

*Using Kahoot to learn introduction to linguistics allowed me to comprehend the lecturer's information at a deeper level because the game asks us to select only the right answer out of multiple alternatives, (Student 9).*

*I get the impression that utilizing Kahoot for studying not only helps me comprehend the material more easily, but it also develops my critical thinking skills, (Student 11).*

### **4. Kahoot! Fosters Positive Competitiveness among Students**

According to the interview results, students were found to find competition to be a powerful motivator. One respondent mentioned that students enjoy giving a "perform," while another expressed the desire to top the scoreboard and be the best in the class. Many students were motivated to prepare ahead of time and actively engage with the subject because they wanted to win.

*I really enjoy rivalry in learning. It seems like everyone aspires to be the best student in the class. Learning using Kahoot is different from other traditional methods in that it encourages competition among all students, (Student 1)*

The findings on the benefits of kahoot in learning above are in accordance with some previous studies such as (Stoyanova, Tuparova, & Samardzhiev, 2016; siu-Ting Hung, 2017a, 2017b; Chaiyo & Nokham, 2017; Cameron & Bizo, 2019; Lofti & Pratolo, 2021). They believe that the use of kahoot in learning is able to improve attention, focus, motivation, participation, and satisfaction.

## **The Barriers of Game-based Learning Kahoot!**

### **1. Limitations on internet access:**

Based on the interview result, one of the barriers learning introduction to linguistics using kahoot! is limited internet connection of participants, not all participants has internet connection. For optimum operation, the Kahoot platform needs a steady internet connection. The use of this program may be hindered if teachers or students have issues with the internet connection. Here are some interview results from students

*I enjoyed learning using kahoot!, however the problem is that not all students have an internet connection. Meanwhile, campus WiFi is not able to accommodate the large number of internet network needs for all students, (Student 5)*

*We occasionally log out of the Kahoot platform due to the poor connection on campus, and it irritates us a lot, (Student 2).*

## **2. Not enough time to answer**

Occasionally, the time allotted for answering a question does not correspond with the degree of difficulty the speaker has generated. Due to time constraints, students may not be able to provide their best answers, which will cause them to become anxious.

*I become anxious when I have to decline an answer because I'm running out of time, (Student 9)*

## **Students' Recommendation for Educational Stakeholders related to Game-based Learning Using Technology.**

### **1. Using game-based technology in the classroom is crucial for all lecturers at STKIP Yapis Dompus**

One of the research's unexpected findings was that every student claimed to have learned using game-based technology only in this introduction to linguistics class. They do not get it to other courses. Moreover; in elementary and high school, they had never been exposed to learning through game-based technology. All participants highly recommended to all lecturers STKIP Yapis Dompus to use game-based learning platform in teaching.

*Only in this class we learn using game-based technology while in other classes we don't. Therefore, we really hope that all lecturers at STKIP Yapis Dompus can use the same method or use a game-based learning platform in teaching, (Student 3)*

*This is my first experience learning using game-based learning. I never experienced it when I was in elementary school or high school, (Student 12)*

### **2. There should be a Specific Course that Discusses Teaching Method using Technology Practically at STKIP Yapis Dompus**

It is impossible to overlook the significance of technology-based education in the modern day. Using technology in the classroom has several important advantages, such as: Technology makes education more accessible. Students may access educational resources from anywhere with the internet and digital devices, breaking down obstacles related to geography and finances. Additionally, there's a chance that technology-based instruction will pique students' interests. Students' engagement in the learning process can be raised by using an interactive method that makes use of games, films, and online learning resources. Therefore; it is very

crucial for STKIP Yapis Dompus provide a specific course discussing learning using technology

*Since we're going to be teachers in the future, it's critical that schools offer a course that prepare us for using technology in the classroom, (Student 4)*

### **3. Providing adequate internet connection for all students on Campus**

By providing adequate internet connections for all students, campuses can ensure that students have equal access to learning resources and opportunities to optimize their learning experience, especially in learning that uses game-based learning. This also helps improve the quality of learning and prepare students to face the challenges of the ever-evolving digital world

## **CONCLUSION**

In conclusion, using Kahoot, an interactive online game-based learning tool, can be adjusted to boost students' motivation and independence, ease the process of evaluating their learning, and help them meet their learning objectives. In this research, there were 4 benefits of implementing Kahoot! in learning Introduction to Linguistics. Firstly, Kahoot creates fun and interested learning atmosphere. Kahoot! technique They acknowledged that the environment in the classroom was very different from usual and that the students might complete the quiz in groups. They also allowed the students to complete the quiz in a more pleasant and lively setting. Secondly, it riggers students' attention and focus during learning. By playing this game, where students like to "play" and others express their excitement to reach the top of the scores and earn the highest in the class, students are more encouraged to compete with their friends to find the appropriate answers. Thirdly, it facilitates comprehension of material Taught. Lastly, Kahoot! fosters positive competitiveness among students. Another crucial finding in this study is the barriers of using kahoot in learning. Based on the finding and discussion above, there were two main barriers of using kahoot in this research: firstly, limitations on internet access. Secondly, not enough time to answer. The surprising conclusion of the research was that, in this introductory linguistics course alone, every student claimed to have learned through the use of game-based technology. Furthermore, they had never been exposed to game-based learning in elementary or high school. Using game-based technology in the classroom is crucial for all lecturers and programing a Specific Course that Discusses Teaching Method using Technology at STKIP Yapis Dompus are other recommendations in this research. This study relied on game-based learning platform kahoot. Therefore, similar study which explores other game-based learning platforms is highly recommended.

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