

The Use of Kahoot as an Interactive Learning Media in the Era of Digital Learning

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Abstract: *This study discusses Kahoot! as an interactive learning media in the digital era. The research problem focuses on how Kahoot! Enhances student engagement and the challenges faced in its implementation. The objective of this study is to evaluate the effectiveness of Kahoot! as an interactive learning tool and to identify its benefits and challenges. The method used is a literature review, analyzing various relevant sources on using Kahoot! in different educational contexts. The results indicate that Kahoot Increases student engagement, understanding of the material, and learning motivation. However, technical challenges such as unstable internet connections and limited digital literacy hinder its application. In conclusion, Kahoot has excellent potential as an innovative evaluation tool, but improvements in infrastructure and digital training are necessary to maximize its benefits.*

Keywords: *Kahoot, interactive learning, student engagement, learning motivation, technical challenges*

Abstrak: Penelitian ini membahas penggunaan Kahoot! sebagai media pembelajaran interaktif di era digital. Masalah yang diangkat adalah bagaimana Kahoot! dapat meningkatkan keterlibatan siswa dan tantangan apa saja yang dihadapi dalam implementasinya. Tujuan penelitian ini adalah mengevaluasi efektivitas Kahoot! sebagai alat pembelajaran interaktif serta mengidentifikasi keuntungan dan tantangan dari penggunaannya. Metode yang digunakan dalam penelitian ini adalah studi literatur, dengan menganalisis berbagai sumber yang relevan terkait penggunaan Kahoot di berbagai konteks pendidikan. Hasil penelitian menunjukkan bahwa Kahoot! dapat meningkatkan keterlibatan siswa, pemahaman materi, dan motivasi belajar. Namun, tantangan teknis seperti koneksi internet yang tidak stabil dan literasi digital yang kurang menjadi hambatan dalam penerapannya. Kesimpulannya, Kahoot memiliki potensi besar sebagai alat evaluasi inovatif, tetapi memerlukan peningkatan infrastruktur dan pelatihan digital untuk memaksimalkan manfaatnya.

Kata kunci: Kahoot, pembelajaran interaktif, keterlibatan siswa, motivasi belajar, tantangan teknis

Introduction

Information and communication technology have changed how we learn and teach in today's digital era. Traditional education, which tends to be expository, is now transforming into a more interactive and participatory learning model. (Nurdyasnyah & Andiek, 2015). One of the innovations that has emerged to support this change is the use of game-based applications, such as Kahoot. Kahoot is a game-based student response system application that combines interactive technology to create a quiz experience like a game show, where the teacher acts as the host and the students as participants. The platform allows teachers to create quizzes with various question formats, such as multiple choice and true/false, accessed via PIN code using digital devices. Kahoot! It uses audio-visual elements, music, and real-time feedback to increase student engagement. Kahoot! Combines a student response system with game design principles, making it accessible to students without registration, allowing anonymous participation, and encouraging point-based competition resulting from the speed and accuracy of answers (Wang & Tahir, 2020). Kahoot is a platform where the teacher and the students interact through an interactive quiz; these can be accessed online inside and outside the classroom. Kahoot is an innovative method for evaluating learning; hence, students will have fun participating in it. With integrated game elements, Kahoot can increase student engagement and make learning more dynamic. Students act as information recipients and active participants in learning activities, encouraging them to collaborate, compete, and share knowledge with their friends. (Christiani et al., 2019).

Using Kahoot in an educational context can potentially increase learning effectiveness, especially in increasing students' understanding of the material. According to Irwan's research, interactive learning media can foster interest in learning due to innovation. This attractive appearance makes students more enthusiastic about learning, ultimately increasing learning achievement. Kahoot can be an alternative interactive learning media in higher education because it has been proven to improve student learning outcomes significantly (Irwan et al., 2019a). However, challenges also arise in implementing this application, such as the stability of the internet network and the availability of adequate supporting devices. Daryanes and Ririen noted that the use of technology in learning cannot be separated from technical obstacles that must be considered to achieve learning objectives optimally. (Daryanes & Ririen, 2020).

From the background above, the problem formulation in this research is how Kahoot can increase student involvement in the learning process and the challenges educators face in its implementation. Therefore, this research aims to evaluate the effectiveness of Kahoot as an interactive learning tool and to identify its advantages and challenges. By collecting data from literature studies discussing Kahoot, it is hoped that this research can provide deeper insight into Kahoot's potential as an innovative evaluation tool in education.

Research Methods

This present research uses a qualitative approach and applies a literature study method to review the effectiveness of Kahoot as an interactive learning tool. Research with literature studies uses secondary data in written forms or documents without requiring field data. In this study, all data are retrieved from the literature and analyzed further in-depth to answer the research questions. Literature study research is scientific, as it involves problem formulation, theoretical review, data collection and analysis, and conclusions, even though there will be no respondents to whom the questions are submitted. This strategy was deemed appropriate because detailed insight can be gained into students' and educators' experiences and perceptions of Kahoot in learning processes. The data collected includes analyzing materials from books, articles, and other relevant research results on Kahoot. Collecting data then included identifying and collating literature material relevant to the research topic (Melfianora, 2024).

Researchers searched for references through academic databases and other trusted internet sources using keywords related to Kahoot and interactive learning. After that, the researcher evaluates the sources' relevance and quality concerning the information they provide to ensure that the information obtained is valid and current. Following collection, the procedure for data analysis is described herein. First, data codification was made to identify the main themes emerging from the sources analyzed. The coding of information is helpful to the researcher in organizing details relevant to formulating a research problem. In this respect, thematic analysis was conducted to dig deeper into the prospects and challenges of adopting Kahoot as an interactive learning tool. The results are then narratively structured to give a complete insight into the effectiveness of Kahoot in enhancing student engagement, as well as the challenges that may be experienced in its application. As such, it is envisaged that this study shall add to developing more innovative and exciting learning methodologies in the digital era.

Results And Discussion

Kahoot as a medium for interactive learning has been studied in various studies, and significant results have been shown in increasing learning effectiveness. Research conducted by Rayan and Watted in 2024 shows the inclusion of Kahoot! Science learning has successfully increased the ability of students to enhance scientific knowledge and motivate student participation more actively at the elementary school level. This quantitative study used pre-and post-tests, showing an increased understanding of the material immediately after Kahoot use (Rayan & Watted, 2024).

Another study conducted by Wang and Tahir (2020) has demonstrated feeling more engaged due to the competition and game elements presented in Kahoot! Accordingly, the research offers a critical review of the literature concerning the effects of Kahoot! in different learning environments. This study has depicted that Kahoot! has raised students' engagement significantly and made the classroom environment very vibrant for formative or summative evaluation purposes. (Wang

& Tahir, 2020). This was further corroborated by the research of Aibar-Almazán et al. (2024), who added that using Kahoot! for over 60 minutes in one learning session at the university level can improve critical thinking skills, creativity, and independent learning. On the other hand, some researchers found that Kahoot had more extended usage, positively affecting students' achievement of the material and digital skills development. (Aibar-Almazán et al., 2024).

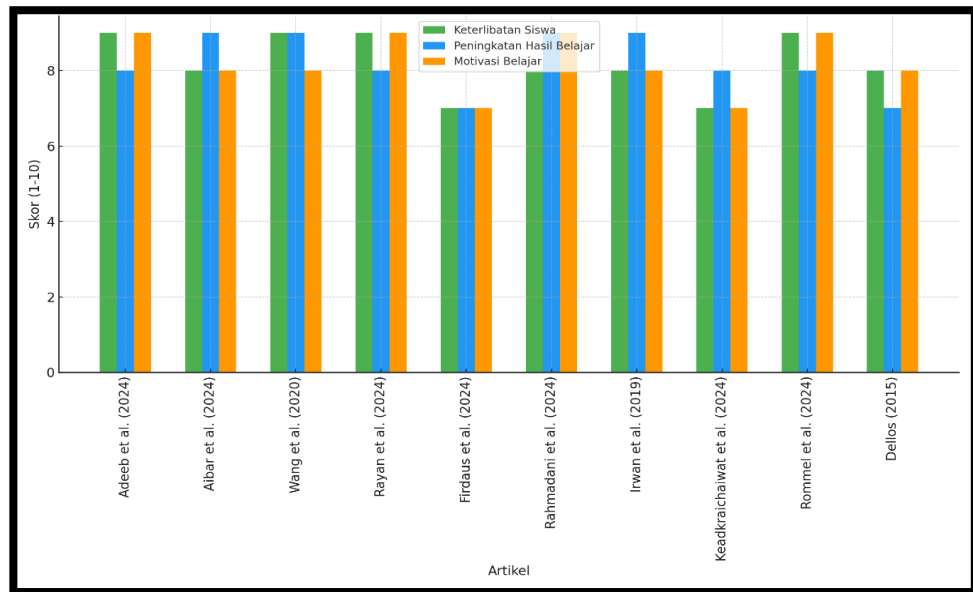
Other studies show that Kahoot! can be an alternative to interactive media that significantly enhances higher education student learning outcomes. A quasi-experimental method using two groups was conducted, and the result showed that the experimental class with Kahoot! got better results than the control class. (Irwan et al., 2019b). Firdaus et al.'s research points out that digital literacy is one of the most critical components in using Kahoot! as an interactive learning medium. The study identified that the more digitally literate the students, the more effectively they could use Kahoot! in a broader learning context. Strategies to increase digital literacy, such as structured training, have a positive effect in maximizing the use of this technology. This study found Kahoot! Improve the motivation of students to learn the language. Students will feel more competitive and motivated when the learning process is interactive and fun. (Iskandar et al., 2024).

Game-based learning theory also points out that embedding game elements increases students' motivation and engagement, justifying Kahoot! as an interactive learning medium. The results provided by Rayan and Watted in 2024 and Wang and Tahir in 2020 gave credence to this very theory since Kahoot! I managed to create a more exciting and participatory learning atmosphere. This increase in student understanding, within the context of learning science, only bolsters what Rayan and Watted observe: namely, by including game elements in learning, teaching becomes more effective, and students are encouraged to be more participatory. (Rayan & Watted, 2024; Wang & Tahir, 2020).

Besides, the additional research conducted by Aibar-Almazán et al. (2024) provides additional insight into the duration of Kahoot! Use. Longer ones can develop students' critical thinking and creativity, which aligns with the theory that technology-based learning can develop students' thinking powers at higher orders. This research also shows that the use of Kahoot! It needs to be balanced with other learning activities to avoid boredom. (Aibar-Almazán et al., 2024).

Research done by Irwan et al., 2019, depicts an increase in the learning outcomes of students in higher education using Kahoot! supports the findings of Wang & Tahir, 2020, that Kahoot! It will be helpful as a means for formative evaluation and can promote a more profound understanding. On the other hand, the research presented just how critical digital literacy is when using Kahoot. Better digital literacy will enable students to maximize the benefits of the technology. (Rahmadani & Saman, 2024).

This discussion shows three indicators of the effectiveness of using Kahoot! Application, namely student involvement, increased learning outcomes, and learning motivation, which are depicted in Graph 1:



Graph 1: Depicted

While these findings demonstrate significant benefits from using Kahoot! Several limitations need to be noted. Technical challenges, such as unstable internet connections and limited time to answer questions, were identified as obstacles that need to be overcome to optimize the implementation of Kahoot! (Wang & Tahir, 2020) (Rahmadani and Saman, 2024) also emphasized the importance of more structured digital literacy training so students can use this technology more effectively. That means Kahoot! proven effective in increasing student engagement, understanding of subject matter, and learning motivation.

1. Increased Student Engagement

It has been found in several studies that Kahoot! Increases the engagement of students in the classroom. Rayan and Watted (2024) stated that using Kahoot! in science learning at elementary schools makes students more interested in learning deeper. This is in agreement with the statement of Wang and Tahir (2020), who prove that Kahoot! can make teaching in classrooms more dynamic and exciting for students. Firdaus et al. (2024) have also pointed out that students' digital literacy is an essential factor in using Kahoot! where increasing levels of digital literacy might create more in-depth engagement among students.

2. Increased understanding of the Subject matter

The use of Kahoot! Illustrates the improvement in the knowledge of the student in the learning process. Irwan et al. (2019) depict in their study that Kahoot! improves student learning outcomes significantly higher than the traditional method because the average experimental class was higher than the control class. Irwan Zaki. Wang and Tahir, 2020 have also stated that using Kahoot! permits students to take in the material in a more interactive and fun way.

3. Increased Learning motivation

Aibar-Almazán et al., 2024, conducted research and explained that using Kahoot! for more than 60 minutes in one learning session can foster critical thinking, creativity, and computer literacy among learners. The research conducted by Rahmadani & Saman, 2024, also describes Kahoot! as having

raised motivation to learn in the context of learning English; students felt motivated and enjoyed learning.

The present research is highly significant due to its implications for developing the concept of interactive learning. Kahoot! is a means of learning with games that can increase student activity and motivation. It is also potentially an effective learning tool for developing critical thinking and creativity skills. However, to optimize the use of this technology, technological infrastructure, and digital literacy need to be improved for students and teachers.

Even though Kahoot! has various benefits in increasing student engagement and motivation, but this application still faces several technical problems that become the main obstacles to its use. In several studies conducted by Wang & Tahir, one of the significant challenges is the internet network applied when using Kahoot. This application requires a stable internet network; limited access in some locations could affect students' access and hinder them from participating in quizzes effectively. Moreover, the time limit to answer questions prompts students to feel rushed, which could minimize the quality of reflection when answering the questions. Apart from the time problem, some students witnessed technical issues, such as the inability to change the answers after they were submitted or the failure to send out responses due to network problems. Jarrah et al., 2024 shed light on how such disruptions reduce optimal learning experiences and increase frustration among students when the devices or networks used do not support the usage of Kahoot! without jitters. In online learning contexts or areas with inadequate internet infrastructure, these technical challenges can harm learning effectiveness using Kahoot.

Another technical challenge that also needs to be considered is the readiness of educators and students to use this technology. Although Kahoot! known for its easy-to-use interface, not all students and teachers have sufficient digital literacy to overcome technical obstacles that may arise during the learning process. In other cases, there is the need for further training to be provided to both the teachers and the students in order for all parties to adequately optimize the use of Kahoot! and reduce the possibility of technical glitches that might affect the process of learning (Jarrah et al., 2024).

Conclusion

This study shows that using Kahoot! might significantly improve students' involvement, better understanding of the subject, and motivation to learn. The game elements in Kahoot! Make the learning process more dynamic, competitive, and attractive for students. These findings support the game-based learning theory, which is underlain by the notion that active involvement and motivation could improve learning outcomes.

However, Kahoot Implementation is not separated from several technical obstacles, such as limited access to stable internet and poor student and teacher digital literacy. This is also a problem that has to be faced when optimizing the effectiveness of Kahoot in learning. Therefore, it is recommended that schools and educators pay more attention to strengthening technological infrastructure, especially adequate internet access, as well as digital literacy training for teachers

and students. Apart from that, educators also need to ensure the use of Kahoot! not only focuses on the competition aspect but also on developing critical thinking and collaboration skills between students. In a broader context, the Government and policymakers in the education sector are expected to provide the necessary support for the development of educational technology that is inclusive and equitable so that all students, including those in remote areas, can enjoy the benefits of interactive learning supported by technology such as Kahoot.

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