IJIET, e-ISSN 2548-8430, p-ISSN 2548-8422, Vol. 7, No. 1, January 2023, pp. 72-83

International Journal of Indonesian Education and Teaching
http://e-journal.usd.ac.id/index.php/IJIET
Sanata Dharma University, Yogyakarta, Indonesia

THE PERCEPTION OF ISLAMIC RELIGIOUS EDUCATION STUDENTS ON KAHOOT! AS A QUIZ

Rafiud Ilmudinulloh
State Islamic Institute of Manado, Indonesia
correspondence: rafiud.ilmudinulloh@iain-manado.ac.id
https://doi.org/10.24071/ijiet.v7i1.5522
received 14 December 2022; accepted 20 January 2023

Abstract
Kahoot! is the most popular online platform in universities to increase student participation in class. The application is suggested as an instrument for the assessment of learning outcomes. This study aims to determine the level of perception of Islamic religious education students towards Kahoot! as a quiz in the midterm exam. The research approach used is descriptive qualitative with questionnaire and observation data collection techniques. The data were then analyzed using descriptive statistics by presenting the data in the form of tables and diagrams. Based on the results of the study, it can be concluded that students' perceptions are very positive in terms of three main indicators, namely the ease of understanding how the application works, the ability of the application to involve participants, and the relevance of quizzes to learning activities. Most students think that Kahoot! provide new experiences that are interesting, fun, and challenging. They are motivated and actively participate in taking quizzes.

Keywords: gamification, Islamic religious education, Kahoot!, student perception

Introduction
The trend of learning technology innovation in the era of the industrial revolution 4.0 leads to the use of the internet as a means of digital transformation. Several new terms in the world of education are starting to rise to the surface such as e-learning, web-based learning, online learning, digital learning, virtual learning, hybrid learning, blended learning, etc.(Astuti et al., 2020; Govindarajan & Srivastava, 2020; Singh & Thurman, 2019; Tayebinik & Puteh, 2013). These terms refer to the ability of the internet to build communication networks that connect learning systems that are limited by space and time (Sasmita, 2020). The internet was not created for educational purposes, but from the perspective of educational technology, the internet is a learning resource that needs to be utilized and managed for the benefit of learning (Martin et al., 2022). Through five domains namely design, utilization, development, management, and assessment, this field of study can produce up-to-date learning technology innovations (Suryadi, 2020).

Learning motivation is a very important aspect of internet-based learning because interaction and communication are limited to the monitor screen of the device used. Motivation is divided into two namely intrinsic and extrinsic motivation (Emda, 2018). Intrinsic motivation comes from within the student while

extrinsic motivation comes from the environment around the student. As an illustration, students' learning motivation towards online learning during the Covid-19 pandemic tends to decrease due to unpreparedness from the aspects of infrastructure, psychological and economic aspects (Adi et al., 2021; Gustiani, 2020; Izzatunnisa et al., 2021). Intrinsic motivation is not well developed because students' involvement in learning activities is low and students' focus or concentration is often diverted from other activities (Robandi & Mudjiran, 2020; Winata, 2021). Many previous studies have focused on increasing learning motivation through the development of learning technology (Agustini & Ngarti, 2020; Hapsari & Zulherman, 2021; Nurrita, 2018). Other efforts are also made by developing methods, strategies, or learning approaches (Hastari, 2019; Umam, 2019). The challenges above need to be faced by creating learning that is creative, innovative and informative (Tafano & Saputra, 2021).

Gamification is a popular term used to describe the process of adapting a learning environment into a game that enlivens the atmosphere, generates motivation, and increases engagement or application of game designs, elements, and principles to non-game contexts to achieve goals (Marisa et al., 2020). These elements include challenges, competitions, awards, avatars, badges, levels, points, and teams (Cheong et al., 2014). Gamification is often associated with game-based learning or serious games, but according to Oliver (2017), There are two types of gamification in education, namely structural and content. There are four factors for the success of learning gamification, namely the adaptation of complex and deep game elements, student learning styles, student learning motivation, and learning environment (Tóth et al., 2019). The idea emerged to increase motivation, including in learning activities (Chandross & DeCourcy, 2018). Learning activities such as assignments, discussions, and exams can be designed in the form of games to increase motivation and excitement in a class by presenting game elements such as challenges, points, difficulty levels, and player characters (Yürük, 2019).

Based on the results of the identification and early observations of the research, student motivation tends to conform as the number of meetings increases, especially among students of the Islamic Religious Education Study Program at the state Islamic institute of Manado (IAIN Manado). This happens because there is no renewal or change in the application of learning strategies that have a significant impact on the classroom atmosphere and student involvement. Group discussions became routine at every meeting, where only a handful of students were active in class. Exams that are carried out classically through sheets of paper containing column questions do not allow students to speak or cooperate and the atmosphere becomes quiet and silent. Most students did not express satisfaction after taking the test because feedback was not immediately given. It is feared that this condition will affect learning outcomes if not handled immediately. Therseveralber of gamification applications such as Socrative, Quiziz, Quizdom, Edpuzzle, and iSpring Learn LMS, are specifically designed to improve student performance and engagement in learning activities (Zainuddin et al., 2020). Of all, Kahoot! is the most popular and widely used platform in universities to increase student participation in class (Yürük, 2019). Guardia et al., (2019) suggest using Kahoot! as an instrument to test students' knowledge, skills, and attitudes during the lecture process because the application will provide new experiences that are fun, interesting,d meaningful.

Kahoot! is an online platform that provides a fun, challenging, and involving learning environment, where teachers can design it in the form of discussions, quizzes, jumbles, and surveys (Martins et al., 2019). The application was released in 2013 through a collaboration between Mobitroll, a Norwegian University, and The British Company (Anatomía, 2018). Kahoot! classified as a Student Response System (SRS) which allows students to answer questions instantly and get feedback quickly. The platform is loved for its recognizable features, pleasant appearance,e and lively music (Boden & Hart, 2018). Screen displays are divided into two types, namely the presenter's screen which displays the content of the questions or discussion, feedback on answers, the number of participants involved, the scoreboard, and the winner's podium, and the screen of the participants which displays the content of the questions or discussion, obtaining scores and rankings. The free online application (https://kahoot.com) has 70 million active users worldwide, of which 50 percent are students (Lunden, 2018). The platform requires the teacher or host to create an account and design the desired learning activities such as quizzes or discussions. To be able to play, students or participants enter using the game pin and nickname made via the https://kahoot.id page. Kahoot! equipped with game features such as player avatars, points, scoreboards, duration, background music, and champion podiums (Zhang & Yu, 2021). Kahoot can be played via devices such as laptops, smartphones, and tablets (Prieto et al., 2019).

The application is very useful for livening up the classroom atmosphere, increasing learning motivation, and reviewing learning activities (Yürük, 2019). Bawa, (2019) in his research on 96 students from the business program at the Midwestern Community College Campus proved that the Kahoot! further, improve student performance and engagement than conventional classes. Against the results and interest in learning, the application has a good influence (Wigati, 2019). Ares et al., (2018) used Kahoot! as a test facility and see the difference in the student graduation rate. From his research, it was found that the application had a positive impact on student performance in exams, where the pass rate was higher. Student perceptions of Kahoot! also tend to be positive. This can be seen from the research by Perdana et al., (2020) the results of all students have a good perception (48% very good; 44% good) of its use in Indonesian subjects. In his literacy study of 12 articles published in India, Pakistan, Sri Lanka, the United Kingdom, Malaysia, Finland, the United States, Austria, and Turkey, he reported that the majority wrote positive perceptions of Kahoot! in the big theme of motivation, performance, and learning atmosphere (Donkin & Rasmussen, 2021). Separately Wang & Tahir, (2020) shows the results of their literacy study of 93 articles about Kahoot! and 97% prove the application has an impact on learning performance, only 8% of articles include challenges, problems, and no impact on Kahoot! in learning. In his findings on learning English, the use of Kahoot! useful for motivating learning, building a learning atmosphere, helping students to focus, and facilitating positive competition (Lofti et al., 2021).

Researchers take advantage of Kahoot! as an assessment instrument for midterm exams through multiple-choice quizzes with a total of 15 questions. The content of the questions is related to educational technology courses that students have studied so far. Researchers are interested in knowing student perceptions after taking the exam through a quiz made with Kahoot!

Methodology

The research approach used is descriptive qualitative. Data was collected using an attitude assessment questionnaire which contained statements of negative and positive attitudes from 1 – 5, a Likert scale. The data consists of ratio data and verbal data. The research involved 61 students taking educational technology courses. Questionnaires were distributed after the implementation of UTS (Mid Semester Examination) using Kahoot! The data were then analyzed using descriptive statistics by presenting the data in the form of tables and diagrams. The average score is calculated using the formula:

$$p = \frac{f}{n} \text{ x } 100\%$$

Explanation:
p : Percentage
f : Total Scores
n : Max. Total Scores

The results of the analysis are then converted to the following table to determine the level of student perceptions of Kahoot!.

Table 1. Perception level conversion(Witari & Suryana, 2020)

Score Ranges	Perception Categories
85 - 100	Very Positive
70 - 84	Positive
55 - 69	Positive Enough
40 - 54	Negative
0 - 39	Very Negative

An overview of student perceptions of game-based learning Kahoot! obtained through 3 main indicators which are then developed into a statement in the questionnaire. These indicators include the ease of understanding how the application works, the ability of the application to involve participants, and the relevance of quizzes to learning activities. The following are the statements contained in the questionnaire.

Table 2. Student perception questionnaire

Question items	VD	D	E	A	VA
1. Quiz is easy for participants to play					
2. The rules in the quiz are easy to understand					
3. The appearance of the quiz is classified as "user-friendly"					
4. Quiz can be played by many participants					
5. Quizzes increase the enthusiasm of the participants					
6. Quizzes provide challenges to participants					
7. Quiz has an attraction for participants					
8. Quizzes build impressions on participants					
9. Quizzes are suitable for learning assessment					
10. Quizzes can be developed according to learning objectives					
What do you think after doing a quiz developed using Kahoot? application?					

Results and Discussion

Results

Out of a total of 90 students, 61 students gave their responses to 10 statements related to game-based learning Kahoot! Following are the results of the data analysis.

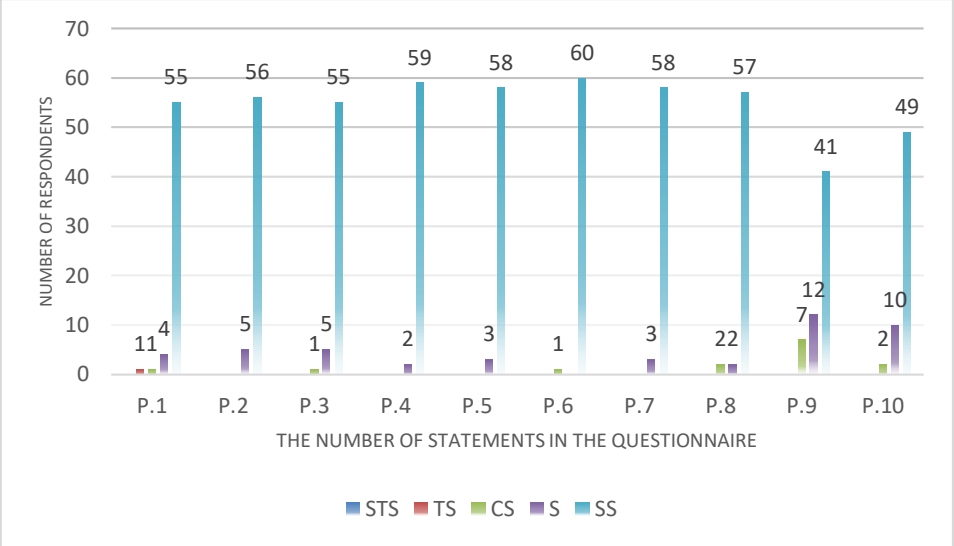

Diagram 1. Questionnaire filling results

The highest response was given by students to the sixth statement (S.6) related to the quiz which provided a challenge for students with 60 students who answered strongly agreed. The lowest response is in the ninth statement (S.9) regarding the relevance of quizzes to learning assessment with 41 students who answered strongly agree. Every single statement in the questionnaire received a strongly agree response from around 55 students. Of all the statements presented in the questionnaire, there was only 1 disapproving response given by the student. This is related to statement 1 (S.1) about the ease of playing quizzes on Kahoot!

Table 3. Average Score and Percentage of Each Statement in the Questionnaire

Statement	S.1	S.2	S.3	S.4	S.5	S.6	S.7	S.8	S.9	S.10	Average
Average Score	4.9	4.9	4.9	5.0	5.0	5.0	5.0	4.9	4.5	4.8	4.9
%	97.0	98.4	97.7	99.3	99.0	99.3	99.0	98.0	90.2	95.4	97.3

S.5, S.6, and S.7 get an average score that is almost perfect with an agreement rate of 99%. The lowest average score is at S.9 with an agreement level of around 90.2%. The average score for each statement item is 4.9 with a percentage of around 97.3%. This figure, when compared with Table 1. Perception Level Conversion is in the score range of 85 - 100, which means that student perceptions of game-based learning Kahoot! very positive.

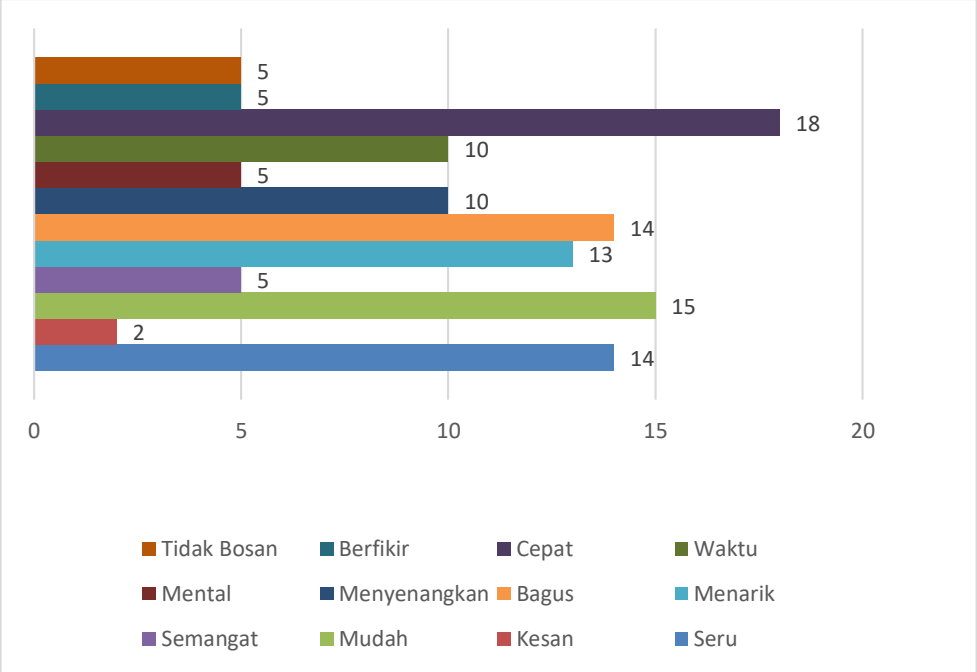

Diagram 2. Words that often appear in the opinion column

Fast words topped the list of words that appear most often with a total of 18 times. The word appears in the context of the duration of time to determine the answer to each question, which according to most students is too fast. This is also evidenced by the word time appearing 10 times. The word fast also goes hand in hand with the word think, where according to them quizzes train the speed of thinking and making decisions to determine the correct answer. Easy words are ranked second with the frequency of mentioning 15 times. Most of the students considered that the quizzes were made using Kahoot! easy to play and understand the rules of the game. Exclamation and good words appeared 14 times in the opinion column. These words appear related to the appearance, animation effects, images, and sound in Kahoot! which arouses the enthusiasm and enthusiasm of the participants to be actively involved in the game. In the next sequence, there are interesting words that appear 13 times, and fun words that appear 10 times. Words with a frequency of 5 times appear, such as enthusiasm, mentality, thinking, and not getting bored. The last sequence is occupied by the word impression.

An interesting note in the comments column is that 8 students complained that the duration of determining answers was too short, namely 10 seconds. This condition makes them more panicked and tense so they have the potential to choose the wrong answer. But many of them also consider that it is a challenge that makes the game more exciting and fun.

Discussion

The very positive perception that emerged from students could not be separated from the ability of Kahoot! in presenting game-based learning that is user-friendly because its appearance and way of working are easy to understand, especially for beginners, fun because it involves technological and psychological elements, and challenging because there is a time duration and a target score that

must be achieved to be a winner quiz. There are at least four benefits derived from using Kahoot! in the learning process namely increasing student learning motivation, building a positive atmosphere in the classroom, helping students to focus, and presenting a positive and competitive attitude (Lofti et al., 2021). Wang & Tahir, (2020) in their literature study of 82 research articles also stated that in general students had a significant positive perception of motivation, concentration, and learning atmosphere. *Kahoot! can increase the attractiveness, understanding, motivation, and involvement of students in the learning process* (Bicen & Kocakoyun, 2018). *Kahoot! not only suitable for theoretical learning but also practical learning, because of its ability to provide reinforcement and retention of the knowledge and experience learned* (Lin et al., 2018). As researched by Robiyati et al., (2020) in the Phonology class, where participants felt that learning using Kahoot! very fun and help them to understand the material discussed. The application makes the class atmosphere more active, collaborative, and participatory in both regular classes and independent classes (Zhang & Yu, 2021). The interaction that is built between students and students or teachers can form a positive attitude, especially in collaborative or group learning designs on Kahoot! (Martins et al., 2019).

Animation effects, audio, and background music stimulate students to actively participate and compete in the game (Boden & Hart, 2018). Background music, when students are racing against time to determine the correct answer, makes students more focused and concentrated because the rhythm of the music brings a serious and tense atmosphere (Lofti et al., 2021). Two types of emotions arise when students play Kahoot! namely positive emotions such as fun, excitement, focus, and excitement, and negative emotions such as tension, panic, and worry (Warsihna & Ramdani, 2020). Every student has a different emotional state because it depends on the challenge, readiness, and initial psychological condition, as well as the difficulty level of the game designed. In the learning context, Kahoot! can be used as an instrument for an icebreaker, independent study, and assessment of learning outcomes (Yürük, 2019). The application is proven to be able to improve learning outcomes, foster interest in learning, raise enthusiasm, and make learning more meaningful (Irwan et al., 2019). Andari, (2020) conducted a comparative test on the use of Kahoot! with PowerPoint. The results of his research revealed that students learning to use Kahoot! higher learning outcomes than those using PowerPoint because experimental class students were more active and directly got feedback from the assessment results which indirectly strengthened retention of the material being studied. In terms of being an assessment instrument, the application minimizes tension and worry during the exam process because the implementation and assessment take place in real time. Kahoot! make students more curious, ambitious, and interested when the level of play is increased (Yürük, 2019).

Kahoot! as a game-based learning platform or Student Respond System (SRS) is supported by Tom W. Malones theory of intrinsic motivation which consists of three categories namely challenge, fantasy, and curiosity (Malone, 1981). Challenge is the level of difficulty encountered in the game to achieve goals. In the quiz on Kahoot!, all participants feel challenged to complete their mission, namely to pass the test and become a winner in the game. Another challenge comes from the game system where participants are given 10 seconds to determine the correct answer and the score points obtained by participants are very dependent on time,

the faster participants choose the correct answer, the greater the points obtained. This aspect is also justified by several previous studies (Licorish, 2018; Pattanapichet, n.d.) The fantasy created is turning the class into a game show where the teacher becomes the host and the students become the contestants. The fantasy is enhanced by sound and animation effects, graphic design, scoreboard, participant avatar icons, and background music which further enlivens the positive atmosphere. The fantasy above in several previous studies was considered to be able to create a positive learning environment (Aktekin et al., 2018; Baydas & Cicek, 2019; Ebadi et al., 2021; Turan & Meral, 2018). Curiosity in playing quizzes on Kahoot! appears because the correct answer is displayed in real-time after working on each question, the score obtained by the participant automatically appears on the device screen after the time has ended, and the ranking scoreboard is displayed before entering the next question. This is regardless of whether their answer is right or wrong. Kahoot! is also in line with what has disclosed Dale (1969) in the "Cone of Experience" where the more students are involved in learning activities, the greater the percentage of the gain obtained. Glasser in "Learning Pyramid" also emphasized that the degree of retention is highly dependent on the methods and media used by the teacher in the classroom. The learning process should not only focus on memorization because students will easily forget after they are tested. Kahoot! is multimedia based on cognitive theory which according to Mayer (2009: 64) has three assumptions namely dual-channel, limited capacity, and active processing. At least humans have two motor sensors that can capture visual and auditory information. From the eyes and ears, information is passed on to the brain to be selected by sensory memory into short-term and long-term memory. The cognitive load experienced by participants when playing with the application is relatively light because the quiz used in Kahoot! is in the form of multiple choices that are presented briefly and clearly and rely more on what students already know and have learned.

The main challenges in using Kahoot! are internet access, an LCD projector, and Bring Your Own Device (BYOD) (Wang & Tahir, 2020). Internet is the main requirement to be able to access the application. These facilities must be fulfilled and have a stable speed because the more people are involved in the game, the more difficult access will be to process the page. An LCD projector is needed to display the main screen that is used by the host/presenter to monitor which participants have succeeded in joining and have not succeeded in joining. In addition, the main screen is also used to display quiz questions, scoreboards, and champion podiums. BYOD is a movement to bring personal devices for learning purposes. Participants can bring smartphones, laptops, or the like to be able to participate. The device is used to respond to questions in the Kahoot! quiz. Technical problems were encountered, including the speed of the internet context which was different for each device so that sometimes the background music stopped, text, images, and answer choices did not appear, and the participants left the game automatically. Participants had difficulty reading the questions and answers on the main screen due to inadequate lighting in the room. Participants also complained about not being able to change the answers they had chosen even though there was still time to answer. Short answer times can also put participants under pressure which can be frustrating, and stressful for fear of losing the game.

Conclusion

Based on the results of the research above, it can be concluded that the perceptions of Islamic Religious Education students towards Kahoot! as a quiz are very positive. This can be seen from the three main indicators, namely the ease of understanding how the application works, the application's ability to involve participants, and the relevance of quizzes to learning activities. Most students think that Kahoot! provide new experiences that are interesting, fun, and challenging. They are motivated and actively participate in taking quizzes. The findings need to be studied in more depth to see the consistency of the influence exerted by Kahoot! on students' positive perceptions through regular measurements.

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