

## STUDENTS' PERCEPTIONS OF GAMIFICATION APPROACH BY USING KAHOOT!: A SURVEY STUDY

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### ABSTRACT

Technological innovation has created various learning models and tools that can increase the effectiveness of the learning process. There are a wide variety of learning software and platforms designed to support teachers in their teaching process and help them create a sustainable learning environment. Research has shown that infusion of 'gamification' software can influence and improve student learning outcomes and create a positive learning environment. This article reports a survey study conducted among 32 students from 8D SMP N 36 Semarang who had experience using Kahoot! in the learning process. This study used the closed-ended questionnaire consisting of 10 statements regarding the students' perceptions for gamification approach and the use of Kahoot!. The questionnaire of the Likert Scale consists of 4 (four) alternative points, specifically: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The four-choice scales were used to force respondents to choose one of the points because the points "Neutral" were not available. The results show that almost all participants have positive experiences when participating in learning process that integrates the gamification approach and Kahoot!. The majority of participants reported that they were able to be actively involved in their learning process while using Kahoot! platforms. Adaptive software and platforms like Kahoot! enable students to engage and actively participate in their learning process, and thus provide a more meaningful and rich learning experience.

**Keywords:** Students' perceptions, Gamification approach, Kahoot!.

### INTRODUCTION

In this digital era, technology has intervened in most aspects of our lives. In fact, technology has changed the way our world works and develops. Technology has made big changes in our personal lives, the business world and various

industries in the world (Dellos, 2015). It is very interesting to see how the intervention of technology into every part of our lives and our environment has made a huge impact by promoting efficiency and increasing the productivity and quality

of the work we do. There is no doubt that the intervention of technology into our education system is reshaping the future of education. The introduction of technology into our education has undoubtedly created a variety of innovative learning models and tools that increase the convenience and effectiveness of the entire learning process. As well as providing great assistance and benefits to students, the advent of new technological hardware and software has equipped teachers with the right tools they need to increase student engagement in their teaching process.

Technology always has been an important part and played a key role in the learning and teaching process (Ahmadi, 2018). The role of technology as an alternative tool for teaching is increasing because educators want to develop a self-directed and collaborative learning environment where students may learn and practice a new language. There are various types of learning software developed to assist teachers in the learning process. Adaptive learning software helps teachers use variations on game elements to motivate, provide feedback, and structure participatory courses. Various studies involving educational settings have proven that the infusion of 'gamification' in the teaching and learning process has the

ability to influence subjective experience as well as behavior and learning outcomes. The features of gamification-based software such as interactive and responsive make this type of adaptive software very suitable for use in the learning process. Studies should examine how students' experiences with such gamification-based activities can lead to higher engagement in their language learning process.

Most teachers have started integrating technology into their learning process. Teachers have initiated this practice to attract and motivate student participation in learning activities. One technology software that has proven invaluable in language classes is Kahoot!. Kahoot! can be used as a teaching tool as well as an assessment tool. This paper report on perspectives of students on gamification approach and their experiences using Kahoot! platform. This study aims to determine students' perspectives on the gamification approach using Kahoot! in the existing learning environment. The Kahoot application is the most popular gamification program and our goal is to find out the effect of this gamification approach on students' interest and motivation and determine their perceptions.

### **Students' Perception**

Perception is one of the activities that are often carried out by many people. Most of them do these activities in order to give their opinion freely with what they feel. Human perception is an essential psychological factor in how they respond to the presence of numerous features and symptoms in their environment. Perception is a wide concept that encompasses both internal and external factors. Perception has been defined in a variety of ways by many experts, all of which have the same meaning in principle. Perceptio is Latin from perception. Perceptio means identification and interpretation of sensory data collected or received to express the information or environment presented (Schacter DL, 2011). According to the dictionary of psychology, perception means: perception, sight, response; is the process of one becoming aware of everything within through the broken senses; or environmental knowledge acquired through the interpretation of sensory data. Perception in a narrow sense is vision, how does someone saw something. Chen (2003) argued that students' perception is essential to evaluate teaching effectiveness. By knowing students' perceptions, teachers may adjust to what is more suitable according to students, whether about the materials' teaching.

Hence, students' perception is essential, both for teachers and students.

### **Gamification Approach**

Gamification is the concept of using game-based activities and the process of using video games to engage the audience or solve problems (Icard, 2014). Gamification is applied in education by incorporating educational assessment into video games. The creation of interactive games for teaching in the classroom promotes independent and collaborative learning. Gamification also improves critical thinking skills and problem solving. Gamification aims to make the learning process much more interesting and promotes a fun learning environment that motivates students. In-game progress indicators also make learning and self-evaluation much more visible. Since games are often part of everyday life among students, they are much more comfortable in gaming environments. This helps students to embrace new learning tools. Using game mechanics as learning material develops an effective learning experience. Theoretically, a fun and enjoyable game environment increases student response and participation in the learning process resulting in positive learning outcomes (Dellos, 2015).

### **Kahoot!**

Kahoot! is a platform that contains quizzes, discussions, and surveys using a gamification mechanism. Kahoot! was found in 2013 and instantly became a global education brand. Kahoot! has its own unique features of a distinctive game and teaching model that is interactive and competitive. The Kahoot Principle! creating a game-based platform for students to enjoy learning in a fun, interactive, and competitive way. Instead of the traditional method of reading textbooks and notes, Kahoot! users are encouraged to learn, play and socialize in the classroom so as to make the learning process active (Graham, 2015). Kahoot! is a game-based response system in the classroom that is played by the whole class at the same time or 'live' time. Example of Kahoot! The application in class is when learning questions will be projected on a screen where students will have to answer questions displayed on the screen via technological devices such as tablets, smartphones or computers.

Students playing Kahoot! use their own devices. The teacher projects the game on a projector that students can view remotely. The teacher then starts the Kahoot! quiz. There is a unique game code that students need to enter into their device of choice before starting the quiz. When students use this code, they'll be

synced into a quiz that's been created especially for them by their teacher. Students then look at the projected game board to get questions and answer choices. On their set, students see a two-by-two grid with different colors and related shapes. Depending on the choice of answers and speed, Kahoot! will give scores to students. After each question, a leaderboard will be shown to the students, as well as the overall leader after the round. Students continued to do this during the Kahoot! quiz to find the overall winner of the game. Students can see in real time their scores and how they are performing against their peers. This gives them the feeling of competing with their peers in real time. Responses to questions were also given, i.e. an indication of whether the attempt was right or wrong. So students, get instant feedback.

### **Kahoot! In the Learning Process**

Kahoot! in the classroom provided many useful values for both the teachers and students. Many higher education institutions are beginning to work on customizing technology such as Kahoot! in classroom activities. Research has shown that students' engagement and collaboration when Kahoot! is used is relatively high (Icard, 2014). Students enjoy participating using Kahoot! in learning process because the content is

appealing and fun. Students also compete with their peers in real time and this gives them a sense of competition. The features of Kahoot! also enable teachers to analyze and assess if students truly understand the learning material through the use of Kahoot! quizzes and surveys.

Kahoot! also allows teachers to effectively and efficiently evaluate the understanding level of students. Kahoot! provides teachers the ability to track student performance in the games and to reassess

and make relevant adjustment in their teaching approaches in some instances. Teachers can also use Kahoot! that was initially made by public users or even create their own Kahoot! platforms for their own teaching activities. In learning process, these features of Kahoot! and the flexibility offered by Kahoot! allow teachers to create unique lessons that are fun and effective as well as monitor their students' progress through quizzes and surveys.

## **.METHODS**

To investigate students' perceptions of gamification approach by using Kahoot!, the researcher employed a descriptive data analysis to obtain detailed descriptions or information about students' perceptions.

The study was conducted in March 2023. An instrument was employed to collect the data, namely a questionnaire adapted from Mulyani (2020). The study used the closed-ended questionnaire consisting of 10 statements regarding the students' perception for gamification approach and the use of Kahoot. The Likert scale was used to analyze the questionnaire. According to Malhotra (2006) the Likert scale is one of the most commonly used itemized scales. The questionnaires of Likert Scale consist of 4 (four) alternative

points, specifically: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The four-choice scales were used to force respondents to choose one of the points because the points "Neutral" is not available (Sugiyono, n.d.), so that the respondent could not choose a neutral option.

The population of this study was 8th grade students of SMP N 36 Semarang. In this study, the researcher was using convenience sampling techniques. The participants of this questionnaire are students who only had experience in using Kahoot!. The total students are 32 students from 8D. The class was selected by looking at the same characteristics related to this study. The students were asked to

fill out a closed ended questionnaire using Google Form to find out and gain the information of their perceptions of

gamification approach and the use of Kahoot!.

## RESULTS AND DISCUSSION

This section reports the findings from the questionnaires distributed to the 32 participants from SMP N 36 Semarang. All the items in the questionnaire were

tabulated based on percentages. The data was analyzed using descriptive data analysis. Table 1 shows the findings of the study from the questionnaire.

Table 1. Student Perceptions on Gamification Methods

| No | Statements   | Strongly Agree | Agree | Disagree | Strongly Disagree |
|----|--|----------------|-------|----------|-------------------|
| 1  | Gamification methods are fun   | 59,4%          | 40,6% | -        | -                 |
| 2  | A gamification method increases my interest in the lesson  | 43,8%          | 56,3% | -        | -                 |
| 3  | I study more to become more successful via gamification methods  | 46,9%          | 53,1% | -        | -                 |
| 4  | Being placed in competition with other students in the classroom via a gamification method increases my motivation | 40,6%          | 59,4% | -        | -                 |
| 5  | I want gamification methods to be used in other lessons as well  | 37,5%          | 62,5% | -        | -                 |

Based on Table 1, overall for all items, participants mostly chose between 'strongly agree' and 'agree' for the statements. The students have positive reactions to most statements. The analysis of statement 1 shows that 59,4% 'strongly agree' with the statement followed by

40,6% who 'agree'. None of the students have 'disagree' or 'strongly disagree' perception. Based from the results of statement 2, a majority of 56,3% students 'agree' while 43,8% 'strongly agree' that a gamification method increases their interest in the lesson, and none of the

students have ‘disagree’ or ‘strongly disagree’ perception. For item 3, all the students either ‘strongly agree’ or ‘agree’ that they study more to become more successful via gamification methods with 46,9% and 53,1% respectively. For statement 4, 59,4% students ‘agree’ and 40,6% students ‘strongly agree’ being placed in competition with other students in the classroom via a gamification method increases their motivation. 37,5% of students ‘strongly agree’ for statement 5 that they want gamification methods to be

used in other lessons as well. This is followed by 62,5% who ‘agree’ response. These five items are concerned with students’ perceptions on gamification methods. Almost all students were highly positive their reactions for statements 1, 2, 3, 4 and 5. In this study, students stated that the gamification method was a fun method and could increase students’ interest and motivation as well as increase the level of competition in the class. Gamification can be used as an appropriate method in the learning process.

Table 2. The Effectiveness of Kahoot!

| No | Statements   | Strongly Agree | Agree | Disagree | Strongly Disagree |
|----|--|----------------|-------|----------|-------------------|
| 1  | Kahoot! increases interest in the lesson   | 40,6%          | 59,4% | -        | -                 |
| 2  | Activities created using Kahoot! are more interesting                                    | 53,1%          | 46,9% | -        | -                 |
| 3  | Using Kahoot! in learning process increases student motivation                           | 43,8%          | 56,3% | -        | -                 |
| 4  | The scoring system of Kahoot! increases the ambition of students to be a top-five scorer | 40,6%          | 56,3% | 3,1%     | -                 |
| 5  | The application can be easily used on all platforms                                      | 56,3%          | 40,6% | 3,1%     | -                 |

According to table 2, the students also have positive reactions to most statements. For statement 1, 59,4% students ‘agree’ that Kahoot! increases interest in the lesson. This is followed by 40,6% who ‘strongly

agree’ towards this statement. The analysis of statement 2 shows that most students ‘strongly agree’ that the activities created using Kahoot! are more interesting with 53,1% and 46,9% who ‘strongly agree’ and

'agree' respectively. For statement 3, the responses show that 56,3% and 43,8% students 'agree' and 'strongly agree' with the statement that using Kahoot! in learning process increases student motivation. 56,3% and 40,6% respectively 'agree' and 'strongly agree' with statement 4 that states the scoring system of Kahoot! increases the ambition of students to be a top-five scorer. Meanwhile, 3,1% students are 'disagree' with the statement. For statement 5, there are 40,6% 'agree' and 56,3% 'strongly agree' with the statement the application can be easily used on all platforms while 3,1% students are 'disagree' towards the statement.

The findings show that almost all students have positive experiences and feelings about implementing the gamification approach and Kahoot! in their learning process. None of the students strongly disagreed with any of the ten statements. Only in table 2, statements 4 and 5 "The scoring system of Kahoot! increases the ambition of students to be a top-five scorer and the application can be

## CONCLUSION

Based on the study, it can be seen that the gamification approach and Kahoot! can engage students in their learning process and provide a positive learning experience. Students who participated in this study

easily used on all platforms" showed a 'disagree' reaction by 3.1% of students. For most of the statements, most of the students agreed or strongly agreed with the statements. It is shown that these students have positive perceptions about using the gamification approach with Kahoot! in their class.

This study have shown that the Kahoot! is easy to use and a platform that both teachers and students can benefit from. Kahoot has proven to be the right app for teachers to encourage students in the classroom and add competition to the learning environment. Kahoot encourages learning and creates a fun and competitive environment. Thomas (2014), Kahoot is recommended for educators because it is quick and easy to access. Turan & Goktas (2015) observed that one of the elements that students liked the most in the reverse class was the Kahoot gamification application. In connection with this it can be concluded that gamification activities must be considered in designing learning.

expressed positive experiences and outcome in their classes when they were involved in activities through Kahoot!. The students involved in this study stated that the Kahoot! such as real-time based activities,



competing with peers, allowing them to track their progress and interactive nature.

Kahoot! enabling teachers to be creative and enhance student learning experiences. Kahoot! is a game-based platform that gives students a sense of competing in real time. Feedback is also provided instantly, so students can monitor their own learning pace and progress. Kahoot! is a modification and increase in the use of information and communication technology in education and games. Kahoot! it is relatively easy to design and offers students a fun and interactive learning experience. This is very useful and effective for increasing students' interest and motivation in the learning process. As the results of this study shows, almost all students found the gamification approach and Kahoot! it has become an effective tool in their class and they find it fun and competitive when engaging in Kahoot! based activities.

Kahoot! is an excellent choice for teaching all levels of students, in any subject. These technologies provide a positive learning environment in the classroom, increasing energy and adding to the fun of learning. Motivation is another factor that needs to be considered. Kahoot! it is also an effective assessment tool that record all results, scores and percentage of questions online and also downloaded manually. Students of all levels can benefit from engaging in a game-based learning platforms such as Kahoot!. Games made on Kahoot! the platform can also be saved for other classes and teachers can reuse and adapt the game for other classes in the future. Kahoot! provide a positive learning experience to students as shown in this study. Kahoot! it is also a tool for teachers to involve their students in the learning process and also to develop human resources who are proficient in technological change.

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