
The excess of Kahoot for pre-service teacher as an evaluation tool

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ARTICLE INFO

Original Article

doi: 10.18860/ijtlm.v2i1.9115

Keywords:

Kahoot, Pre-service Teacher's Response, Likert Scale

ABSTRACT

Technology-based instrument is one of the main factors in improving the quality of learning in the classroom. The purpose of the study was to see pre-service teacher' response using Kahoot as evaluation tool. This study was carried out on third year students in Universitas Khairun. The study employed a questionnaire that consists of 15 items about the excess of Kahoot. A total of 23 subjects participated in this study. The students highly perceived Kahoot as a game that can increase self-confidence, a fun game, interesting game, and the most useful tools to be used later when the students become teacher.

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How to cite: Angkotasari, N., Tonra, W. S., & Taib, S. (2019). The excess of Kahoot for pre-service teacher as an evaluation tool. *International Journal on Teaching and Learning Mathematics*, 2(1), 15-20.

1. INTRODUCTION

In the era of the industrial revolution 4.0, all sectors utilize sophisticated technology. In education environment, using technology is a must nowadays in the classroom. Both teachers and lecturers are required to be proficient in the use of technology, so that students are also able to implement it in everyday life. In line with this, Eyyam and Yaratan (2014) stated that technology can increase academic success in classrooms and students have a positive attitude towards the use of technology.

The most important and effective factors on the quality of education and learning are improving teaching skills, having appropriate programs and conditions in the curriculum, using new instruments of education and teaching (technology-based instruments) can provide better educational and learning conditions and can increase levels student satisfaction (Zohrevand et al., 2010). Hirata (2018) stated in technology-implemented classrooms, the involvement of interactive learners in the learning process is fostered, and learning becomes more fun and more interesting for the students. One of technology based to help students is gamification. The aim of gamification is to make the learning process more attractive to learners. A novel learning experience that increases student motivation can be created in a learning environment that includes competition (Bicen & Kocakoyun, 2018) Although the gamification process is not new in education, the technologies that are supporting these interventions have been evolving, from single use to collaborative and distributed contexts (Holmes & Gee, 2016). Therefore, technology-based teaching factor is one of the main factors in improving the quality of learning in the classroom because it is able to create an atmosphere that is not boring for students so that it is considered to be able to improve the ability of students in learning, especially in subjects that are often a scourge for students like mathematics. According to Licorish et al. (2018), the

use of educational games in the classroom is likely to minimize distractions, thereby improving the quality of teaching and learning beyond what is provided in conventional classrooms. Other factors that contributed to students' enhanced learning included the creation and integration of appropriate content in Kahoot, providing students with timely feedback, and game-play (gamification) strategies.

Mathematics is one of the essential subjects in education because it plays an important role in human life. Unwittingly, human activities cannot be separated from calculations and numbers. Therefore, learning good mathematics is needed by humans in supporting survival (Tonra, 2018). Success in mathematics really depends on how teachers design class directly, so that they can lead students to think critically and creatively. One of the teacher's tasks is to evaluate students to find out whether or not the learning objectives are achieved. Therefore, an evaluation tool must be made which is of course adapted to certain rules. To achieve the utilization of technology and the manufacture of adequate evaluation tools, one of the solutions offered is the use of Kahoot in teaching and learning process.

Kahoot is a based game platform that was launched in August 2013 from Norway. Kahoot is now played by more than 50 million people in 180 countries. Designed to be used by all age levels and all subjects. Learners can access on personal devices such as laptops or android mobile phones respectively. One of the advantages of Kahoot is the interesting and interactive features so that it can provide motivation for students in answering questions as evaluation material made by teachers. Kahoot contains 3 features namely quiz, survey and jumble. Teachers can choose just one of them or use all four features. Kahoot has several advantages. First, Kahoot stimulates students to think quickly because it has a timer that can be set by the teacher. In addition, Kahoot gives a score for the correct answer at the end of the session so that makes students curious, even sometimes students shout out in excitement when knowing the score obtained.

Kahoot can be used in teaching and learning activities such as pretest, posttest, practice exercises, remedial, enrichment and others, the uniqueness of Kahoot is that each answer choice represents a different picture and color (Bicen & Kocakoyun, 2018; Dellos, 2015; Plump & LaRosa, 2017; Zarzycka-Piskorz, 2016). Kahoot is an educational based interactive game in which there are several icons to be developed. One of them is a quiz icon where users can create quizzes using Kahoot for a learning so that learning becomes interesting and not boring (Tsihouridis, Vavougios, & Ioannidis, 2017). Kahoot is equipped with a timer in each question that is made so that the evaluation process is more exciting and makes students feel challenged.

Plump & LaRosa (2017) stated that one of the game based emerging learning platforms used in educational institutions is Kahoot. It is freely available, a real-time game-based learning platform that has received wide acceptance globally with more than 30 million users worldwide. This enables teachers to create quiz-based, survey and several other games where participants compete with each other. The participant with the highest to lowest score will be displayed on the scoreboard at the end of the match will display the winner. The good thing about Kahoot, the results including descriptive analysis data can be exported and stored by teachers for the future as a reference. It allows teachers to create game-based quizzes, surveys and a few more things in which the participants compete against each other. Top responders for each question are revealed and the overall winner(s) will be displayed at the end of the Kahoot session (Johns, 2015).

Kahoot is an interesting game and helps in increasing their mastery of the material provided in each session (Batsila & Tsihouridis, 2017; Fotaris, Mastoras, Leinfellner, & Rosunally, 2016;

Palma, Tobías, Prieto, León, & Ruiz, 2018). Additionally, this game can increase their competitiveness among their friends and increase their interest and motivation in learning. Learning motivation is one of the important aspects in the learning process. Kahoot is able to create a passionate and motivated atmosphere so that it is considered capable of bringing about positive change.

Collaboration on the use of website-based game technology and adequate mathematics learning is considered to be able to improve the quality of learning in the classroom, therefore it is urgent to examine this in order to provide its own color in mathematics learning in particular and other learning. One branch of mathematics is English mathematics. The use of Kahoot for English Mathematics is expected to be able to give a positive impression for students. The purpose of this study to see pre-service teacher’s response using the Kahoot Game as an evaluation tool

2. METHOD

This type of research is a qualitative descriptive study that aims to describe all responses after using Kahoot in evaluations that was given to students through a questionnaire. According to Moleong (2013), research with a qualitative approach is study that is used to holistically understand the phenomena experienced by research subjects in a special natural context by describing them in the form of words and language by natural methods. This study was carried out on third year students in Universitas Khairun, Indonesia. The study employed a questionnaire that consists of 15 items about the excess of Kahoot. A total of 23 subjects participated in this study who were in English mathematics course. The participants rate each item using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Description of Likert scale is on Table 1.

Table 1. Likert scale score for questionnaire

Score	Answer
5	Strongly Agree
4	Agree
3	Neither
2	Disagree
1	Strongly Disagree

Furthermore, each item is calculated using the following formula: $P = \frac{f}{N} \times 100 \%$.

P = Percentage

f = Score of all questionnaire

N = Maximum Score

From the results of the data analysis, conclusions can be drawn about students' responses to the evaluation tools using the application Kahoot as shown in Table 2.

Table 2. Response category (Arikunto, 2009)

Score	Classification
80% $<x \leq 100\%$	Very Proper
60% $<x \leq 80\%$	Proper

40% $<x \leq 60\%$	Neither
20% $<x \leq 40\%$	Improper
0% $\leq x \leq 20\%$	Very Improper

The questionnaire items will be shown in Table 3.

Table 3. Questionnaire items

Item	The Excess of Kahoot
1	This game fosters interest in evaluation course process
2	This game is fun for me
3	This game makes good use of technology in the learning and evaluation process
4	Every question in this game makes me excited
5	Through this game my knowledge has increased
6	This game can be used in all subjects
7	This game is able to increase self-confidence
8	The scoreboard makes me nervous
9	Every time my answer is wrong, I am increasingly encouraged to answer correctly in the next number of questions
10	Seeing who is the 1st place friend on the scoreboard makes me want to also be 1st place
11	This game makes me want to study better in order to get the maximum score
12	This game is useful for me both as a student and as a prospective teacher later
13	When I become a teacher, I will use this game in the learning process in my classroom
14	When I become a teacher, I will use this game in the student examination process
15	When I become a teacher, I feel that I can save my time both in conducting tests and correcting test results

3. RESULT AND DISCUSSION

Analysis of Kahoot Questionnaire: The total score is the sum of the scores of each statement item multiplied by the weight of the score according to the Likert scale. Maximum score is the maximum score on the Likert scale multiplied by the number of items, so that $5 \times 15 = 75$. Total expected score is the maximum score multiplied by the number respondent, so $23 \times 75 = 1725$. Calculation of percentage is as follows.

Table 4. Score per item

Object	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Item 1	-	-	1	10	12
Item 2	-	-	1	6	16
Item 3	-	-	1	12	10
Item 4	-	2	2	10	9
Item 5	-	-	-	14	9
Item 6	1	-	3	14	5
Item 7	1	-	3	12	7
Item 8	-	2	5	8	8
Item 9	1	-	1	8	13
Item 10	-	3	-	8	12
Item 11	-	-	-	9	14
Item 12	-	-	-	9	14
Item 13	-	-	3	12	8
Item 14	-	-	4	12	7
Item 15	-	1	-	11	9
TOTAL	3	8	24	155	153

From Table 4, total score are Strongly disagree (SD) = 3 Disagree (D)= 8 Neither (N) = 24 Agree (A)= 155 Strongly Agree (SA) = 153.

$$\sum \text{score} = (\text{number} \times \text{SA score}) + (\text{number} \times \text{A score}) + (\text{number} \times \text{N score}) + (\text{number} \times \text{D score}) + (\text{number} \times \text{SD score})$$

$$\sum \text{score} = (153 \times 5) + (155 \times 4) + (24 \times 3) + (8 \times 2) + (3 \times 1)$$

$$\sum \text{score} = 765 + 620 + 72 + 16 + 3 = 1476$$

While the percentage of eligibility are as follows:

$$P = \frac{f}{N} \times 100 \% = \frac{1476}{1725} \times 100 \% = 85.56 \%$$

Based on the criteria in the eligibility table according to Arikunto (2009), the percentage of the total score is included in the category “Very Proper”. That means pre-service teacher think that Kahoot for evaluation is very proper to be used based on their answer on questionnaire. In line with the research of Ismail and Mohammad (2017), Kahoot is a promising formative assessment tool that is feasible, practical and makes learning fun and enjoyable. It can be used to motivate students to learn. According to Licorish et al. (2018), Kahoot fosters motivation and engagement through gamification, where teachers are able to provide real-time feedback to students, and to some extent adapt teaching activities based on students’ responses to quizzes. However, when utilizing Kahoot as evaluation tool, there is also a barrier faced by some students, that is the internet connection that must be always on when using this tool. So, it is better to make sure that all the participants have a good connection.

4. CONCLUSION

Questionnaire analysis of the excess of Kahoot in learning is that Kahoot for evaluation is very proper to be used because this game fosters interest in evaluation course process. This game is fun and makes good use of technology in the learning and evaluation process. Every question in this game makes participants excited. Through this game their knowledge has increased. This game can be used in all subjects and is able to increase self-confidence. The scoreboard makes them nervous, when their answer is wrong. It encouraged answering correctly in the next number of questions. Seeing a person who is the 1st place friend on the scoreboard makes themselves want to also be 1st place. This game makes them want to study better in order to get the maximum score. This game is useful for them both as a student and as a prospective teacher later, when they become a teacher. They will use this game in the learning process, when they become a teacher. They will use this game in the student examination process, when they become a teacher. They feel that it can save their time both in conducting tests and correcting test results.

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