

## Enhance Engagement Students Through Kahoot! In Online Lecture During Pandemi Covid-19

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### Abstract

Numerous schools worldwide have closed during Covid-19 pandemic but students has several distraction when they study from home. Schools and universities have to continue with preparing learning method in any occasion like online lecture. Some study results show an increase in linkages using digital applications, one of which is Kahoot. Therefore, this study aims to analyze the acceptance and relationship of students with lectures through Kahoot in online lecture. In this study, 67 students of pre-service Madrasah/ Primary teachers at a Siliwangi Islamic College were chosen as a participant. The age of the students ranged from 19 to 30 years and they were students who were taught by the researcher.

The research conducted of two phases. In the first phases, consist of an introduction, lectures, and Kahoot! Quiz each chapter. In the second phase students answering the questionnaire-based online using google form. Question points in the questionnaire included usability, ease of use, attitude, engagement skills, and interaction. The findings show that a whole respondents agree that Kahoot can improve their learning performance. In spite of encourage in taking a good notes and listening carefully in classroom, Kahoot is contribute students to having fun in the online lecture.

### Introduction

As we know, the quickly creating coronavirus emergency is ruling worldwide headlines and adjusting life. Numerous schools worldwide have closed. Schools and universities have to continue with preparing learning method in any occasion, when schools close. The New York Times (30/3/2020) provides an overview of the state of students when studying at home. Students complete school assignments in about 2-3 hours, but for them more tiring than being in school for 8 hours. Some students feel unenthusiastic because they do not have an internet network. Students has several distraction when they study from home. However, students feel more time for reflection and closer to their family. There are several factors for the success of lectures in the classroom. The process of building knowledge will occur well if students are ready to gain knowledge.

Some research has been done mainly to improve the relationship at students with lectures. Some study results show an increase in linkages using digital applications, one of which is Kahoot . However, no deeper analysis has yet been found to improve the relationship of students during lectures at the time with the number of distractions like online Classroom using Kahoot. Therefore, this study aims to analyze the acceptance and relationship of students with lectures through Kahoot! in online lecture.

Several studies referred to Kahoot as a tool to increase student engagement Kahoot being able to provide a fun, competitive, and immersive end to the class and strengthening end to class using gameplay is

## Enhance Engagement Students Through Kahoot!

a positive social learning strategy (Cameron & Bizo, 2019). Overall Kahoot Implementation! quite simple, pleasing aesthetically and inclusive. Kahoot can improve the nature of instructing and learning since decline interruptions in the class (Licorish, Owen, Daniel, & George, 2018). He uncovered that Kahoot! enhanced the nature of understudy learning in the study hall, with the highest influence reported on classroom dynamics, engagement, motivation and improved learning experience.

Their discoveries additionally propose that the utilization of instructive games in the study hall is probably going to limit interruptions, consequently improving the nature of educating and realizing past what is given in regular study halls. Other factors that contributed to students' enhanced learning, because Kahoot, providing students with timely feedback, and game-play (gamification) strategies. Gamified design is effective in engaged people who were bashful or distracted (Song, Ju, & Xu, 2017).

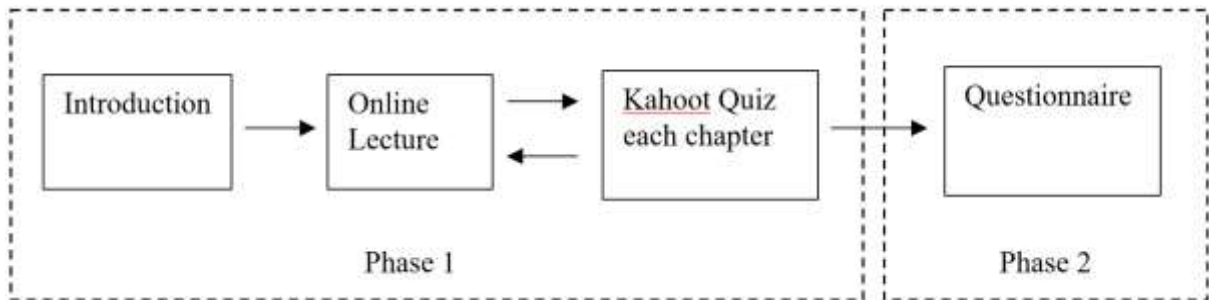
Students were motivated, enthusiast and able to manage their time through the questions. The outcomes show that the understudies were progressively persuaded, increasingly excited and ready to deal with their opportunity to think all through the test (Rosdiana, 2019). There was no strained air, and all understudies appeared to be cheerful and energetic in addressing each question.

Survey items

Items	Questions	Scale
<b>Demographic</b>	Gender	Male or female
	Age	Age Range
<b>Usefulness</b>	Using Kahoot! improves my learning performance	5 point Likert
	Using Kahoot! increases my learning outcome	5 point Likert
	Using Kahoot! enhances my desire to produce desired result in my learning	5 point Likert
	Using Kahoot! is useful in my learning	5 point Likert
<b>Ease of Use</b>	I find Kahoot! flexible to be used	5 point Likert
	The Kahoot! functionality and interface is clear and understandable	5 point Likert
	Interacting with Kahoot! does not require a lot of my mental effort	5 point Likert
	Overall, I believe that Kahoot! is easy to use	5 point Likert
<b>Attitude</b>	I think that using Kahoot! is a good idea	5 point Likert
	I like learning with Kahoot!	5 point Likert
	I look forward to those aspects of my learning that require the use of Kahoot!	5 point Likert
<b>Skill of Engagement</b>	<b>Kahoot! encourage me in:</b>	
	Taking good notes in online lecture	5 point Likert
	Listening carefully in online lecture	5 point Likert
<b>Interaction</b>	Making sure to study on regular basis	5 point Likert
	<b>Kahoot! contribute to me in:</b>	
	Having fun in the online classroom	5 point Likert
	Participating actively in small-group discussions	5 point Likert
	Helping fellow students	5 point Likert
	Asking questions when I did not understand the lecturer	5 point Likert

### Method

In this study, 67 students of pre-service Madrasah/ Primary teachers at a Siliwangi Islamic College were chosen as a participant. The age of the students ranged from 19 to 30 years and they were students who were taught by the researcher.



The research conduct of two phases as shown in Figure 1. In the first phases, consist of an introduction, lectures, and Kahoot! Quiz each chapter. In the second phase students answering the questionnaire-based online using google form.

Procedure of the research start from the beginning of the semester. Students were introduced to how to use Kahoot! in their home on their own devices like smartphones. Lessons were conducted based on the lesson plan. After each chapter is completed, a quiz using Kahoot! was held to assess the students understanding. At the end of the chapter, students were asked to fill a five-point Likert Scale questionnaire of 17 questions. All items used a 5-point Likert scale option ranged from 1 (Strongly disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly Agree). The other 2 items covered the demographic data of the students which are gender and age. Then, a focus-group interview was performed with randomly selected 5 students to evaluate their answers in detail. The personal details of the students who responded to the questionnaire and accepted to be interviewed were kept confidential.

The survey instrument was designed to assess students' acceptance of Kahoot! and their engagement in the learning process. Survey instrument design In measuring the students' engagement based on the Gamification Acceptance Model (GAM), a survey instrument to assess students' acceptance of gamification in their learning process based on Student Course Engagement Questionnaire (SCEQ) by Handelsman and the Technology Acceptance Model (TAM) by Davis et al. Questions can be grouped adapted from previous studies by Ab. Rahman, Ahmad, & Hashim (2018) as were perceived of usefulness (4 items), perceived ease of use (4 items) and attitude towards using gamification technology (3 items). Items contained skill engagement (3 items) and participation/interaction engagement (4 items). For measuring students' engagement after the use of certain technology, descriptive statistics used to describe the means, correlations, standard deviations and alphas of the variables as used in the study.

## Result and Discussion

### I. Phase 1

#### a. Introduction

Kahoot! is a game-based learning platform that makes it easy to create, share and play learning games or trivia quizzes in minutes. The format and number of questions is up to user. Add videos, images and diagrams to questions to amplify engagement.

## Enhance Engagement Students Through Kahoot!

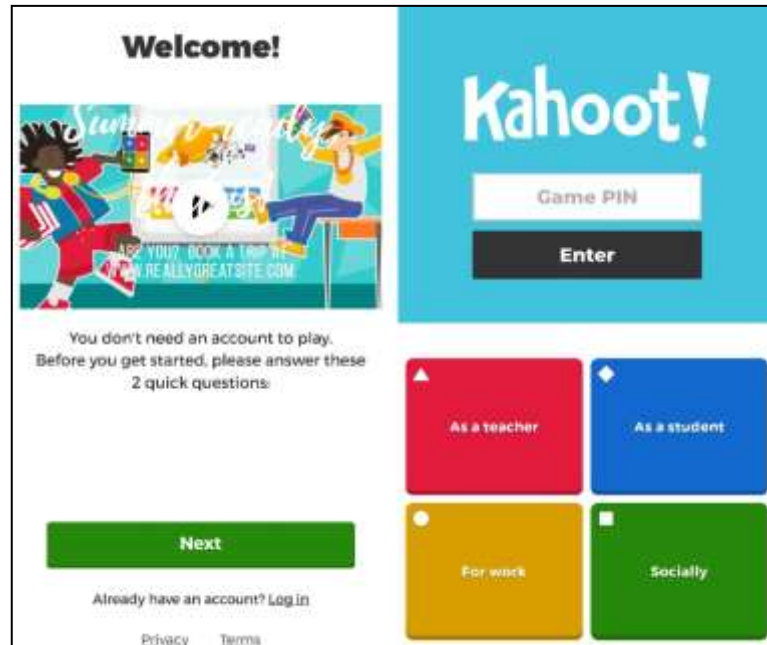


Figure 1 Kahoot installed in the smartphone

Kahoots are best played in a group setting. To join a game need a unique PIN. Lecturer is the game host. Players answer on their own devices, lecturer send kahoot challenges that players complete at their own pace. After a game, encourage players to create and share their own Kahoots.

b. Lecture

In the online lecture process, students enter Google Classroom to get instructions and assignments. The task is in the form of making concept maps. Concept maps will help students find concept definitions and the interrelationships between concepts. In addition, the concept map is able to reveal the students' misconceptions. so that the process of understanding the material will run more directed.

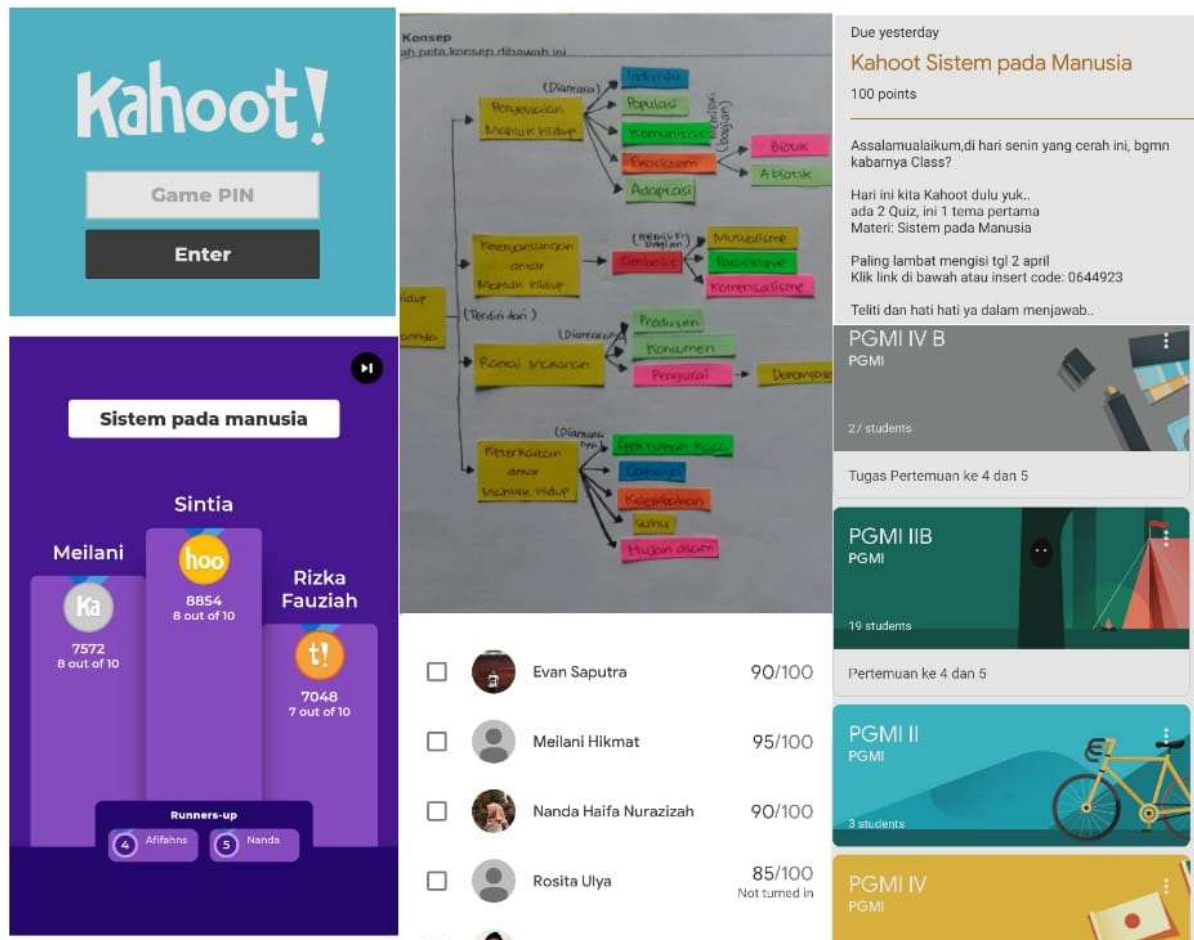


Figure 2 Online Lecture and Kahoot Quiz

c. Quiz each chapter

Quiz using Kahoot is conducted after the lecture process is finished each chapter. The grace period for filling is 3 days. Each question is given 30 seconds. The final point will come out right after students fill in all the questions. At the end a podium will appear for the 3 students with the highest grades.

II Phase 2

A. Demographic analysis

1. Gender and Age

Respondents fill in age and gender questions to find out the distribution of age and sex participants.

Table 1 and Figure 1 show the age percentage. Table and Figure showed the gender frequency.

Table 1  
Gender Frequency

	Frequency	Percent %	Valid percent	Cumulative percent
Male	11	15.7	15.7	15.7
Female	59	84.3	84.3	100
Total	70	100	100	

## Enhance Engagement Students Through Kahoot!

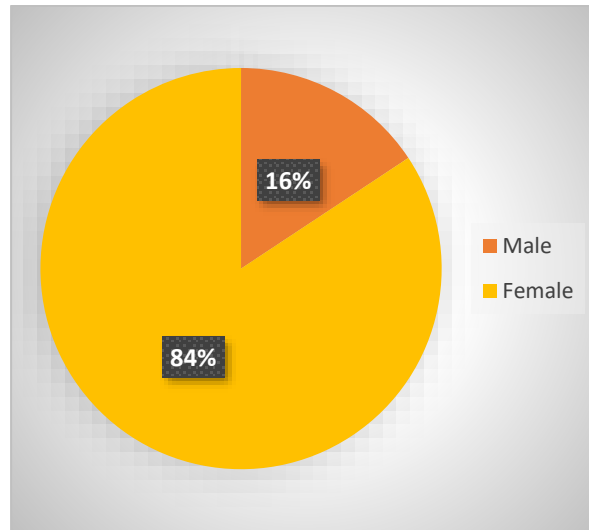


Figure 3.

### Gender Frequency

Respondents fill in age and gender questions to find out the distribution of age and sex participants.

Table and Figure show the age percentage. Table and Figure showed the gender frequency.

Table 2  
Age Frequency

Age	Frequency	Percent (%)
19	12	17,1
20	19	27,1
21	9	12,9
22	6	8,6
23	3	4,3
24	4	5,7
25	1	1,4
26	2	2,9
27	1	1,4
28	1	1,4
29	2	2,9
30	1	1,4
31	2	2,9
32	0	0,0
33	2	2,9
34	0	0,0
35	1	1,4
36	4	5,7
<b>Total</b>	<b>70</b>	<b>100</b>

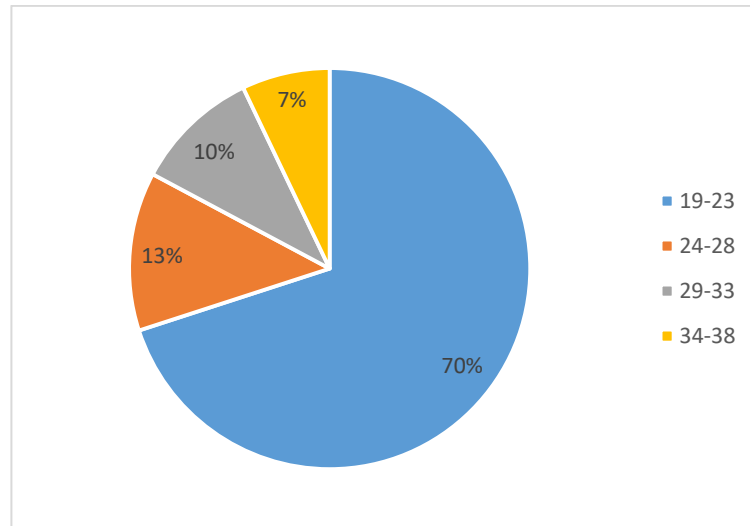


Figure 4  
Age Frequency

Table 3  
Analysis of perceived usefulness

	Perceived usefulness
Mean	3.9
Median	4
Std Deviation	0.77
Minimum	1
Maximum	5

Four questions of perceived usefulness filled by respondents. The descriptive analyze showed on Table 3. Analysis for perceived usefulness variable in Table 3 shows that the distribution of the data was normal. Because the value of mean (3.9) and median (4.0) were close and have low value of standard deviation (0.77). The mean value in Table 3 was 3.90 showed that, most students, the respondents agree on the usefulness of the Kahoot! conducted in this study.

Table 4  
Perceived usefulness frequency

Questions	Frequency each questions				Total	Percent	Valid percent	Cumulative percent
	1	2	3	4				
Strongly agree	35	26	3	11	75	26,8	26,8	26.8
Agree	35	40	39	12	126	45,0	45,0	71.8
Neutral	0	4	28	45	77	27,5	27,5	99.3
Disagree	0	0	0	2	2	0,7	0,7	100
Total	70	70	70	70	280	100	100	

Table 4 shown more deeply analyze of the result. Questions number one showed that a whole respondents agree that Kahoot! can improve their learning performance. In where 66 respondents agree that Kahoot increase their learning outcomes, another 4 students neutral with that questions. In where 42 respondents agree Kahoot! enhance their desire in learning, but a half more, 28 respondents neutral with

## Enhance Engagement Students Through Kahoot!

that questions. The last question, a half more, 45 respondents not really agree if Kahoot! not useful in their learning.

In where 26.8% of the respondents strongly agree on usefulness of Kahoot! another 45% agree. In where 27.5% neutral and 0.7% disagree of usefulness Kahoot! This shows that most of students (71.8%) respondents agreed using Kahoot! in the classroom.

The findings are in line with the advantages of game based learning, this emerging technology has expanded far beyond integrating digital and online games into learning. Games enable learners to acquire new knowledge and enhance learning through multiple intelligences. There are many online applications/games that could be utilized in teaching and learning. Among the simplest ways to engage students in gamified learning is to try web resources such as Kahoot, Quizlet, Quizziz, Socrative and many more (Hashim, 2018).

Table 5  
Analysis of ease to use

	<b>Ease to use</b>
Mean	4.2
Median	4
Std Deviation	0.67
Minimum	3
Maximum	5

Four questions of ease to use filled by respondents. The descriptive analyze showed on Table 5. Analysis for perceived usefulness variable in Table 5 shows that the distribution of the data was normal. Because the value of mean (4.2) and median (4.0) were close and have low value of standard deviation (0.67). The mean value in Table 5 was 4.20 showed that, most students, the respondents agree on the ease to use of the Kahoot! conducted in this study.

Table 6  
Perceived ease to use frequency

Questions	Frequency each question				Total	Percent	Valid percent	Cumulative percent
	1	2	3	4				
Strongly Agree	24	33	11	31	99	35,4	35,4	35.4
Agree	38	34	33	35	140	50,0	50,0	85.4
Neutral	8	3	26	4	41	14,6	14,6	100
Total	70	70	70	70	280	100	100	

Table 6 shown more deeply analyze of the result. Questions number one showed that a whole respondents agree that Kahoot! was flexible to be use. In where 33 respondents strongly agree and 34 respondents agree that Kahoot! functionality and interface is clear and understandable, another 3 students neutral with that questions. In where 44 (strongly agree and agree) respondents agree that interacting with Kahoot! does not require a lot of their mental effort, but 26 respondents neutral with that questions. The last question, a half more, 66 respondents believe that Kahoot! is easy to use.



In where 35.4% of the respondents strongly agree on ease to use of Kahoot! another 50% agree, and 14.6% disagree ease to use of Kahoot! This shows that most of students (85.4%) respondents agreed that Kahoot! ease to use in the classroom.

Some research suggested that following the Kahoot introduction, student retention rates and academic performance increased, and there was a positive correlation between students' scoring highly on the app and achieving higher academic grades. While the app's affordances for learning are promising, the causal relationship between the app usage and improved student outcomes requires further investigation (Pechenkina, Laurence, Oates, Eldridge, & Hunter, 2017).

Table 7  
Analysis for Attitude towards using Kahoot!

	Attitude
Mean	4.4
Median	4
Std Deviation	0.56
Minimum	3
Maximum	5

Three questions of attitude towards using Kahoot! filled by respondents. The descriptive analyze showed on Table 7. Analysis for attitude variable in Table 7 shows that the distribution of the data was normal. Because the value of mean (4.4) and median (4.0) were close and have low value of standard deviation (0.56). The mean value in Table 7 was 4.40 showed that, most students, the respondents a good attitude towards using Kahoot! conducted in this study.

Table 8  
Percieved Attitude towards using Kahoot! frequency

	Frequency each question			Total	Percent	Valid perent	Cumulative percent
Strongly Agree	19	41	30	90	42,9	42,9	42.9
Agree	48	27	37	112	53.3	53.3	96.2
Neutral	3	2	3	8	3.8	3.8	100
Total	70	70	70	210	100	100	

Table 8 shown more deeply analyze of the result. Questions number one showed that a whole respondents think agree that using Kahoot! is a good idea. In where 68 (strongly agree and agree) respondents like learning with Kahoot!, another 2 students neutral with that questions. In where 67 respondents look forward to those aspects of their learning that require the use of Kahoot!, 3 respondents neutral with that questions.

In where 42.9% of the respondents strongly agree on usefulness of Kahoot! another 53.3% agree, and 3.8% neutral of usefulness Kahoot! This shows that most of students (96.2%) respondents agreed using Kahoot! in the classroom.

## Enhance Engagement Students Through Kahoot!

Table 9  
Analysis for Engagment towards using Kahoot!

	Engagment
Mean	4.2
Median	4
Std Deviation	0.56
Minimum	3
Maximum	5

Three questions of percieved engagment towards using Kahoot! filled by respondents. The descriptive analyze showed on Table 9. Analysis for attitude variable in Table 9 shows that the distribution of the data was normal. Because the value of mean (4.2) and median (4.0) were close and have low value of standard deviation (0.56). The mean value in Table 9 was 4.20 showed that, most students, the respondents a good attitude towards using Kahoot! conducted in this study.

Table 10  
Percieved Engagment towards using Kahoot! frequency

	Frequency each question			Frequency	Percent	Valid perent	Cumulative percent
Strongly Agree	12	21	21	54	25,71	25,71	25.71
Agree	52	46	47	145	69,05	69,05	94.76
Neutral	6	3	2	11	5,238	5,238	100
Total	70	70	70	210	100	100	

Table 10 shown more deeply analyze of the result. Questions number one showed that a whole respondents encourage in taking a good notes in classroom. In where 67 (strongly agree and agree) respondents encourage to listening carefully in classroom, another 3 students neutral with that questions. In where 68 respondents agree that Kahoot encourage students to make sure study on regular basis.

In where 25.71% of the respondents strongly agree on skill if engagement of Kahoot! another 69.05% agree, and 5.23% neutral of that question. This shows that most of students (94.76%) respondents agreed using Kahoot! in the classroom with its skill of engagement.

Technology is being increasingly integrated into teaching environments in view of enhancing students' engagement and motivation. In particular, game-based student response systems have been found to foster students' engagement, enhance classroom dynamics and improve overall students' learning experience. Educational games in the classroom is likely to minimise distractions, thereby improving the quality of teaching and learning beyond what is provided in conventional classrooms (Licorish et al., 2018). 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.

Table 11  
Analysis for Students interactions towards using Kahoot!

	Interactions
Mean	4.4
Median	4
Std Deviation	0.58
Minimum	3
Maximum	5

Four questions of interactions towards using Kahoot! filled by respondents. The descriptive analyze showed on Table 11. Analysis for attitude variable in Table 11 shows that the distribution of the data was normal. Because the value of mean (4.4) and median (4.0) were close and have low value of standard deviation (0.58). The mean value in Table 11 was 4.40 showed that, most students, the respondents a good interacting towards using Kahoot! conducted in this study.

Table 12  
Perceived Students interaction towards using Kahoot! frequency

	Frequency each question				Frequency	Percent	Valid percent	Cumulative percent
Strongly Agree	27	33	32	22	114	40,7	40,7	40.7
Agree	41	34	34	41	150	53,6	53,6	94.3
Neutral	2	3	4	7	16	5,7	5,7	100
Total	70	70	70	70	280	100	100	

Table 12 shown more deeply analyze of the result. Questions number one showed that a whole respondents think agree that using Kahoot! is contribute students to having fun in the online lecture. In where 68 (strongly agree and agree) respondents like learning with Kahoot!, another 2 students neutral with that questions. In where 67 respondents look forward to those aspects of their learning that require the use of Kahoot!, 3 respondents neutral with that questions.

In where 40,7% of the respondents strongly agree on usefulness of Kahoot! another 53,6% agree, and 5,7% neutral of usefulness Kahoot! This shows that most of students (96.2%) respondents agreed using Kahoot! in the classroom.

Above all, due to the unique characteristics of the new generation of learners, teachers could not run away from integrating and applying technology in teaching and learning. For these learners, technology is not considered an accessory to life but is viewed as a way of life. This has implications on pedagogy and it demands the transformation of education (Hashim, 2018)

## Conclusion

In the pandemic situation teachers could not run away from integrating and applying technology in teaching and learning. The use of Kahoot in the online classroom is minimize distractions, thereby improving the quality of online lecture. The findings show that a whole respondents agree that Kahoot can improve their learning performance. In spite of encourage in taking a good notes and listening carefully in classroom, Kahoot is contribute students to having fun in the online lecture. Obstacles felt by students

## Enhance Engagement Students Through Kahoot!

during the implementation of Kahoot in lectures such as signals and accuracy of students in choosing answers because of the short time to answer. For further research to prevent students from feeling bored, it is recommended to try to integrate with other applications.

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