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Kahoot! App: An Interactive Tool to Enhance the English Participation of Grade 7 Students

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ABSTRACT

This study is aimed at improving the participation of 30 Grade 7 students during the Academic Year 2021-2022 through the Kahoot! App. Kahoot! is a game-based student-response system that focuses on engaging the students in the classroom. Through class observations and interviews, it was found that students were rarely volunteering to answer questions and contribute to the discussion because of the traditional tools used by the teacher. To further validate the researchers' observations, the respondents were given a pre-survey checklist as well as a post-survey checklist. This was to determine their extent of participation before and after the employment of the intervention. Results showed that the mean score of the respondents in their pre-survey was 1.79 or Strongly Disagree, while in their post-survey, it was 4.41 or Strongly Agree which means that there was a mean difference of 2.63. Also, the t-value of -37.51 means that the pre-survey checklist obtained a lower result than the post-survey checklist. This is attributed to the fact that the students favored and preferred Kahoot! App than Google Form. In addition, the p-value of 0.000 is less than the .01 level of significance which further validates that there is a significant difference of the pre-survey and the post-survey. This implies that the intervention of this research proved to improve the participation of the students in English. Thus, the intervention of this study is highly recommended for teachers to use in facilitating assessment activities in online setting because of its engaging features like colorful backgrounds, pictures, interesting graphics, and immediate feedback, which motivate the students to participate

INTRODUCTION

Due to the ongoing international COVID-19 crisis, the education institutions have been forced to adopt online environments as key spaces for interaction between teachers and students (Hodges et al., 2020). Reimers et al., (2020), asserted that one of the main hindrances to learning that are observed in online environments is relatively the poor active participation of the students. Based on the researchers' in-depth observations during their Field Study 1-Observations of Teaching-Learning in an Actual School Environment and at the beginning of their Field Study 2-Participation and Teaching Assistantship, teachers were challenged in maintaining students' participation during online classes. Students rarely volunteer to answer questions, and at some point, some of the students tend not to open their cameras or microphones when they are being called by the teacher to recite or participate in the discussion.

This is very crucial for an educator as it has always been a critical factor in yielding positive learning outcomes for students and further developing their abilities. Dlab et al., 2020, defined participation as the capacity for students to involve themselves in virtual settings in a variety of ways. In the study of Sivapalan & Cregan, (2015), participation is one of the fundamental variables that determines learning in online environments. Weaver and Qi (2019) claimed that 'students who actively participate in the learning process learn more than those who do not'. This statement was supported by Astin (2019), claiming that students who actively participate in class tends to have a better academic achievement and showed

higher satisfaction in the learning process Siti Maziha (2019). This may be because greater participation means a greater probability of student interaction, greater participation means more communicative exchanges, or greater participation leads to a better learning experience (Isohätälä et al., 2017).

In connection, Michailidis et al., (2018), suggested that to enhance student learning in online environments, the quality of participation must be improved especially in the assessment part of the discussion. Based from the study of Sudweeks & Barbour (2018), online learning can be as effective as face-to-face courses, but only if learners are provided well-designed interaction activities. It is argued that learner participation can be enhanced by using online interactive application in e-learning settings. A study by White and McCoy (2019) agreed and stated that online interactive application was persistently used in e-learning environment as they have helped encourage student to become focused and motivated to learn. Similar researches explain the different benefits of integrating interactive online activities in the online classes and mention no negative effects, Gebbels (2018).

The fact that there have only been a few studies that looked at the effects of using Kahoot! on improving student participation, this study is significant. Although there are numerous factors affecting the low percentage of participation of students in various activities during their online class, the researchers conducted an action using the Kahoot! App, which aims to improve students' participation in e-learning setting. Kahoot! App is a game-based student-response system that focuses on engaging

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the students in the classroom. It is an educational software that offers teachers the ability to create questionnaires, quizzes, discussions, and exams (Tóth, Lógó, & Lógó, 2019).

LITERATURE REVIEW

Using online interactive application in the classroom is a promising avenue. This is very crucial as there are newer educational standards that emphasize the need for teachers to support student learning with technologies. A study by White and McCoy (2019) agreed and stated that online interactive application such as Kahoot! App was persistently used in e-learning environment as they have helped encourage student to become focused and motivated to learn.

Various studies have found that using technology, including computers, personal tablets, and smartphones, is effective in improving students' engagement and active participation in classrooms (Bransford et. al, 2000). Thus, the researchers state that use of individual devices and other computer-generated tools can improve someone's ability especially a teacher to solicit active participation from all students during lessons, incorporate Internet resources, and evaluate students' progress. Such activities provide kinesthetic learners an opportunity to actively engage through movement of their muscles in response to stimulation as they see and hear and were able to connect it to their existing knowledge.

The pursuit for literature review which Kahoot! was reported by the previous researchers, it was discovered in one literature review mentioning about the benefits of GSRs such as GSRs are able to afford interactivity, increase students' performance in academic, and full engagement (Aljaloud et al., 2015). As students nowadays, who are also known as millennials and may be more knowledgeable in certain aspects of technology, it is crucial for teachers to explore new technology and synchronize their knowledge with the students in order to create a meaningful teaching and learning experience. Early research shows that integrating GSRs (e.g., Kahoot!) into regular classroom lectures contributes to improvements in student engagement (Wang, 201).

Kahoot! represents a new generation of student-response systems that has a main focus on student motivation and engagement through gamification. In the study of Batsila and Tsihouridis (2018), it is clear that Kahoot! is a useful tool for both teachers and students in various aspects. The findings show that Kahoot! App can improve student's engagement and participation and a useful assessment tool to evaluate students' knowledge. In the same study conducted by Wang, Zhu and Sætre (2018), this type of learning tool is an apt to boost participation and engagement which supports learning while evaluating the level of pupils' understanding of a lesson. Putri, (2019) has added, Kahoot! has impacted positively on the interactions in the classroom, student engagement as well as participation.

Kahoot! App is a very beneficial and outstanding tool

in today's virtual world of learning. Coming to the advantages, it is very helpful for learners. The following are some of the in-depth advantages of using Kahoot!

a) as the students' interest level is high, the teachers can easily assess the understanding level through quizzes and polls.

b) it can be used as a tool of assessment for the teachers.

c) it has effectively reduced students' frustration levels.

d) the stress about the fear of formative assessments in the traditional method and it has increased the students' performance due to an increase in the student's attendance.

In the recent study of Bransford, Brown, and Cocking (2021) "assessments and feedback must focus on understanding, assessments that emphasize understanding do not necessarily require elaborate or complicated assessment procedures. Even multiple-choice tests can be organized in ways that assess understanding". As an assessment-based tool, Kahoot! supports pre-assessments, productive formative assessments and student reflection, through fun quizzing, quick polls and surveys.

In relation to this research study, since, Kahoot! App has proven by some researchers to be an effective pedagogical tool in improving the participation and engagement of students. It goes beyond being a fun motivation or reward for students. From quick pulse checks to formative assessment and tracking class progress, it can help capture actionable insights and target instruction in any learning environment.

METHODOLOGY

This research study used an observation, unstructured interview (Villanueva & Gamiao, 2022) and online survey checklists. Initially, the researchers made an observation with the Grade 7 students of MMSU-LHS on their participation during online class. The researchers found out that most of the students were not highly engaged to the discussion because of the teacher's use of traditional tools in their class. Thus, to address this concern, the researchers thought of an intervention that could help them improve their participation in class and would make them become more active in the teaching-learning process. To collect in-depth data on the learning problems of the students, the researchers conducted an unstructured interview with the English teacher of Grade 7 of MMSU-LHS. This is to support their initial observations that the Grade 7 students are struggling to participate during online classes. Moreover, an unstructured interview was also done to selected Grade 7 students of MMSU-LHS to supplement the deficiencies of the quantitative data.

In addition, the researchers utilized an online survey checklist-questionnaire in gathering the necessary data for this study. The online survey checklist-questionnaire was composed of two parts. The first part asks for the profile of the respondents and checklist questions for the second part that were adopted from the recent study by Wang, Alf I. (2020) titled, "Dozens of studies show

learning benefits of using Kahoot! App.” However, the adopted questions were modified and enhanced to ensure alignment with the objectives of the study. The data gathered from this study was particularly obtained from Grade 7 students of Mariano Marcos State University Laboratory High School, Laoag City, the Philippines. The result of interview, observation and survey checklist were the primary sources in collecting the data. Hence, its result is limited to its identified respondents and instruments utilized.

Data Gathering Procedures

To determine if the Grade 7 students of MMSU-LHS are struggling to participate during online class sessions, the researchers conducted a class observation during their scheduled synchronous classes. The researchers found out that the use of google form as an assessment tool was not effective because of the following reasons: a) the interface is not engaging b) inaccurate scoring in the short answer section c) it automatically refreshes over again when faced with poor connectivity, d) it is impersonal because it does not require interaction and building relationships with learners. To further support the researchers’ observations, they administered the pre-survey checklist through Google Form to supplement the data gathered from the pre-test. The google form link was sent to the English Teacher of Grade 7 MMSU-LHS to the students. The data gathered from the pre-survey was tabulated and interpreted by the researchers.

After determining the results from the pre-survey checklist, and interview from the English teacher of Grade 7 students at MMSU-LHS, the researchers have standardized the content of week 1 and week 2 lessons and learning materials to ensure that all classes have covered the same material in an identical way. The lesson plans, delivery methods, and approach to teaching in the classrooms were also coordinated by the cooperating teacher. During the intervention period, each section was given four sessions in two weeks with the incorporation of Kahoot! App features in creating a variety of activities per session. This is also to introduce the features of the Kahoot! App to the students so that they will be familiar when answering the post-test after the teaching demonstration. In the first week, the topic given to the researchers was “Distinguishing the features of academic writing”. The teaching method used during the session was the usual way; it started with a motivation, lesson proper, application, and giving assignments. However, during the class discussion, there were several activities created by the demo teachers. They facilitated some activities incorporating the Kahoot! App, particularly in asking questions. To further validate and test the effectiveness of the Kahoot! App, the researchers continued the teaching demonstration for the second lesson with the topic, “Employ a Variety of Strategies for Effective Communication.” To standardize the content of the week 2 lesson and materials just like the previous meetings, the researchers have followed the same method and procedure in teaching. After the researchers

employed the intervention, they sent the post-survey checklist questionnaire to the Grade 7 MMSU-LHS students via a Kahoot! App. The result from the and pre-survey checklist was checked, tabulated and analyzed qualitatively as well as quantitatively.

Data Analysis

In this study, the researchers have employed both qualitative and quantitative data analysis. Content analysis was used to analyze the qualitative data. Bhandari (2022) as cited by Villanueva (2022), stated that qualitative analysis is a means of interpreting textual data such as concepts, opinions, and experiences of the subjects in a study to gather in-depth analysis. Holsti (2017) stated that content analysis is used to analyze group interviews and open-ended questions to complement the quantitative data. In addition, to analyze the quantitative data, descriptive statistics were used. According to William (2018), descriptive statistics are used to present quantitative descriptions in a manageable form. It simplifies large amounts of data in a sensible way.

Moreover, to have in-depth analysis and interpretation of data in the light of the problems of this research study, a central tendency was used, specifically, the mean score or value. As stated by Bhandari (2020), central tendency is very important when performing descriptive statistics. The data gathered in the survey checklist-questionnaire was tabulated using frequency count and weighted mean as a statistical tools. Furthermore, the data elicited were interpreted using Moidunny (2009) method of interpretation, as shown below.

Mean Score	Descriptive Interpretation
4.21 – 5.00	Strongly Agree
3.21 – 4.20	Agree
2.61 – 3.20	Undecided
1.81 – 2.60	Disagree
1.00 – 1.80	Strongly Disagree

Futhermore, the data gathered in the pretest and posttest were tabulated using the statistical tools such as mean, frequency count and percentage distribution. The data were interpreted using the following range and descriptors taken from the study of Villanueva, (2016).

Range	Descriptive Value
13-15	Very Satisfactory
10-12	Satisfactory
7-9	Good
4-6	Fair
1-3	Needs Improvement

RESULTS AND DISCUSSION

The first concern of this study was to look into the respondents’ mean score in their pre-survey. Thus, an online survey was administered and the following results surfaced:

It could be gleaned from Table 1 that the overall mean score of Google Form as an assessment tool was 1.79

Table 1: The Mean Score of the Respondents in their Pre-Survey Checklist

A. Usage of Google Form as an Assessment Tool	Weighted Mean	Descriptors
1. I prefer to use Google Form when answering quizzes because it is more engaging and interactive.	1.57	SD
2. I feel motivated to learn and participate in class because of its features.	1.83	D
3. I feel more comfortable in answering the questions because it shows immediate feedback.	1.87	D
4. I am inspired to answer quizzes because it reduces anxiety.	1.80	SD
5. It helps me become more creative and innovative.	2.33	D
6. I am motivated to learn using Google Form because it helps me assess my understanding and retain information.	1.70	SD
7. Google Form helps me to earn more points and that makes me inspire to participate.	1.80	SD
8. Google Form helps me to become more active and productive.	1.73	SD
9. Google Form brings me remarkable learning experience.	1.63	SD
10. Google Form helps me to reduce boredom.	1.63	SD
11. Google Form allows me to explore and experience its features.	1.90	D
12. Google Form helps me capture actionable insights and target instructions.	1.60	D
13. Google Form tests my knowledge and help me retain important concept.	1.80	D
14. Google Form catches my attention.	1.83	D
15. Google Form increase my self-esteem to participate assessment activities such as quizzes, etc.	1.77	SD
N=30 Overall Mean	1.79	SD

Numerical Rating

Legend Numerical Rating Descriptive Interpretation

13-15	Very Satisfactory
10-12	Satisfactory
7-9	Good
4-6	Fair
1-3	Needs Improvement

or Strongly Disagree. This indicated that majority of the participants strongly disagreed while few of them disagreed on the use of Google Form as they were not motivated to learn and could not help them increase their level of creativity and self-esteem. Moreover, it is apparent that the use of Google Form was not an effective tool to improve students' participation because it does not help students to widen their knowledge about a particular topic/subject matter, it does not encourage them to learn more eagerly, does not bring a remarkable experience, cannot even test their knowledge about the topic and cannot reiterate important concepts, and most of all, it also decreases their self-esteem to participate in the activities and/or quizzes given by the teacher.

This result also supported the statement of an English Teacher of the Grade 7 students of MMSU-LHS in an interview after the class discussion wherein Google Form was used:

"One of the key components to creating effective teaching and learning processes in this kind of modality (online class) is using various technological tools to encourage participation. However, Google Form is not an effective tool. Based from what we just had in

our class today, utilizing google form could not help students become more creative in constructing sentences from the questions raised by the teacher. It could not even catch the student's attention and could not even offer a great help that can be used as an energizer to reduce the boredom of the students during online class"

The following were some feedbacks shared by selected Grade 7 students of MMSU-LHS as a result of their experiences with the use of Google Form.

"...taking quiz on google form is very boring. And, as students, we easily get bored during online classes, we want something new, a lesson and activity that would energize us and reduce the boredom we experience during online classes".

-Student A

"...I always get low score whenever I take quizzes using google form. I also feel frustrated because it does not motivate me to answer the quizzes...because it is so boring tool"

-Student B

"I don't even take my quizzes seriously whenever I answer in the google form. I don't even read the questions whenever I answer. Hence, this is not an effective tool to test my knowledge about the topic and cannot reiterate important concepts"

-Student C

"...it is not effective because...I could not demonstrate what I have understood on the lesson when I take the quizzes using google form..."

-Student D

Notably, the students did not express favorable feedbacks on the use of Google Form as an assessment tool, therefore, this type of learning tool is not an apt to boost participation and engagement which supports learning

Table 2: The Mean Score of the Respondents in their Post-Survey Checklist

B. Usage of Kahoot! App as an Assessment Tool	Weighted Mean	Descriptors
1. I prefer to use Kahoot! when answering quizzes because it is more engaging and interactive.	4.37	SA
2. I feel motivated to learn and participative in class because of its features.	4.23	SA
3. I feel more comfortable in answering the questions because it shows immediate feedback.	4.33	SA
4. I am inspired to answer quizzes because it reduces anxiety.	4.13	A
5. It helps me become more creative and innovative.	4.43	SA
6. I am motivated to learn using Kahoot! because it helps me assess my understanding and retain information	4.83	SA
7. Kahoot! helps me to earn more points and that makes me inspire to participate.	4.43	SA
8. Kahoot! helps me to become more active and productive.	4.43	SA
9. Kahoot! brings me remarkable learning experience.	4.50	SA
10. Kahoot! helps me to reduce boredom.	4.43	SA
11. Kahoot! allows me to explore and experience its features.	4.50	SA
12. Kahoot! helps me capture actionable insights and target instructions.	4.63	SA
13. Kahoot! tests my knowledge and help me retain important concept.	4.33	SA
14. Kahoot! catches my attention.	4.27	SA
15. Kahoot! increase my self-esteem to participate assessment activities such as quizzes, etc.	4.37	SA
N=30		
Overall Mean	4.41	SA

Numerical Rating

Legend Descriptive Interpretation

4.21 – 5.00	Strongly Agree/Very High
3.21 – 4.20	Agree/High
2.61 – 3.20	Undecided/Moderate
1.81 – 2.60	Disagree/Low
1.00 – 1.80	Strongly Disagree/Very low

while evaluating the level of students' understanding of a lesson. Table 2 shows the result of the survey-checklist administered after employing the intervention. It could be gleaned from the table that most of the respondents Strongly Agree with the use of Kahoot! App as an assessment tool with the overall mean 4.41.

Furthermore, it was worthy to note that Kahoot! App was an effective tool to improve students' participation because it helped students to widen their knowledge about a particular topic/subject matter, motivates students to learn more eagerly, brings a remarkable experience, can really test student's knowledge about the topic and can reiterate important concepts, and can increase students' self-esteem to participate in the activities and/or quizzes given by the teacher.

In an interview, an English Teacher admitted that:

"I can say that Kahoot! App is very helpful to the learners. Based from what I have observed, the students' interest level during the class is very high, the teachers can easily assess the understanding level through the quizzes and polls. This is a great way to increase participation because it is evident that it has effectively reduced students' frustration levels. Students who randomly participate

became participative in the class. The stress about the fear of formative assessments in the traditional method was reduced as it also increased the students' performance due to an increase in the student's attendance as well"

Another English Teacher also admitted that:

"Kahoot! goes beyond being a fun motivation or reward for students. From quick pulse checks to formative assessment and tracking class progress, it can help capture actionable insights and target instruction in any learning environment"

It was further complimented by the selected Grade 7 students of MMSU-LHS as they expressed positively their experiences in using Kahoot App.

"...for me ma'am, I prefer to use Kahoot! Because this is more engaging and interactive, and aside from its..., engaging feature, this is also great in saving and restoring answers. Even if there is an interruption like intermittent connection or power interruption, the answers are automatically saved. Unlike in the google form quiz, you cannot restore the answers once it is refreshed."

-Student A

"...when I am taking quizzes, I prefer using Kahoot! App instead of the google form because the game feature of Kahoot! App has reduced my stress about the fear of tests and quizzes"

-Student B

"...I also prefer to use Kahoot! App when taking quizzes because uhm probably because of its uhm game features that allows me to be comfortable in answering the question. I feel excited and inspired to attend the classes...I believe, taking quizzes using the Kahoot! App helped me increase my self-esteem to participate more in the activities ken quizzes given by the teacher"

-Student C

"I prefer to use Kahoot! App when taking quizzes because...unlike

the Google Form that automatically refreshes over again when faced with poor connectivity Kahoot! App is accurate in scoring answer. It is also engaging as does require interaction”.

- Student D

The result from survey-checklist and interview also supports our observation during the intervention period. Students were very active, engaged and participative in answering quizzes and questions, catches student's attention most especially with the interactive activities that Kahoot! App offers and also gave a great help that

can be used as an energizer to reduce boredom of the students because they can earn more points which makes them inspired to participate. These could also support the students' learning while evaluating their level of understanding about the lesson. The result is in agreement with one of the findings of Putri (2019) in her study that Kahoot! App has a positive impact in terms of students' interaction in the classroom, student engagement as well as participation.

Table 3 unveils 2.63 as the mean difference of the pre-

Table 3: The Difference of the Pre-Survey Checklist and Post-Survey Checklist

	N	Mean	Standard Deviation	Mean Difference	t-test	p-value
Pre-Survey	30	1.79	0.18	2.63	-37.51	0.000*
Post-Survey	30	4.41	0.17			

* significant at 0.01

survey and post-survey checklist. It can be noticed from the table that the t-value of -37.51 means that the pre-survey checklist obtained a lower result than the post-survey checklist. It was obvious that the mean of the pre-survey was 1.79 and post-survey was 4.41 which means that the students favored and preferred Kahoot! App than Google Form. In addition, the p-value of 0.000 is less than the .01 level of significance which means that there is a significant difference of the pre-survey and the post-survey. This implies that the intervention used in this study truly improved the participation of the students in English. Thus, the intervention of this research is highly recommended for teachers to use in facilitating assessment activities in online setting.

Furthermore, the significant increase of scores also showed that the students prefer to use an assessment application such as Kahoot! App which has proven to promote active participation, more meaningful engagement and motivation. This statement was concluded in the study of Bawa, (2018) and Plump & Larosa (2017) that Kahoot! App could stimulate student engagement in participating assessment activities.

CONCLUSIONS

Generally, this study aimed to improve the participation of Grade 7 MMSU-LHS students in English through Kahoot! App. Kahoot! App was employed particularly in the assessment part of learning to test whether it has a significant impact. Through class observations, interviews, pre-survey and post-survey, the researchers found out that there was significant difference before and after the intervention was employed. It was evident that the mean score obtained of the respondents in the pre-survey checklist was 1.79 or Strongly Disagree. In contrary, the desirable result of the students in the post-survey checklist shows that majority of them agreed and favored the use of Kahoot App as an assessment tool as opposed to Google Form! which is indicated in their overall mean score of 4.41 or Strongly Agree.

Hence, the researchers concluded that there was a significant difference in the mean score of the respondents

in the pre-survey and post-survey after employing the intervention. Thus, Kahoot App! is recommended to teachers to use in their online classes as it was proven to be an effective assessment tool in assessing the student's knowledge as well as maintaining an interactive environment. It was also proven that using Kahoot! App encouraged the students to become more active and at the same time more productive as opposed to the use of Google Form where students are passive and does not at all motivate them in the teaching-learning process specifically in the assessment part. Overall, these results provide strong support for the use of Kahoot! App in the class as an assessment tool to improve student's participation.

RECOMMENDATIONS

Based on the results and conclusion, we would like to offer the following recommendations:

1. Teachers should explore different assessment applications such as Kahoot! because it provides an advantageous learning experience for students.
2. Teachers should utilize Kahoot! App in facilitating their classes specifically assessment activities as it was proven to entice the attention and interest of the students making them more active and participative during online classes. Coupled with effective pedagogy, Kahoot! can offer more effective and less intrusive measurement of learning than traditional assessment.

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