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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v12-i9/14604

Received: 13 July 2022, Revised: 17 August 2022, Accepted: 28 August 2022

Published Online: 10 September 2022

In-Text Citation: (Thiagarajah et al., 2022)

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Vol. 12, No. 9, 2022, Pg. 1046 – 1063

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Effectiveness of Gamification Tool in Teaching Vocabulary

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Abstract
This research investigates the views of students in a home school centre from Setia Alam towards the effectiveness of using gamification tools in teaching vocabulary. In recent years, numerous game-based technologies have been developed with the aim of providing fun yet meaningful experience to their users. These technologies are also common among students in the ESL classroom since they act as supplements for effective game-based classroom activities. Many studies have proven that game-based learning had motivated students to participate and engage actively in learning as it creates positive feelings among them. This study seeks to explore students’ attitudes towards the usage of gamification tool to enhance vocabulary skills, the different attitudes of male and female students toward using gamification tool to learn vocabulary and the differences of vocabulary scores between the traditional method of teaching and when gamification is used when teaching. This study was conducted both quantitatively and qualitatively with the participation of 60 students. The prime data was collected via questionnaires using Google Forms Survey which was later analysed descriptively. Data collected from the interview was used to supplement the findings. The findings report that Kahoot! is proven to be useful and effective for students in the ESL classroom. The study provides insights for better implementation of game-based technologies in the English language classroom curriculum.

Keywords: Gamification Tool, Teaching Vocabulary, Vocabulary, ESL Learners, Kahoot!

Introduction
English is regarded as a link language in countries, and as for Malaysia it is a strong second language (Bayuong et al., 2019). As a result, present learners should therefore master this language because English has become a universal language in many fields. However, teaching language is a challenging field in which educators constantly try to find the best and most effective ways to motivate and engage learners in the learning process.
As stated in the Malaysia Education Blueprint 2013-2025 (Ministry of Education, 2012), many novel approaches have been introduced to improve the efficacy of teaching and learning strategies for teachers at school (Yeop et al., 2019; Raman et al., 2019). Fisher (2010); Huang et al (2019) state that one of the famous and acceptable approaches is online and game-based learning. Instructional and online games are gaining acceptance in the classroom, especially to gain students’ engagement and feedback (Braga, 2019). Participation in game-based learning and entertaining factors have been found to increase learners’ interest and retention. According to (Mare & Mutezo, 2020) learners also displayed better interaction among peers and thus this improved their performance. A judicious mix of entertainment and educational value must be considered when selecting any game-based learning platform.

The use of information and communication technology (ICT) has an important role in education as it makes the teaching and learning process more effective. ICT can be a medium in English language teaching that can support reading, speaking, writing and listening skills. This is supported by a study conducted by Yürük (2019) that identified how gamification activities conducted in classrooms are beneficial for language classrooms. Due to the rapid changes and advancements in technology, a plethora of gamification tools have lately arisen for this purpose. Learning tools based on games like Kahoot! compliment teaching practices with new technological solutions whereby it is deemed to be easy to be utilise and not requiring extensive prior knowledge (Kiyancicek & Uzun, 2022).

Despite years of mandatory English classes, Malaysian students continue to struggle with the language (Tan, 2016; David, 2015; Mohini et al., 2008). Gamification encourages efficient and productive learning by utilising game components and game-based thinking (Ahmed et. al., 2022). Hence, it has become valuable for the teaching and learning of content that students regard as ‘boring.’ The issue, nevertheless, is in selecting appropriate platforms that can truly indulge learners who have largely grown up with technology to some extent since childhood. Lolita (2020) in her study mentioned that in order to achieve the learning outcomes planned in a lesson an educator must be able to choose the correct teaching materials. Therefore, it is imperative to take into account the most suitable techniques to assist students in improving their vocabulary. Essentially, students do not encounter successful learning when there is no incentive to do so, therefore seeking appropriate approaches that are highly stimulating to promote and improve learning can be a taxing job for educators.

This study is expected to shed light on a method that can make the classroom atmosphere warm, comfortable, and educating for all levels of students. The findings of this research could be useful to educators, especially ESL teachers, learners and future researchers. Hence, this research aims to answer the following research questions:

• What are the students’ attitudes towards gamification tool to enhance vocabulary skills among students?
• Is there a significant difference in male and female perceptions towards using Kahoot! in learning vocabulary?
• Is there a difference in vocabulary scores when using Kahoot! in comparison to the traditional method?
Literature Review

Gamification

Gamification is defined as the "application of game-based strategies, aesthetics, and game thinking to engage people, stimulate action, enhance learning, and solve problems" (Kapp, 2012). One of the goals of gamification is to impact people’s behaviour via perceptions and emotions produced by games, thus motivating user, customer, and worker dedication and commitment (Park et al., 2014). Undoubtedly, quiz game platforms focusing on students' responses, such as Kahoot! are regarded as credible sources for creating supplementary education equipment that appeals to 21st-century learners. In simple terms, this platform enables the creation of online quiz games that can be utilised in learning, particularly in ESL classrooms.

The effects of learning through play should not be underrated because, as Piaget (1962) mentioned long before, play is an essential element of one's cognitive advancement from early life to adult years. Fromberg and Gullo (1992) further defended Piaget's theory, which called for promoting language advancement, social competence, creativeness, and cognitive skills through play. Frost (1992) also emphasised that "play is the main machine for the growth of creativity and competence, language and social skills". Gamification in education refers to the use of instructional systems designed with gaming elements but executed in non-game settings (Deterding et al., 2011).

Kahoot!

Kahoot! is a game-based learning platform that is used as educational technology in schools and other educational institutions. Its learning games are multiple-choice quizzes created by users that can be accessed via a web browser or the Kahoot app. It can be reached using the link https://Kahoot.com and the users can create a username and get a password. To use Kahoot!, the users can simply duplicate the available quizzes or create a new quiz themselves. If users want to create a new Kahoot!, they must decide for certain if it will be a survey, a quiz, or a discussion question. If the users choose to use the readily accessible Kahoot!, they can do so based on their needs, either they use the full readily accessible quiz or edit it by adding some questions if needed.

Kahoot! possesses elements capable of creating motivation, sustained engagement, and meeting the academic needs of learners in general. According to Zarzycka-Piscorz (2016), Kahoot! can induce intrinsic and extrinsic motivation and encourage students to learn effectively. Hence this study will look at the effectiveness of using Kahoot! to teach vocabulary to ESL learners.

Students’ Perception on Gamification Tool

Gamification in learning has been implemented to make the process of learning more fun and engaging for learners. In the current world of technology, research regarding implementation of technology in learning has been widely conducted especially on gamification on learning. (Bal & Bicen, 2017). It is crucial to identify student’s perceptions on gamification tools to discover gamification’s effectiveness and benefits towards the student's learning process.

According to a journal entitled “Perceptions of students for gamification: Kahoot as a case study” the author discussed about student’s perception on gamification tools. The study indicated that gamification tools have increased student’s interest and motivation in learning. Students claimed that they are excited to learn through gamification because they can learn
a topic in a more easier way and and answer the questions in a fun way. Learners stated that Kahoot is one of the most famous applications among students and they are interested to attend class prepared and fun to answer quizzes suddenly (Bal & Bicen, 2017)

According to a study conducted by Pratama et al (2020), the participants from that research declared that implementing gamification into studies as a meaningful invention. The researcher has also found out that student’s motivation and interest plays an important role in student’s performance in education. Students who tend to show high interest and motivation in learning were able to perform well as well. Gamification highly attracts student’s attention in class throughout the lesson and at the same time it increases their engagement in class. To conclude, data from previous studies has claimed that implementing gamification in learning has gained positive feedback from the students.

Learning Vocabulary using Gamification Tool
Through the plethora of research, it is proven that gamification in education promotes student’s interest, abbreviation of anxiety, improved motivation and enhancement in learning performance. As a result, gamification is introduced and combines learning through games which is known as learning and having fun as well to emerge learning interest among students. Learning through games is very beneficial for students since students will not easily give up the task just for the concept of winning the game. Students are highly motivated with the recognition given to them at the end of the game. Learning vocabulary with gamification tools helps the students to learn unfamiliar words and phrases through the games.

Implementing a gamification tool in learning vocabulary has gained positive feedback from the students and increased their interest in gamified English language by delivering a fun, exciting, motivating and engaging lesson. (Waluyo, 2021). It is significant to ensure student’s engagement and participation when learning to promote their satisfaction and motivation in learning (Dehghanzadeh et al., 2019). According to Zou, 2019, gamification in English learning has paved the way for listening and reading comprehension and enhanced student’s vocabulary knowledge. Gamification tends to encourage the components such as critical thinking, teamwork and self-learning among the learners (Kapp, 2012). These gamification tools in English vocabulary learning are very beneficial for learners with low proficiency in English. The main reason for students to be less proficient in English might be due to lack of exposure to English. It is necessary to conduct a language class that is exciting, fun, easy to learn, and engaging to establish student’s participation and interest in learning. One is unable to learn a language without having its vocabulary knowledge and one’s excellence in a language is measured through their knowledge of vocabulary. Even a learner is proficient in English language.

The Importance of Learning Vocabulary
Vocabulary plays a bigger role in enhancing a learner’s proficiency level of a language and in acquiring all four skills such as reading, writing, listening and speaking (Nation, 2011). Researchers proved that language learning relies totally on vocabulary acquisition, and those who fail to acquire a good vocabulary tend to struggle to learn a language. Consequently, good vocabulary knowledge is necessary to convey a message to someone in terms of a written or verbal form. Gaining as much vocabulary knowledge is important in order to have good communication as well. It is important for teachers to enhance the importance of vocabulary in language learning to students from their early learning stages. Teaching vocabulary should be carried out more interactive and engaging to make the lesson more
effective and efficient (Al-Neyadi, 2007; Davies & Pears, 2003). Gamification tool in learning vocabulary is correlated to modern teaching method which is student-centred where students can learn independently with minimum support from the teacher (Mirzoveya & Kabdrgalinova, 2021).

Methodology

Research Design

This research study applies a quantitative and qualitative design. The qualitative design is assisted by the pretest and posttest as a data collection method. The qualitative design is supported by the survey conducted in this study. Then, the quantitative approach towards gathering information focuses on describing a phenomenon across a number of participants’ opinions regarding gamification tools in enhancing vocabulary. The qualitative approach towards collected information focused on describing the experiences of the participants of the study through a narrative and comprehensible manner. The reasons for these choice of research designs is because, in order to identify the overall effectiveness of the gamification tools approach was an effective treatment in improving the learners’ vocabulary skills along with the learner vocabulary attitudes, a pretest, posttest and interview is needed to validate and generalise the findings. The different types of rich data have four triangulation methods of strengthening the quality of the research using different methods, multiple theories and investigators (Li et al., 2022).

Population and Sample

The population for this research is from a homeschool centre, located in Setia Alam, Shah Alam. This research is aimed for students in the grade seven and eight classes, which are 60 students. The class selected consisted of a mixture of female and male students. The reason for the choice of this year group for this research is due to examine the effectiveness between male and female learners’ perceptions towards Kahoot in improving vocabulary skills and are not exposed to various gamification tools to approach the vocabulary learning task over the years. Therefore, it is a purposive sampling method as the selected students had experience in using gamification tool, Kahoot for enhancing vocabulary in order to elicit honest opinions based on their views towards the method.

Table 1
Distribution of the Sample according to Gender Variable.

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>50%</td>
</tr>
<tr>
<td>Valid N</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Research Instrument

The instruments used for this research study consist of qualitative and quantitative instruments which are questionnaire survey and semi-structured interview. The rationale behind the choice of research instruments is to measure students’ engagement, perceptions
towards gamification tools, the impact of healthy competition among their classmates, and preference of learning vocabulary through Kahoot. Meanwhile, the quantitative instruments were utilised to measure students’ learning, preference of treatment and students’ participation as a whole.

The vocabulary tests adapted from an online worksheet, “English Worksheets Land” were administered twice (before and after the experiment) to the students in both groups to measure their vocabulary knowledge. Each pre-and post-test contained 10 questions, which were different in terms of vocabulary content yet similar in composition and characteristics. The questionnaire containing five 5-point Likert items (with scores ranging from 5 to 1: 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree) was designed via Google Form and sent to the students to elicit their opinion concerning enhancing vocabulary knowledge through Kahoot. The questionnaire was adapted from Rabu and Talib’s (2017) studies and later modified to fit this study.

Then, a face-to-face interview session was carried out and recorded in order to determine the differences between the male and female students' attitudes towards Kahoot in using it as a treatment to enhance their vocabulary knowledge. The interview session was followed up with 5 open-ended questions, attached in the Appendix, adapted from the study of Rondiyah (2020) in “Interactive game, Kahoot! as the media of students’ vocabulary assessment”.

Table 2

<table>
<thead>
<tr>
<th>No. Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is it the first time for you to use Kahoot application as the media in learning English? Please explain.</td>
</tr>
<tr>
<td>2. Does Kahoot increase your vocabulary? In that way?</td>
</tr>
<tr>
<td>3. What are the benefits of Kahoot application for testing your vocabulary?</td>
</tr>
<tr>
<td>4. Are you interested in using the Kahoot application for testing your vocabulary?</td>
</tr>
<tr>
<td>5. What are the challenges of using Kahoot application in learning English?</td>
</tr>
</tbody>
</table>

Research Procedure

In the first lesson, the vocabulary worksheet from “Englishworksheetsland” was administered to the students as a pretest to check the student’s current level at vocabulary comprehension. After the pretest, the students are given a reading text and are supposed to identify words with individual character, everyday life, field work, creatures and products. Then, the students are introduced and explained further about the Kahoot game and how to play the game.

A set of questions in the form of multiple choice questions will be displayed on the teacher’s main device. The researcher shows them the Kahoot pin and asks them to enter the website in order to play the game. At the end of the game, the scores are displayed in front of the screen and the teacher provides her feedback and comments to the students’ errors and evaluates their scores. After the treatment, the post-test was administered to see the students’ vocabulary achievement, as the items and content of post-test is the same as in the pre-test. Then, the researcher writes down the scores to notice the effectiveness of Kahoot games in order to enhance vocabulary knowledge. Then, the students are distributed a questionnaire through Google form to assess the students’ perception on the use of Kahoot.
to enhance vocabulary skill. Then, the researcher will interview 2 male and 2 female students. Lastly, the responses from the interview would support the findings gathered from the questionnaire, pre-test and post-test.

**Data Analysis**

The data collected based on the questionnaires administered through Google Forms to answer the first research question was analysed through SPSS (Statistical Package for Social Sciences). This way the research would be able to produce quantitative data in a standardised way so that the findings are internally consistent and coherent for analysis. Moreover, the data collected in regards to the second research question was analysed using a comparative method between the male and female students’ responses towards Kahoot regarding vocabulary enhancement through a series of open-ended questions. For further understanding and analysis of the data, the recording of the students’ interview sessions were transcribed and attached in the findings section in order to elaborate further on their particular responses.

To add on, the pre-test and post-test was answered through the data collected based on the vocabulary worksheet attached in the Appendix, consisting of 10 questions each, which were administered to answer the third research question. This research's pre-test and post-test data was analysed through SPSS (Statistical Package for Social Sciences). The data was analysed based on a Paired Samples T-test on the scores between without the Kahoot teaching approach and with the Kahoot teaching approach to calculate if the data was normally distributed. In addition, analysis of the data was also conducted using a paired sample statistics and paired sample test to identify the mean and standard deviation scores through SPSS, which indicated the significant difference in the students’ vocabulary skills, in the session without Kahoot tool approach and with the Kahoot tool approach.

**Results**

**What are students’ attitude towards gamification tool to enhance vocabulary skills among secondary school students?**

Table 3

<table>
<thead>
<tr>
<th>Student’s Attitude</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level Student’s Attitude</td>
<td>60</td>
<td>4.16</td>
<td>0.261</td>
</tr>
</tbody>
</table>

Table 3 presents descriptive statistics for the questionnaire survey conducted on their level of the 60 students’ attitude on the use of Kahoot tool to enhance vocabulary skills. The table also presents the descriptive statistics of the questionnaire survey to show the overall level of both male and female students’ attitude on the use of Kahoot to enhance vocabulary skills. After tabulating the data, the results show the students’ ability attitude level with a mean of (4.16).
Table 4
Mean and Standard Deviation for students’ attitude using questionnaire.

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>1 (SD)</th>
<th>2 (D)</th>
<th>3 (N)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning using the English vocabulary digital game is easy for me.</td>
<td>2</td>
<td>2</td>
<td>17</td>
<td>14</td>
<td>25</td>
<td>4.13</td>
<td>1.01</td>
</tr>
<tr>
<td>2</td>
<td>It is easier for me to learn English vocabulary through digital games rather than direct instruction from teachers.</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>30</td>
<td>24</td>
<td>4.23</td>
<td>0.81</td>
</tr>
<tr>
<td>3</td>
<td>I find that the English vocabulary digital game is very useful.</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>25</td>
<td>29</td>
<td>4.35</td>
<td>0.76</td>
</tr>
<tr>
<td>4</td>
<td>I can use the English vocabulary digital game without the help of a teacher.</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>30</td>
<td>25</td>
<td>4.20</td>
<td>0.94</td>
</tr>
<tr>
<td>5</td>
<td>Using English vocabulary digital game can improve my effectiveness in learning activities.</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>30</td>
<td>24</td>
<td>4.20</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Using English vocabulary digital game can develop my English vocabulary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>27</td>
<td>26</td>
<td>4.18</td>
<td>0.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using digital game can increase my productivity in English vocabulary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>15</td>
<td>29</td>
<td>12</td>
<td>2</td>
<td>2.95</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I find that the English vocabulary digital game is very useful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>31</td>
<td>23</td>
<td>4.20</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I like to use this English vocabulary digital game.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>29</td>
<td>28</td>
<td>4.37</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The English vocabulary digital game should always be used inside and outside the classroom (at home, at the access point and anywhere).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>29</td>
<td>25</td>
<td>4.23</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I believe it is a good idea to use digital game in English vocabulary learning.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>24</td>
<td>28</td>
<td>4.15</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

1055
Based on the questionnaire survey, the highest mean was achieved in item 3, which is (4.35) out of (5) in the survey. The question stated in the survey, "My interaction with the English vocabulary digital game is clear and easy to understand". The students agree that their vocabulary learning has been easy to comprehend due to clear instructions and interaction among classmates through Kahoot and has increased their vocabulary learning through classroom activities, making them remember the meaning of the words effectively.

On the other hand, the lowest mean reached for this category of questions is in B1, which is
(4.13) out of (5) from the survey. Meanwhile, in category (C), the highest mean score was shown in C1 (4.20) out of 5, with a standard deviation (0.90). Meanwhile, the lowest mean score was scored for C3 (2.95) with a standard deviation (0.85). The table above also shows the descriptive statistics for questions in category D. The highest mean score was tabulated from D1 with the mean (4.37) and the lowest mean was scored in D3 with the mean (4.15) and standard deviation (1.0). The minimum score of the students for the particular question was 1, meanwhile there were students who selected 5 from the likert-scale.

Lastly, the students have agreed to the E2 item, by scoring a high mean of (4.30) out of 5. The students have claimed that the practice of learning vocabulary through gamification tools will continue even outside the classroom.

How different are the attitudes of male and female students toward using gamification tools in learning vocabulary?

To answer the research questions an Independent Sample T-test was applied to examine the significant differences between gender students’ attitudes on the use of Kahoot to enhance vocabulary skills.

Table 5
Results of Independent Samples T-test to examine the significant differences between gender students’ attitudes

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Attitude</td>
<td>Male</td>
<td>30</td>
<td>4.13</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>30</td>
<td>4.19</td>
</tr>
</tbody>
</table>

Based on the above table, of the t-test shown, the participants for male and female groups were 40 each. The mean of these two groups shows a slight difference with the male mean value being (4.13) and for female was (4.19). Therefore, it can be concluded that there is no statistically significant difference between the two groups of students’ attitude on the use of Kahoot to enhance vocabulary skills due to the gender variables which are male and female. On the other hand, the result of the gender total score shows a little difference between male and female outlined in the students’ attitude on the use of Kahoot to enhance vocabulary skills due to the exposure of vocabulary, ways of utilising the tool and many more. It can be also said that both male and female students use Kahoot differently for enhancing vocabulary skills.

What is the difference in vocabulary scores between traditional methods of teaching and when gamification tool is used when teaching?
Table 6
Mean and Standard Deviation for Pre-Test and Post-Test Vocabulary Worksheets.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PreTest</td>
<td>60</td>
<td>4.68</td>
<td>1.43</td>
</tr>
<tr>
<td>PostTest</td>
<td>60</td>
<td>6.65</td>
<td>1.176</td>
</tr>
<tr>
<td>Valid N</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above shows the scores of the students before and after applying the treatment (Kahoot). The mean score for pre-test is (4.68) with the standard deviation being (0.14) meanwhile, post-test is (6.65) with standard deviation being (1.18). Through the post-test and post-test scores, there can be seen an improvement in students’ scores in their vocabulary skills after the treatment, which Kahoot applied for their lesson.

Discussion
RQ 1 What are students’ attitude towards gamification tool to enhance vocabulary skills among secondary school students?

According to the results collected from the questionnaire, most of the students answered agree and strongly agree to most of the questions. This shows that students managed to enhance their vocabulary skills through gamifications tools being implemented in classroom learning. According to Question 2, students responded that they find it easier to learn English vocabulary through games rather than through direct instruction from the teacher because learning through games increases students’ interest and motivation. As mentioned in Question 4, Gamification on learning has strengthened students’ independent learning as most of the students agreed that they can learn English vocabulary digital games independently without the help of the teacher.

In question 5, the total number of students who chose to agree and strongly agree are 54 students from a total of 60 students. It is shown that a student’s effectiveness in learning activities has improved by using digital games. Previous studies also have agreed that student’s learning performance and engagement in class increased by implementing gamification in learning (Pratama et al., 2020). Apart from that, a total number of 53 students selected that they agree and strongly agree for question 6. Hence, it is proven students agree that gamification in education has improved their English vocabulary. Question 7 which shows 29 students said that using digital games neither increase nor decrease their productivity in English vocabulary. However, 2 students selected strongly disagree and 15 students disagree for question 7.

According to question 8 to 12, students highly prefer to use digital games in learning English vocabulary since they are interested and find it very useful to help enhance their English vocabulary. Gamification helps students to perform well in class because through gamification students tend to increase their engagement, motivation and creative thinking in class (Honorio et al., 2018). For questions 8 to 12, most students have selected agree and strongly agree while 5 or less than 5 students selected that they disagree and strongly disagree which consists of less than 10% of the students. Results revealed that students are more interested and teachers can gain high participation from students when they implement games in teaching English vocabulary.
To conclude, most of the students agreed that implementing gamification in learning English vocabulary is very effective, engaging, interesting and useful. A high number of students agreed that applying game tools in English vocabulary learning has enhanced their English vocabulary.

RQ 2 How different are the attitudes of male and female students toward using gamification tools in learning vocabulary?

The second research question was focused on how different are the attitudes between female and male students toward Kahoot in enhancing vocabulary. The results revealed that there were no statistically significant differences in students’ attitudes towards Kahoot in enhancing vocabulary due to the gender variables (male and female) showing that there is little difference between male and female students’ opinion on the use of Kahoot for vocabulary enhancement. However, this is because male and female students have different ways of using Kahoot to improve their vocabulary learning effectively and efficiently.

Through the questionnaire, the male students enjoy less compared to female students in engaging with the classroom and feel anxiety when the scores are being displayed on the front screen. Meanwhile, the female students enjoy the competitive environment among their classmates and find it useful to learn vocabulary through games, as it provides the opportunity for them to remember or recall the meaning of the words better than being taught in the traditional method. This can be seen through the scores obtained by the students in the post-test conducted after the treatment, Kahoot being applied in vocabulary learning lessons.

On the other hand, the semi-structured interview conducted with 2 male and 2 female students were useful to determine their different opinions regarding Kahoot used as a tool for vocabulary enhancement. The female students explained how Kahoot has helped them engage with their friends, carry out team work and see differences through their performance in answering the vocabulary worksheets. Also, the female students enjoyed the game method as it encouraged them to perform better when their names are being displayed in front of the screen. They believe that the game has created a healthy competition among their classmates and even the urge to perform better in the upcoming games.

However, the male students were a bit reluctant by eliciting their thoughts regarding Kahoot as a tool to improve vocabulary. The male students find it challenging to answer the questions in the specific time provided. They mentioned that the insufficient time provided in the game made them nervous and were unable to think rapidly to select the appropriate answer for some questions. One of their challenges is to work and think quickly in the short period of time provided, hence why their scores would have been better if only more time were given, as Kahoot is an enjoyable way of learning vocabulary. However, motivation has permitted students to explore new ways of learning through games (Buenaño et al., 2022)

RQ3 What is the difference in vocabulary scores between traditional methods of teaching and when gamification tool is used when teaching?

The third research question looked into the effectiveness of using gamification tools in teaching vocabulary and in comparison to the traditional way of teaching. From the data obtained, the vocabulary scores of the post-test indicated that the learners found the usage of gamification tools during vocabulary lessons to be more appealing, interesting academically, fun, engaging, and well-organised. A collaborative setting allowed learners to
communicate their thoughts and ideas in a more constructive way. From the semistructured interview conducted, Learner A mentioned that by using Kahoot! he felt more prepared for the post-test because he felt that interacting with technology, challenges, and games helped him understand the task sheet better.

This study found, on average, that learners in the traditional learning method of teaching scored lower on the pretest than on the post-test when the gamification tool was administered in it. Furthermore, the study's relationship between learners and teachers is an intriguing aspect. There seems to be an increase in student engagement and motivation when teachers employ gamification tools in the teaching and learning sessions. Hence, it bridges the gap between the teacher and learner. This is inlined with a study conducted at Purdue University in the USA. The game-based approach was found far better than the traditional one. Other higher-level institutions in Germany, France, Portugal, Taiwan, Indonesia and Turkey have reported similar results showing that game-based learning increases intentional and participatory learning experience.

**Conclusion**

Rapid technology advancements can result in the establishment of a competitive atmosphere, which can be harnessed in the classroom through the use of a gamification strategy. Simultaneously, integrating a gamification approach improves students' motivation to adopt new learning approaches. The results from the study are highly recommended to apply Kahoot! game-based learning in order to obtain effective learning among ESL students.

Online games, such as Kahoot!, are an excellent educational tool which provide classroom fun, concept research support, and positive energy that appears to be translated into motivation and increased meaningfulness. This digital-learning platform can create an attractive environment which provides active participation and supports learning. The findings conclude the students' views on the use of Kahoot! towards learning English in the ESL classroom are positive.

To sum up, the study's major findings reveal that students had a great positive attitude towards Kahoot to enhance their vocabulary skills. The evidence found that using Kahoot to improve students’ vocabulary skills has resulted in an increase in their vocabulary knowledge and learning ability. The survey results are used to highlight the main idea of this research study. All participants involved in the interview stated that using Kahoot has contributed much to their vocabulary learning in different ways, in terms of motivation, interest and adapting the new words. Apart from that, there were no significant differences in both genders’ views about using Kahoot as a gaming tool to enhance their vocabulary skills.

The students have pointed out their views and offered ways on how Kahoot can be utilised to improve their vocabulary skills, such as longer time, types of materials and even as quizzes to test their vocabulary knowledge. The findings imply that the impact of Kahoot helps students to acquire new words easily, as it is one of the crucial components in sharpening their English language skills. Teachers can be creative and updated by establishing pedagogical activities involving Kahoot, by dividing them into groups and ensuring them to exchange ideas and help each other which eases the time to learn vocabulary. This way learners can be engaged in the classroom throughout the lesson and prevent disrupting the pace of the lesson through creative and interesting activities using Kahoot.

The results from this research advocate that Kahoot! can be very impactful in helping the ESL learners especially secondary school students to in-cooperate game-based learning to boost students’ motivation and engagement to learn English effectively. Furthermore, the
findings from this research also suggest that gamification like Kahoot! is among the current learning tools which can be effective in enhancing the learning experience among students.

Apart from the aforementioned strengths of this research, it may serve as a starting point for educators to employ game-based learning methods such as Kahoot! in the classroom to teach English from a variety of perspectives. Therefore, it is recommended that future replication of this research be conducted in a larger-scale context. In addition, it would be fruitful to pursue further research about teachers’ views on using Kahoot! for teaching English as a second language and the challenges they face during the implementation of the game-based teaching.

References
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