From highlight to insight, the role of visual input enhancement in vocabulary Mastery with Kahoot

Fatmawati[1*], Aminah Suriaman[2], Mukrim[3]
Institut Tadulako, Indonesia
Email: fatmawati.alwi1988@gmail.com[1*], amisuriaman@gmail.com[2], mukrim@untad.ac.id[3]

*Correspondence

ABSTRACT

Keywords: Action Research, Vocabulary Mastery, Kahoot, Input enhancement.

This research aims at solving the problem of low vocabulary mastery encountered by the class eight students of SMP Negeri 3 Banawa. The use of Kahoot, assisted by input enhancement techniques, was used to address this problem by attempting to increase vocabulary mastery of the students through a two-cycle Classroom Action Research (CAR) design, consisting of planning, acting, observing, and reflecting. The first cycle consisting of three meetings employed Kahoot, assisted by input enhancement technique with bolded, underlined modified texts, and the second cycle consisting of three meetings utilized Kahoot, assisted by input enhancement with highlighted, enlarged fonts of modified texts. Quantitative data from post-tests and qualitative data from field notes, observation sheets, interviews, and questionnaires were collected to evaluate student progress and engagement throughout the study. The criteria of success applied in this research is 75 or 70 % of the students achieved the passing grade. Result of post-test in the first cycle showed that only 23 % of the students achieved the passing grade. The data from observation and fieldnotes supported the finding that the plans needed to be revised, input manipulation changed and students were grouped. Findings from the intervention in the second cycle denotes that 73% of students achieving the passing grade (KKM) in vocabulary mastery. It means that the criteria of success were fulfilled. In addition, findings from qualitative data indicated the enhancement of student engagement, interaction, motivation, attention, and vocabulary retention. The research highlights the potential of Kahoot assisted by visual input enhancement techniques as a good teaching media to be utilized by teachers in increasing vocabulary mastery of EFL learners.

Introduction

In order to have a mastery of both receptive (reading and listening) and productive (speaking and writing) skills, someone has to acquire an adequate vocabulary since the

most essential skill that anyone studying English needs to master is vocabulary (Quiroz, Gutiérrez, Rocha, Valenzuela, & Vilches, 2021). Learning vocabulary is crucial since it is impossible to communicate effectively and to master other skills without a sufficient vocabulary (Milton & Fitzpatrick, 2017). In the same way, (Mustafa, 2019) state that nowadays, knowledge of vocabulary is thought to be essential to almost all parts of language skills. We can easily comprehend English paragraphs, write an essay in English, and communicate vocally by developing a wide vocabulary. When listening, students' vocabulary level affects how well they comprehend the teacher's speech, class conversation, and other talks. They can actively communicate by selecting the words they use when speaking. Students' reading comprehension suffers when they lack the necessary language knowledge. Furthermore, when it comes to writing, students' language skills have an impact on how well they can communicate their ideas to the readers. In other words, having a sufficient English vocabulary is one of the conditions for mastering the language. Therefore, it is said that one's knowledge of and amount of productive vocabulary have a significant impact on their output's fluency and quality (Qian & Sun, 2019).

Technology is currently being incorporated into every aspect of our lives due to its many benefits, including its simplicity, accessibility from any location at any time, efficiency, safety, ability to save time and money, etc (Alhuwaydi, 2022). The students nowadays are familiar with the use of technology in their life. Educators, including English language teachers, are encouraged to embrace mobile technology for educational reasons in response to the new information era (Hood, 2022). Related to that, the use of technology has been suggested to be applied in teaching teaching-learning process since it has been demonstrated that using mobile-assisted language learning (MALL) programs on devices like smartphones, tablets, and e-readers can help students improve their language abilities (Li & Hafner, 2022). Furthermore, along with collaborative learning, MALL is suggested to be integrated into the curriculum to get students' engagement in technology (Al-Ahdal & Alharbi, 2021) that can students use as a variety of strategies to properly absorb vocabulary (Jones & Waller, 2017). As a mobile-assisted language learning, online gaming is one strategy that can be used. Online games can help students learn more vocabulary, according to several studies (Ashraf, Motlagh, & Salami, 2014). (Ashraf, Motlagh, & Salami, 2014). One of the online games that can be used in the classroom is Kahoot! It has been proved that the use of Kahoots increases students' vocabulary and engagement in the classroom as research was done by Katemba, Tobing, and Putry in 2022.

Related to that, based on the researcher's reflection as a teacher in the classroom, consideration of how Kahoot helps students learn vocabulary and how they need more techniques to enhance retention in long-term memory, the researcher intended to integrate Kahoot application and input enhancement technique. Input enhancement technique in a form of textual enhancement have been applied by researchers in diverse circumstances with various objectives (Aprilani, 2021). Kahoot has also widely used in lots of researches and given a positive effect on learning performance and classroom dynamic (Wang and

tahir, 2020). However, Insufficient research exists to support the use of input enhancement techniques in conjunction with other strategies, particularly those employed in digital learning platforms. Hence, the researcher was interested in applying input enhancement technique to assist the use of Kahoot since it is more appealing to students when modifications to the input are clear, distinct, and appealing to them. Moreover, using input enhancement techniques is not only beneficial to students, but teachers can gain a broad perspective and figure out ways to help students better understand new and target vocabulary in texts by bolding, underlining, and capitalizing their words (Ahmed et al., 2022).

Based on the phenomena stated above, the researcher as a teacher has a big concern about the process of teaching and learning in the classroom hence, she conducted action research to find out how vocabulary enhancement by using Kahoot assisted by input enhancement works on students. Action research was manifested in overcoming the problem because the researcher as a teacher in the class conducted several changes to the teaching practice in the class.

Table 1
The differences and similarities between previous studies and the current study

NO	Authors and Titles	Differences	Similarities
1	Do kahoot games enhance vocabulary learning? Caroline V. Katemba, Joshua H. L. Tobing & Talitha A. Putri.	The previous study was conducted in **quantitative research** focusing on finding out the differences in vocabulary enhancement among male and female students.	Both previous and present studies utilize Kahoot to enhance students' vocabulary mastery
2	Improving English Vocabulary Learning through Kahoot!: A quasi-experimental high school experience. Author: Martín Flores Quiroz, Ricardo Gutiérrez, Franco Rocha, María Paz Valenzuela and Cynthia Vilches.	The research was conducted in a **quasi-experimental method** in which there were two groups; one experimental group practiced vocabulary through Kahoot and another group practiced traditional methods, such as worksheets and exercises.	Both previous and present studies focus on the use of Kahoot in vocabulary practices.

Based on a review of previous studies, it can be seen that both Kahoot and input enhancement have had positive impacts on the enhancement of students' vocabulary. Moreover, the studies emphasized the use of experimental methods in their implementation to prove the theories. However, the present study exhibits distinct characteristics in comparison to prior research investigations. Classroom action research was applied in the present study to see the process of increasing students' vocabulary by integrating the aforementioned strategies which are Kahoot application and input enhancement technique (Khan & Liu, 2020). The reason to integrate the input enhancement technique with Kahoot is because based on previous studies, Kahoot can help students enhance their vocabulary while the input enhancement technique can be used to help students' retention of vocabulary by making inputs more salient by boldfacing, underlining, capitalizing, and highlighting the inputs. By incorporating input enhancement and Kahoot, the researcher as a teacher wants to provide a dynamic and engaging learning experience that combines interesting elements with student active engagement.

Method

Design of the research

To determine if vocabulary development supported by the Kahoot application and input enhancement technique works on students, the study was carried out using action research. In doing the research, the researcher was assisted by a teacher colleague as her collaborator. The researcher and collaborator participated actively in the teaching and learning process. They made various adjustments to the teaching methods used in the class and modified the plans based on the feedback.

The setting of the research

The research was conducted at SMPN 3 BANAWA Donggala where the researcher works as an English teacher in that school. The research participants were students of class eight D in the academic year 2023/2024.

Table 2
The subject of the research

Class	Students		Total
	Male	Female	
VIII D	17	9	26

The procedure of the Research

This classroom Action research involved two cycles consisting of 3 meetings for each cycle. Some procedures conducted in this research are planning, acting (implementing the action), observing, and reflecting.

Planning

In this stage, the researcher did an observation and identified the problem she had in the classroom concerning vocabulary that has to be solved. She involved the teacher collaborator to engage in designing lesson in teaching and learning process related to the use of Kahoot assisted by input enhancement technique. The activities were about

selecting the group of words from the list of 1st 1000 and 2nd 2000 high frequency words provided by (Miles, Huberman, & Saldana, 2014), the basic competence, the evaluation and indicator of success.

Acting (Implementation of the plan)

In the second stage, the researcher along the collaborator did some interventions including creating Kahoot! quizzes that focused on certain vocabulary topics integrating multimedia components to provide context, and using input enhancement technique in modified reading texts. Implementation encompasses the use of live Kahoot! sessions within the classroom setting or the allocation of quizzes for solo or collaborative study purposes

Observing

In this stage, both the teacher and the collaborator monitored student engagement, collected comments, and modify the quizzes by performance data and insights. Evaluation of vocabulary acquisition is conducted by pre- and post-intervention measurements, and the whole process was recorded and communicated to the teacher collaborator.

Reflecting

It is necessary to conduct a critical reflection stage to assess the efficiency of the intervention after conducting the Kahoot-assisted vocabulary mastering program using the input enhancement technique. The first component of reflection is a comprehensive examination of the data gathered during the execution stage. This entails analyzing quantitative data, such as scores from assessments conducted after the intervention, as well as qualitative data, including observations, students' questionnaire results, and field notes.

Instruments for Collecting the Data

The data of this research will be collected by using some instruments, such as tests, observation sheets, interviews, field notes, and questionnaires. The tests were given to the students at the end of each cycle.

Test

The quantitative data of the research were collected by giving tests to students, consisting of 30 numbers. In this research, the teacher used objective tests such as multiple choices, odd one out, and completion. The words in the test are in the categories of verbs, nouns, and adjectives taken from a list of high-frequency words proposed by Nation. The tests were given at the last meeting of every cycle.

Observation

In this study, the teacher's collaborator conducted observations while the learning process takes place and during the intervention applied. The collaborator observed the conditions of the teaching-learning process and students' behavior and actions during the lesson. The purpose of this instrument is to collect a variety of information and to evaluate how attitudes are shown by students in classroom conditions through the observation checklist.

Interview

The interview was used to collect more data that cannot be gained from the observation. The research applied in-depth interviews consisting of some open-ended questions to be asked to some representative students.

Field Note

Field notes were used to collect data related to the process of teaching and learning in the classroom when the integration of Kahoot and input enhancement applied. The researcher recorded any responses given by students during the process.

Questionnaire

The questionnaire was given after the intervention of the second cycle conducted. It consists of six aspects related to students' The questionnaire was given after the action research conducted. It consists of six aspects related to students' feeling, perceptions, interest, their opinions whether the interventions impacted their vocabulary learning or not.

Data Analysis

The data of the research were collected qualitatively and quantitatively as follows:

a. The qualitative data were collected through observation sheets, interviews, field notes, and questionnaires. The data were be analyzed by using the technique of qualitative data analysis proposed by (Miles, Huberman, & Saldaña, 2014) consisting of some steps, namely:

　1. Data collection

　　In this initial stage, the researcher gathered and organized qualitative data from various sources, such as interviews, observation, and field notes.

　2. Data Reduction

　　In this stage, the researcher simplified and transformed the data into codes, categories, and themes.

　3. Data display

　　In this stage, the researcher compiled and organized the data that has been reduced so it was easily understood and analyzed.

　4. Conclusion drawing and verification

　　in this stage, the researcher interpreted and concluded the data presentation

b. The quantitative data were collected through tests after each cycle. In carrying out the test, the teacher gave 30 minutes for students to answer the 30-number test. In scoring the vocabulary test, the formula designed by Purwanto was used in this research. The formula is as follows:

$$X = \frac{\sum X}{N}$$

X: mean

x: individual score

n: number of students

Next, the researcher calculated the percentage of classes that pass the minimum mastery level criteria (KKM) which is 75 by using the following formula:

$$P = \frac{F}{N} \times 100\%$$

P = the class percentage

F = total percentage score

N = total number of students

Results and Discussion
Result of post-test in cycle 1

To find out the result of the research done at the first cycle, the students were tested in the next two days, on 6th March 2024. The researcher gave a post-test consisting of 30 numbers related to target vocabulary that had been learned from meetings one to three. Here is the result of the students' post-test in cycle 1:

Table 3
Result of the Post-test

NO	STUDENTS	SCORES
1	AGD	53
2	ASY	63
3	AUD	77
4	DIM	53
5	ERA	63
6	FJR	50
7	LAT	50
8	MAR	80
9	MOH	80
10	MUA	53
11	MUL	77
12	NUR	53
13	NRZ	63
14	OKT	50
15	RAF	70
16	RAFAEL	77
17	RAZ	53
18	REY	33
19	REZ	33
20	RID	33
21	RIS	53
22	RIT	37
23	RIZ	50
24	YUD	50
25	ZAL	83

26	ZYD	63
		$\sum x =$ **1500**
		X=58

26 students did the post-test after the first cycle. The data showed that there were only six students achieved the KKM score. Three students got 77, two students got 80, and one student got 83 (It can be seen from the chart below in green color). The rest of the students were unsuccess in getting 75 in the test. The total score of the students was 1500. The data above can be visualized in the chart below:
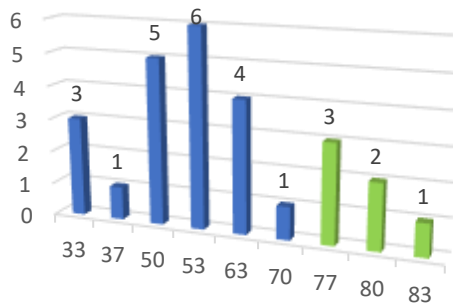

Chart 1 Result of the post-test

The percentage of students who got success called P1 and unsuccess called P2 in the vocabulary test was calculated by applying the following formula:
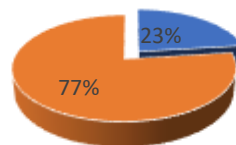
$P = \dfrac{F}{} \times 100\%$

$P1 = \dfrac{6}{} \times 100\%$

$P1 = 23\%$

And

$P2 = \dfrac{20}{} \times 100\%$

$P2 = 77\%$

■ P1 (succes) ■ P2 (unsucces)

Chart 2 Percentage of post-test results in a cycle

Based on the data visualized in the chart, it can be seen that the use of Kahoot assisted by input enhancement with bolded underlined text was not successful in improving students' vocabulary mastery for the result did not fulfill the criteria of success. It was proved by the percentage of P1(success), 23 % was lower than the percentage of P2 (unsuccess) 77 %.

Observing

The teacher was assisted by her collaborator to do the observation aimed at finding out the data on how the use of Kahoot assisted by input enhancement technique increases students' vocabulary mastery. Things covered in the observation were related to the implementation of the plan as well as teacher and students' performances during the implementation.

Data Presentation and analysis from the observation checklist on teacher's performance in the teaching-learning process in Cycle 1

The collaborator observed the researcher as a teacher to get data about how the researcher carried out the teaching and learning process. There was a checklist given to the collaborator on teacher's activities in the classroom during the application of Kahoot assisted by input enhancement technique. The data from the teacher's performance during the intervention can be seen below:

Table 4
The data of observation checklist on teacher's performance in cycle one

NO	Teacher's Activities	Meeting 1		Meeting 2		Meeting 3	
		observed					
		Yes	No	Yes	No	Yes	No
1	The teacher introduces the topic well.	√		√		√	
2	The teacher gives students chances to prepare themselves to study.	√		√		√	
3	The teacher informs the objective of learning.	√		√		√	
4	The teacher gives instruction related to the use of Kahoot appropriately.	√		√		√	
5	The teacher uses the related media well.	√		√		√	
6	The teacher provides and explains the material well.	√		√		√	
7	The teacher directs students to deepen their knowledge of the words that have been learned through discussion.	√		√		√	
8	The teacher provides students with a reading text.	√		√		√	
9	The teacher monitors students' activity while doing the exercises.	√		√		√	
10	The teacher asks students to reflect on their activities.	√		√		√	
11	The teacher concludes the material		√	√		√	
12	The teacher uses the time effectively and efficiently		√	√		√	

The table above is the result of observation of teacher's performances during the first, second, and the third meeting of the first cycle. It can be seen that the first meeting of the cycle did not go as it was planned. The teacher spent more time getting the students ready with their gadgets. She should have allocated a day to prepare technical support before conducting the research. It was something beyond her calculation that some students' gadgets were not compatible with the application of Kahoot and that she had to explain the instructions for doing the worksheet many times until the students knew what they had to do with the worksheet. That is why she could not manage her time well in the classroom. Apart from being busy getting students ready with their gadgets, the teaching and learning process on that day went well. Having reflected on what happened at the first meeting, the teacher made some improvements to the teaching and learning process hence the second and the third meeting of cycle one could run as they were planned. The planned activities on the second and the third meeting were observed by the collaborator.

Data Presentation and analysis from the observation checklist on students' performance in the teaching-learning process in cycle 1

The teacher and her collaborator observed students' performances as well as their participation in the teaching and learning process in the classroom during the intervention. The data of the observation are presented below:

Table 5
The data of the observation checklist on students' performance in cycle one

NO	Students' Activities	Score Meeting 1				Score Meeting 2				Score Meeting 3			
		1	2	3	4	1	2	3	4	1	2	3	4
1	The students are joyful in getting involved in the teaching and learning process.				√				√				√
2	The students feel motivated while doing the teacher's instruction.				√				√				√
3	The students keep their attention and respond teacher's explanation.				√				√				√
4	The students focus on doing the activity (using Kahoot in the classroom)				√				√				√
5	The students get involved in the discussion.	√				√				√			
6	The students pay attention to the modified text provided by the teacher.	√				√				√			
7	The students focus on doing the exercises.	√				√				√			
8	The students discuss the exercises.	√				√				√			

9	The students present the results of their works	√	√	√
10	The students pay attention to the teacher's response and corrections.	√	√	√

Note:

1 and 2 = Low

2 = Medium

4 = High

The first meeting of the first cycle was conducted on 29th February 2024. The observation sheet showed that the students did not get involved in the discussion that had been directed well by the teacher. In this meeting, the teacher did not group the students when they discussed the lesson and the exercises. They did the exercises individually so; the discussion could not be observed well. Hence, the involvement was classified as low. The modified text presented by the teacher could only attract some students' attention who soon realized that the words from the Kahoot quiz were shown again in the text. Furthermore, at the end of the lesson, only a few students were presenting the result of their work which was also classified as low.

Reflecting

The plan's revision conducted during the second cycle displayed an increase in post-test results. 73% of students achieved the minimum passing grade. This is supported by the findings of other instruments, such as observation checklists, field notes, interviews, and questionnaires, which indicated that the use of Kahoot assisted by input enhancement techniques involving highlighted-enlarged-font modified text not only increases students' vocabulary mastery but also engagement, interaction, motivation, attention, and retention.

Discussion

This present study aimed at enhancing students' vocabulary mastery through the integration of Kahoot with input enhancement strategies. Initially, in the first cycle, vocabulary was presented using bolded and underlined text following Kahoot activities. However, based on the result of the post-test and the teaching-learning process in the cycle, proved by observation sheets on teacher and students' performance as well as field notes in every meeting, it was found that students were not able to process the vocabulary learned and convert it to knowledge. As a result, they failed to recall the target words. The manipulation created in the text by bolded-underlined could not direct students' attention to target words and facilitate learning. For that reason, the discussion in the classroom could not go well. Consequently, the overall classroom engagement and understanding were impacted due to the ineffective application of this technique.

To address these findings, revisions were made in the second cycle. The first revision was related to the updated strategy involving the use of highlighted-enlarged-font modified text to aid in vocabulary retention after Kahoot activities. This adjustment

proved to be considerably more effective and showed that the input processed and understood by students can be effectively retained and converted into knowledge which is called intake (Smith,1993). In addition, concerning the result of using yellow highlighted- -font enlarged text, empirical data collected by Khan and Liu, in 2020 shows that, when learning, the human mind is significantly more adept at drawing attention to large, obvious objects and colors than it is to other common environmental stimuli.

The post-test scores in the second cycle revealed a significant improvement, with 73% of the students meeting the KKM. This enhanced performance can be attributed to the more visually distinct input enhancement, which likely facilitated the enhancement of vocabulary mastery and retention. Moreover, qualitative data from field notes, questionnaires, and observations provided further insights into the learning process.

These data sources indicated that students became more engaged when they worked in groups. The group discussions provided a chance to reinforce active learning in the classroom that can strengthen students' comprehension and retention of vocabulary knowledge. In line with Sun (2016) Participating in group tasks can bolster an individual's ability to learn and retain new words over an extended period. Once students' attention was drawn to the target vocabulary that they got from Kahoot, group discussions came as an opportunity for active participation and reinforcing students' understanding and retention of vocabulary mastery.

The integration of interactive methods of Kahoot and visual input enhancement seems to have effectively enhanced the process of learning new words and enhanced performance in completing tasks. As a result, not only do students' vocabulary mastery increase but also engagement, motivation, interaction, attention, and retention.

Conclusion

This study shows that Kahoot assisted by input enhancement technique noticeably can increase vocabulary mastery of class eight at SMP Negeri 3 Banawa with 73% percentage of students achieving passing score. It can be increased by applying visual input enhancement technique with highlighted-enlarged-font modified text. Other than that, collaborative learning also supports students' engagement, interaction, motivation, attention to retention so that the input that students learned can turn into intake. This research provides new insights and possibilities to integrate digital game-based learning platform with input enhancement technique in vocabulary learning.
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