IMPROVING VOCABULARY LEARNING SKILLS FOR HIGH SCHOOL STUDENTS THROUGH THE 4ENGLISH APPLICATION

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ABSTRACT

In recent years, the issue of integrating digital tools into language teaching for learners has been increasingly concerned by experts and educational institutions, especially the improvement of students' ability to learn, memorize, and use English vocabulary. This study aims to investigate the effectiveness of the 4English application in supporting learners, especially students, in developing their ability to learn English vocabulary. The target audience in the study is 22 high school students, focusing on using the valuable features of the 4English application such as reading the news and newspapers, listening to music, and learning vocabulary through context to improve the ability to acquire, remember, and use vocabulary. By various research methods such as taking tests and surveys to measure the level of improvement in vocabulary and feeling about the experience of learning vocabulary using the 4English application, the author can indicate the research results through the research results of the experimental process. In addition, the research paper can make new research proposals in the future.

Keywords: Vocabulary Learning, 4english Application, Contextual Learning, Language Teaching.

1. INTRODUCTION

In today's globalized and technologically driven environment, proficiency in English is essential for academic achievement and career advancement. However, many secondary school students continue to face challenges in acquiring vocabulary, a fundamental element for effective communication and language proficiency (Nation, 2001; Schmitt, 2008). Conventional methods, which often rely on rote memorization and discrete vocabulary lists, often fail to provide the interactive and context-rich environment necessary for long-term retention and practical use (Webb & Nation, 2017). Recent breakthroughs in digital technology have facilitated the development of multimedia learning tools that provide engaging and contextualized educational experiences (Mayer, 2009).

The 4English app demonstrates this new model by utilizing varied authentic multimedia content, including current news articles, educational videos with subtitles, and pertinent podcasts. They cover a variety of topics—i.e., politics, science, technology, and entertainment—and therefore enable the learners to engage with the language in context, which improves their reading and listening abilities (Stockwell, 2010). The app's interactive aspects provide active vocabulary usage since students can participate in applying the learned words to practical contexts (Godwin-Jones, 2018). 4English provides individualized content for different skill levels ranging from beginner to expert, thus promoting an interactive and customized learning environment that is specific to the unique needs of each learner (Reinhardt & Sykes, 2014).

Although multimedia software has been showing great potential in language education, there is little empirical evidence regarding their actual impact on secondary school learners' acquisition of vocabulary (Kukulska-Hulme, 2009). This study is intended to bridge the gap by probing into the impact of multimedia components in the 4English application on students' ability to remember, retrieve, and use new words. The study will utilize a mixed-methods design to collect quantitative data through pre- and post-tests and qualitative data through structured questionnaires to ascertain the effectiveness of the application. The results are expected to yield meaningful data on the effectiveness of multimedia tools in enhancing vocabulary acquisition, providing practical recommendations for educators and developers to enhance computer-assisted language learning environments.

2. LITERATURE REVIEW
2.1. 4English app in learning vocabulary
The 4English app is an online application platform built with a variety of features aimed at enriching experience and enhancing the English learning capability of students, mainly high school students. The app is purposefully built with many helpful features and rich learning resources, updated on a continuous basis. This renders 4English a highly effective tool in the vocabulary learning and memorization sector, hence improving language skills in general. It makes learning accessible to students with the content of articles, videos, podcasts, and images at their fingertips, besides there being games and exercises that students can use to facilitate learning ability and memorize vocabulary. The materials in the 4English app have been selected by publishers and experts carefully, thus it is straightforward for students to learn the right content and hence make learning more effective.

The biggest advantage of the features of the 4English app is its ability to combine a variety of subjects and content, such as science, learning, travel, entertainment and technology topics. Such abilities not only benefit learners in their ability to learn and remember vocabulary, but also help learners to stay up-to-date with current news and events. Moreover, reading and comprehending texts and news allow learners, particularly students, to broaden their vocabulary and also increase their contextual knowledge in a variety of contexts.

One other major characteristic of the 4English application is that students are instructed in memorizing vocabulary with big and little exercises, interactive exercises, flashcards. This feature of the application makes it possible for students to gain more variety and range of experience, hence making students more involved in learning vocabulary and even in memorizing and remembering new vocabulary. The mixture of learning materials and constantly updated content transforms the 4English app into an app of varied and complete learning resources to support students with their proficiency in learning and memorizing English vocabulary.

While little research has been conducted on the effectiveness of the 4English app for students in high school, studies have indicated that multimedia learning-apps can significantly assist in learning a language. According to a study by Vu et al. (2023), the use of the 4English application improved the reading skill of 10th-grade students, as evidence that multimedia learning technology can improve vocabulary acquisition and reading skill (Vu et al., 2023). In summary, the 4English app can be regarded as a complete and very interactive app that assists high school students in enhancing their English learning abilities, particularly memorizing and applying English words.
2.2. Learning vocabulary through context

One of the central tenets of the immersion method is contextual learning of vocabulary. Applying this tenet, students can learn new words and phrases in a rational and recallable way by encountering them in real life and course materials, rather than discrete word lists or rote repetition. 4English effectively integrates this tenet into its system, providing students with numerous opportunities to learn vocabulary in context.

When they read news, blogs, or articles on 4English, they learn new words in a rich situational context and linguistic context. Contextual learning allows them to learn not only the meaning of the words but also their use in sentences, connotations, and nuances. As Nagy and Scott (2000) note, contextual vocabulary learning facilitates comprehension and memory more than decontextualized modes of learning. For example, reading a story on environmental conservation exposes students to words like "sustainability," "ecosystem," and "biodiversity" in a context that defines their meaning and use. 4English videos and podcasts expose students to words in natural dialogue and monologues.

Listening to native speakers talk on various subjects allows learners to listen to the pronunciation of words, intonation rhythm, and where words are placed in normal language. This kind of activity is apt for study by Schmitt (2008), which contends that vocabulary learning through listening to natural speech is more likely to be internalized and actually utilized. For instance, a podcast episode on technology trends can introduce and repeatedly utilize terms like "innovation," "start-up," and "artificial intelligence" so that students learn their meanings and applications. To complement vocabulary learning in context further, 4English integrates interactive features like clickable words and in-built dictionaries into reading texts and videos. When the learner encounters a new word, he or she can click on the word to see its definition, hear it pronounced, and read example sentences.

This context-dependent clarification at the point of need enables them to learn and remember new words. This type of interactive presentation of new words in context results in more successful vocabulary acquisition, Hulstijn and Laufer (2001) state. After exposure to authentic material, students can use 4English vocabulary quizzes and flashcards to reinforce learning. Such software has a tendency to show words in sentences or short paragraphs, rather than alone, so that students continue to see vocabulary in context.

On a general level, 4English's emphasis on learning vocabulary through context is one of the program's primary foundations. By introducing students to unfamiliar words in context and providing interactive tools for reinforcing mastery, the program makes it easier for high school students to acquire a robust vocabulary and improve the overall quality of their language comprehension.

3. METHDOLOGY

3.1. Research questions

The study was carried out using the following questions to ivestigate the effectiveness of using the 4English application to improving vocabulary learning skills for high school students

(1) What is the students' attitude towards using the 4English app to improve their vocabulary learning?

(2) To what extent does the 4English app affect students' vocabulary learning, including their ability to remember and use new words?

3.2. Participants

This study was conducted targeting students in the grade level of high school. The students participating in the study are selected from a single classroom (22 students) to ensure the uniformity of the curriculum and learning environment, which helps the experimental process to take place smoothly. The subjects of the study are all students who are in the process of learning English – a main subject, in addition to the need to improve vocabulary to improve the learning quality of English.

Students who participate in the experiment are required to use the 4English app according to the instructions during the experiment period.

During the experiment, students will use the 4English app as an auxiliary tool for vocabulary learning. The experimental process takes place in a normal learning environment of students, where students can apply the knowledge learned from the application to English activities and lessons in class and activities in life.

This study aims to evaluate the effects of the 4English app on students' ability to remember and use vocabulary and also to verify students' attitudes towards the use of the 4English app to improve their ability to learn and memorize vocabulary.

3.3. Data collection instruments
3.3.1. Tests

The study aimed to find out the effectiveness of the 4English app to develop vocabulary learning and language skills. The tests were employed to measure important aspects of vocabulary learning, including vocabulary acquisition, reading comprehension, and general language capacity. The tests were designed to provide quantitative data to quantify the effectiveness of the 4English app to develop vocabulary learning and English language capacity at different levels.

To begin with, before the experimental process started, there was a pre-test to gauge the ability of each participant to understand and implement vocabulary and lexicon. The test had several types of exercises to assess the overall ability of the students, including: multiple choice exercises, reading comprehension, and determining the correct part of speech.

At the completion of the experiment, the students will take a post-test using the 4English app to assess their improvement and vocabulary gain. The post-test utilizes vocabulary learning techniques in the 4English app to assess the vocabulary development and vocabulary gain of the subjects, e.g., thematic lessons, stories, news, and mimicked audio and vocabulary phrases. The test evaluates the overall progress of the experiment-participating students in a holistic manner.

Lastly, the pre-test and post-test are utilized to determine the learners' initial abilities and gauge progress at the end of the research process. By comparing the results, the research is able to quantify the amount of improvement in vocabulary learning capabilities and determine the effectiveness of the 4English app during the research process.

3.3.2. Questionnaire

Besides the tests, a questionnaire is also a tool to get important data to be utilized in collecting qualitative data on the experience of the participants – high school students for the 4English application. The questionnaire is designed to examine the impression, feelings, and feelings of the students towards the use of the app, as well as measuring the effectiveness of the app in assisting learners.

The questionnaire consists of diverse, multiple-choice questions that allow different quantitative and qualitative responses to be collected. The questions are used in the form of a Likert scale,

where the subjects of the experiment will be graded by choosing statements relevant to their opinions and perspectives (e.g., positive, negative, neutral, etc.). This also permits the qualitative scale of students' overall satisfaction with the 4English application, including: degree of convenience to use, degree of exercises contained in the app, vocabulary acquisition activities, etc.

3.4 Data collection procedure

The data collection process for this study will be carried out in a systematic way, with a clear process to ensure the effectiveness of the experimental process. Before starting the experiment, students will be selected so that there is synchronization in the English learning program, there is a diversity of levels and learning needs. Participants in the experiment will be fully instructed on the purpose, content and how to conduct the research, how to use the 4English application.

Table 1. The procedure of data collection

EXPERIMENT PLAN	
Pre-Questionnaire	Questionnaire includes multiple-choice questions using Google Forms.
Pre-test	Pre – test includes the excersices related to the student' topic lesson.
Experiment	Experience using 4English application to improve vocabulary learning ability.
Post-Test	Post – test to assess the ability of vocabulary learners using the 4English application
Post-Questionnaire	Questionnaire includes multiple-choice questions using Google Forms related to the experimental subject's point of view.

4. FINDINGS AND DISCUSSIONS

4.1. Data analysis from the tests.

Through the implementation of pre-test and post-test for the experimental process, thereby collecting and analyzing the data in detail and carefully, the researcher can make specific and accurate assessments of students' abilities before and after applying the experimental process as well as learning students do not apply the method of using the 4English application to improve their skills in learning, memorizing and using vocabulary. Looking at the results obtained from the tests, the 4English application has had positive effects and benefits for students in the process of memorizing and applying the vocabulary they have learned. Overall, the data collected showed that students had a positive improvement in learning English vocabulary through the use of the 4English app.
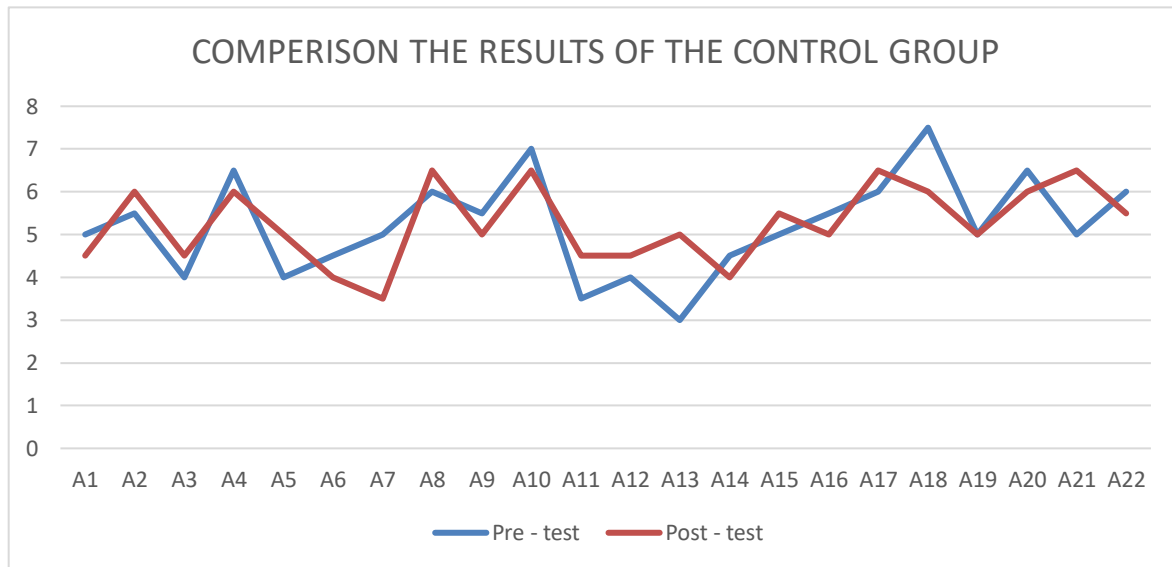
Figure 1. Comparison between pre and post-test results of the control group**.**

Figure 1 shows the difference between the two input tests (pre-test) and the output test (post-test) of the control research team. The test uses a 10-point scale with 26 students participating, using traditional vocabulary learning methods.

Looking at the chart, it is easy to see that a significant number of students (up to 12 students) generally have no change in scores, which has shown that the application of traditional vocabulary learning methods still has many limitations and has not been highly effective. Besides, the chart shows that only some students (6 students) have not made impressive improvements in the learning process. On the other hand, some students (8 students) had their scores reduced after the test.

The average score of the entrance tests (pre-test) of this group of students before the experiment was 5,204, then the average score of the output test reached 5.25 points. These results show that although this group of students has made some progress (only a small number of students), this shows that when applying the traditional vocabulary learning method, there are still many limitations and the effect is very modest. In general, this method is still effective but less suitable for learners and current learning needs.
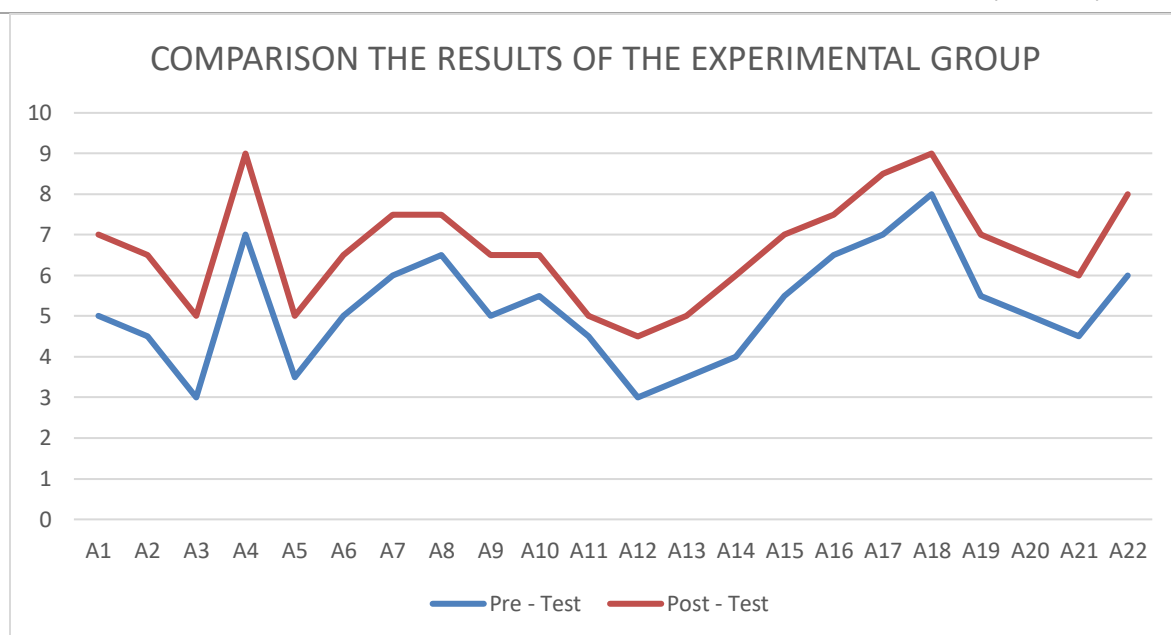
Figure 2. Comparison between pre and post-test results of the experimental group.

Figure 2 describes the comparison of the results of the pre-test and the post-test of a group of students experimenting with the use of the 4English application in learning, memorizing, and acquiring vocabulary. Looking at it in general, it can be seen that there is a very obvious improvement in students' ability to learn vocabulary. Based on the 10-point scale of the test, the results showed that the majority of students in the experimental group (20 students, about 91% of the total number of students) achieved higher scores in the post-test than in the pre-test. The graph also shows that students with low results initially also made progress as the 3-point or 4-point papers increased to 4.5 and 5 points on subsequent tests.

This positive improvement shows that the learning method applying the use of the 4English application has a good effect on students' ability to remember and use vocabulary. This effectiveness shows that the method is not only effective for learners with good level or higher but also suitable for learners with low input and level capacity.

4.2. Data analysis from the questionnaire

By conducting the survey method, the research goes deeper into the process of analyzing students' abilities as well as psychology and attitudes in learning vocabulary, exploring the values and aspects that the experimental method brings, contributing to the effective research and experimental process. Through studying the data collected from the survey, the majority of students said that traditional learning methods have not had a positive effect on their learning and acquisition of English vocabulary. In addition, each individual also has their own difficult problems. Surveys will help to draw the necessary conclusions and find solutions in the research process.

Table 2. The issues that students encounter.

No	Issues	Agree	Neutral	Disagree
1	High school students nowadays spend enough time learning English vocabulary.	59,1%	31,8%	9,1%
2	High school students are highly motivated to learn English vocabulary.	40,9%	31,8%	27,3%
3	The current vocabulary learning methods used in schools are effective.	22,7%	36,4%	40,9%
4	High school students find it difficult to memorize English vocabulary.	40,9%	45,5%	13,6%
5	Students actively use vocabulary learning tools such as mobile apps, flashcards, or online software.	31,8%	59,1%	9,1%
6	Students feel confident when using newly learned vocabulary in daily communication.	27,3%	36,4%	36,4%
7	Teachers at high schools provide sufficient materials and methods to support vocabulary learning.	45,5%	31,8%	22,7%
8	Traditional vocabulary lessons in high school often feel repetitive and monotonous.	54,5%	27,3%	18,2%
9	Traditional vocabulary learning methods maintained in schools are appropriate and effective.	36,4%	54,5%	9,1%
10	High school students have a positive attitude toward learning English vocabulary and want to improve their vocabulary knowledge.	68,2%	13,6%	18,2%

The results of the questionnaire showed that the app was capable of facilitating high student satisfaction. The majority of the students felt that the app was highly beneficial for improving their vocabulary, and they felt that the vocabulary exercises were challenging enough and relevant enough to fit their needs.

Students indicated satisfaction with the user-friendly interface of the app, which facilitated ongoing and steady learning, and positive remarks showed that they felt more confident in their ability to utilize newly acquired words in regular conversation.   Both maintenance of learning

motivation and facilitation towards high vocabulary memory were significantly augmented by these modules.

Through facilitating multimedia learning, the 4English app possesses the ability to enhance vocabulary learning efficiently, it is revealed by the findings, which is grounded on the inherent limitations of traditional approaches.

That is, not only does it improve learning for learners, but also their performance in applying language in real contexts. The research, however, noted some limitations, such as the absence of an evaluation regarding the long-term learning outcomes following the experiment and the possibility of variation in the learning capabilities of different individuals. As a result of this, there has been a cry for more research to be conducted in an attempt to establish the lifespan of learning effects and in pursuit of better ways of include technology in institutions of learning.

5. CONCLUSION

This study aims to investigate the impact of using the 4English app as a method to improve the English vocabulary learning ability of high school students. the results showed that the use of the 4English app in improving vocabulary learning for high school students had a positive effect. After the experimental period, students in the group using the 4English application have had a marked improvement in memorization and vocabulary use, along with confidence in using new words. Overall, research has proven that integrating the 4English application into the vocabulary learning process can effectively support and improve students' vocabulary learning capacity.

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