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Fostering Junior High English Vocabulary Mastery Through the Cake Application

[Membina Penguasaan Kosakata Bahasa Inggris Siswa Melalui Aplikasi Cake]

Abstract : This study investigates the effectiveness of the Cake application in improving vocabulary knowledge among eighth-grade students at SMP Muhammadiyah 5 Sidoarjo, emphasizing technology's transformative role in education in the era of globalization and the growing relevance of English as a global language. Using a true-experimental methodology, this study compares the vocabulary acquisition of students who use the Cake application to those who use traditional methods via pre-test and post-test assessments. The results, examined with SPSS 26, show a considerable gain in vocabulary mastery in the experimental group, proving the application's usefulness as an instructional tool. This study not only addresses the gap in deploying mobile-assisted language learning tools in educational settings, but also emphasizes the potential of such applications to significantly improve learning outcomes and student involvement in learning. The findings highlight the substantial influence that educational apps like Cake can have on enhancing vocabulary skills, thereby underscoring their role as valuable assets in modern pedagogical practices.

Keywords : Cake Application, English Vocabulary, Listening Skills

Abstrak : Studi ini menyelidiki efektivitas aplikasi Cake dalam meningkatkan pengetahuan kosakata di kalangan siswa kelas delapan di SMP Muhammadiyah 5 Sidoarjo, dengan menekankan peran transformasional teknologi dalam pendidikan di era globalisasi dan relevansi bahasa Inggris yang semakin meningkat sebagai bahasa global. Menggunakan metodologi eksperimental sejati, studi ini membandingkan perolehan kosakata siswa yang menggunakan aplikasi Cake dengan mereka yang menggunakan metode tradisional melalui penilaian pre-test dan post-test. Hasilnya, yang dianalisis dengan SPSS 26, menunjukkan peningkatan yang signifikan dalam penguasaan kosakata di kelompok eksperimen, membuktikan kegunaan aplikasi tersebut sebagai alat instruksional. Studi ini tidak hanya menangani kesenjangan dalam penerapan alat pembelajaran bahasa berbasis mobile di lingkungan pendidikan, tetapi juga menekankan potensi aplikasi semacam itu untuk secara signifikan meningkatkan hasil belajar dan keterlibatan siswa dalam pembelajaran. Temuan ini menyoroti pengaruh substansial yang dimiliki aplikasi pendidikan seperti Cake dalam meningkatkan keterampilan kosakata, sehingga menegaskan peran mereka sebagai aset berharga dalam praktik pedagogis modern.

Kata kunci: Aplikasi Cake, Kosakata bahasa Inggris, Keterampilan menyimak

I. INTRODUCTION

The era of globalization and advances in information technology that continue to develop, it can have a large and broad impact on every region of the world. Education, which is one of the most important fields, is greatly influenced by these technological advances [1]. English is increasingly important in various aspects of life because it is considered a global communication language. The world of education must adapt to technological advances so that students can prepare for the future. Governments and educational institutions are paying close attention to this as they seek to provide students with the skills required to succeed in a globalized environment.

English is very important for students because it allows them to communicate and express themselves well all over the world [2]. Vocabulary development is a crucial component of language competency since our ability to understand and convey meaning is positively correlated with the number of words we know. Vocabulary is very important for learning English. Without vocabulary, students will not be able to understand and speak well in English [3].

According to Mansur et al, vocabulary plays a vital role in language acquisition [4]. When learning English, it is important not only to acquire each of the four skills of reading, writing, speaking, and listening, but also to develop general language proficiency. Students must not only understand words and sentences but also develop their vocabulary through listening in English effectively. Uzer asserts that the first step in helping students comprehend and advance their reading, writing, and speaking abilities is listening. Through listening exercises, students learn new vocabulary and learn how to pronounce words without realizing it [5]. Listening activities involves capturing sounds by the auditory system, refining them to produce meaningful words, or forming meaningful phrases. [6]. It is worth noting that each student has a different vocabulary, which can greatly affect how they learn the language. Thornbury, emphasizes, that while grammar is crucial for communication, vocabulary is the key to expressing oneself [7]. When students actively expand their vocabulary, they can improve their ability to communicate, understand words that they don't know, and improve their general English skills. Additionally, having a strong vocabulary base makes it easier for them to communicate in English. It's important to remember that vocabulary is an essential part of learning a new language and is connected to all of the other language skills.

Fatin carried out a study titled "*The Effectiveness of Using Cake Application Toward Students' Vocabulary Mastery of the Seventh Grade at MTs PSM Rejotangan*" to address the issue [8]. The Cake application, which is the subject of this study, is a useful tool for increasing students' vocabulary knowledge as a learning medium and resource.

Tiamanda conducted the next research with the title "*The Use of Cake Application to Improve Students' Vocabulary at Karanganyar State High School*" [9]. The research found that there was definitely significant variance between teaching vocabulary and using methods of quantitative research and a quasi-experimental method. The research findings indicate that utilizing Cake has a consequence on vocabulary mastery. The pre-test had an average value of 46.59, while the post-test had an average value of 59.14 after therapy. In conclusion, using the Cake application has increased students' vocabulary mastery. Another study was conducted by Sofia et al with the title "*Students' Perception Towards the Use of Cake Application as a Medium to Increase Vocabulary Knowledge in Junior High Students*" [10]. This research focuses on student pronunciation and vocabulary mastery. This Cake application is useful, has interesting features, is easy to use, and is free. The results of these findings show that they are aggregated into positive perceptions. Apart from that, researchers found negative perceptions in this study. It was found that students felt that implementing this Cake had challenges for them. The students shared that they found it difficult to use the microphone and had limited scribbles or hearts when using the Cake application.

Contrast to the studies reviewed previously, the researcher focused on teaching vocabulary by implementing this cake application. To see students' vocabulary mastery in learning listening skills, the researcher chose listening skills activities because this application is suitable for listening activities. In this case, research highlights that teaching vocabulary through the Cake application not only provides variety in teaching media but also utilizes advanced technology to improve students' listening skills effectively. Therefore, the significance of this application was researched below the title "*Fostering Students' Mastery of English Vocabulary Through the Class VIII Cake Application at SMP Muhammadiyah 5 Sidoarjo*". In connection with the worth of vocabulary previously, the process of learning and teaching requires an optimal educational setting to attract student learning. The importance of this research lies not only in improving listening skills or vocabulary mastery but also in the contribution of English language teaching media to the

educational environment. In this way, students can actively participate in the methods and media used, not only in acquiring new vocabulary but also in being responsive to technological developments.

Choudron (2015) explained that learning English has become easier for students, thanks to applications that can be accessed via smartphones connected to the internet [11]. Smartphones serve not only as a basic means for communication, but they can also as efficient tools for learning because they have all of the capabilities of a computer.

According to E. Gerlach, teachers must consider student qualities that are directly related to the learning process, such as verbal ability, visual perception, and audio, when choosing the right media [12]. Our learning system model must also consider other components of media selection. They include the way the group is organized, the amount of time available, and the location where the media is used. The right media can encourage students to be more active. Psychologically, students want to study certain topics in a safe environment and are not afraid. Practically, the use of this medium can stimulate students to learn. The results are clear, allowing students to understand the material and learn the concepts. Students will be filled with enthusiasm after engaging in the lesson as a result of this. We know that utilizing this learning application media will improve your ability to speak English, including English conversation. This is due to several useful features in this application, which you can utilize to improve your English skills.

According to Darwis et al, Online learning media provides easy access and time flexibility for users, users can access learning materials anytime and anywhere [13]. Apart from that, online learning media also provides various interactions with other users, such as online discussions and collaboration in group assignments. On the other hand, offline learning media, such as books and printed materials, offer advantages in terms of stable availability and can be accessed without depending on an internet connection. Users can also learn in depth through offline learning media. As a result, educational media can be defined as anything that can transform and solidify knowledge from any source practically and efficiently, resulting in a critical learning environment in which learners can carry out the learning process efficiently and effectively.

As stated by Yanthi, The Cake application is South Korea's newest and most popular Android mobile application. He mentioned that this app is part of MALL (Mobile Assisted Language Learning), which may be accessed through smartphone devices [14]. It is claimed that utilizing this application can improve the user's proficiency in English competence, including

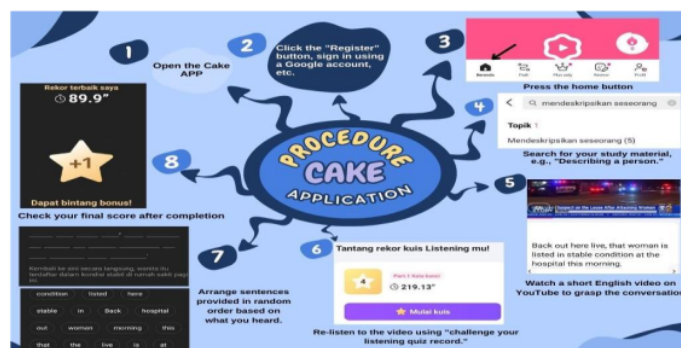


Figure 1. Cake application in listening activities

vocabulary, because it contains many interesting functions that can be applied to effectively increase English language skills.

Cake is not only an application, but also an English educational platform available for Android and iOS. Cake Learn English has a variety of impressive capabilities, such as short and funny subtitled video conversations, practicing speaking with native speakers, and a Speech Awareness tool that could be used to verify pronunciation. Interestingly, the app is easy for students to use, and it's familiar to Indonesians.

There are various advantages to using the Cake application as an English learning tool. It is easier to use and a new approach to learning English makes it a very effective choice. Because it is smartphone-based, students can access it with flexibility, anytime and anywhere. This app offers diverse content and, more importantly, is free once students use it. Learning English through this application is considered fun and never boring.

The Cake application has become considered to be the most efficient English teaching medium for improving students' vocabulary mastery and listening activities, seeing the large number of people who download this application. Since students will become more active in class, using Cake will become more effective. The Cake application is recognized as an efficient and fun medium for vocabulary acquisition in listening activities since it allows students to confidently listen, speak, and discuss the vocabulary that they have just learned. Studying with the Cake program encourages students to improve their English vocabulary and listening activities.

II. RESEARCH QUESTION

Can listening activity in Cake application improve students vocabulary mastery at SMP Muhammadiyah 5 Sidoarjo?

III. METODE

The research design used is quantitative experimental research. According to Creswell 2015, This method is known as a quantitative method while the researchers data is in a form of numbers and uses analysis based on statistics [15]. The researchers uses one of the experimental research styles in this experimental quantitative research, which is true-experimental, with one group pre-test and post-test. For the collection of data for this study, students will be accompanied into two groups: control and experimental. The control group learns language using conventional technical methods with PowerPoint accompanied by audio to discover new vocabulary, while the experimental group learns vocabulary using the Cake application program. This study used a purposive sampling technique for sampling. The purposive sampling technique, as defined by Cresswell (2015), is a method of determining and selecting samples chosen by the researcher based on certain considerations. In this circumstance, these considerations vary and are adjusted to the specific requirements of the research being conducted. The research sample consisted of 30 students who were purposively selected based on certain criteria that were considered relevant to the research objectives.

1

Group	Pre-test	Treatment	Post-test
Experimental	V	X	V
Control	V	Y	V

Explanation:

X : The Cake Application will be given to the students
Y : The Cake Application will not given to the students.

The researchers was conducted by treating one group and then administering a pre-test and post-test. The pre-test is measured against various traits or traits measured in an experiment before the group catching treatment, whereas the post-test is compared to several traits or traits assessed in an experiment after the group's therapy. This layout is recommended. In a true experimental research design, the researcher just analyzes one group of participants and does not possess a control group to compare with.

Pre-Test

A pre-test was given to students before being given treatment by researchers to determine students' vocabulary mastery in listening abilities or skills. The test is in the form of an audio given to students to measure the level of student mastery of vocabulary and listening activities. Students in both groups, the experimental group and the control group, were given the same test.

Treatment

Treatment strategies are used to help students solve problems in learning activities. At this stage, the control class was not given treatment using the cake application but instead used traditional teaching methods via audio provided by the teacher to increase vocabulary and listening activities. Meanwhile, for the experimental class, students were given treatment through a cake video application.

Post-Test

For the post-test, students are given audio listening which covers various levels of difficulty, then students listen and answer the questions in writing. The condition after the pre-test and treatment test attempts to identify any variations between the experimental and control groups. The pre-test and post-test results were then calculated using the SPSS 26 (Statistical Package for Social Science) program to measure whether there was a positive influence.

The population in this study were 8th grade students SMP Muhammadiyah 5 Tulangan which amounted to 30 students. From the 8th grade students at SMP Muhammadiyah 5 Tulangan, 2 samples were selected, namely 8th grade A students as the control class and 8th grade C as the experimental class.

The instruments used are audio listening and tests. The test instrument is a written test given to students to construct vocabulary based on the results of the listening learning that has been carried out.

Data analysis in this study used SPSS. This analysis technique aims to test differences in vocabulary skills between the control group and the experimental group taught through the cake application media. In this way, the difference in effectiveness between the control group and the experimental group will be known.

VI. RESULT & DISCUSSION

The researchers sought to see how effective a cake application was for teaching students vocabulary. The substantial advantages difference for students average scores between the pre- and post-tests demonstrates their effectiveness. After completing data analysis, the researchers provides the statistical analysis results to address the study challenges raised in the previous

chapter. The researchers conducted pre- and post-tests to collect numerical data on students' **14** **cabulary mastery before and after treatment. The following is a display of student scores as pre-test and post-test results.**

This chapter presents **data** analysis in **pre-test** and post-test activities. This chapter contains an overview of the problem, problem solving and discussion. The values were compared before and after the treatment to assess the progress in each group. As shown in the table below:

Tabel 1.
Score Pre-test and Post-test

No	Class	Average before treatment (Pre-test)	Average after treatment (Post-test)
1.	Control Class (8C)	45	75
2.	Experiment Class (8A)	55	82

The first section of Table 1 shows that **10** **the experimental group's pre-test score was 55,** whereas **the control group's was 45.** This indicates that the experimental group had a little higher score than the control group. Furthermore, the table also shows the average post-test score of both groups. The researchers employed the t-test to compare students' pre- and post-test scores in the experimental and control groups. Before performing a t-test calculating, the researcheres determined the data's normality. The normality test determines whether data is regularly distributed or not. In this true-expe**7** **mental test, the research involved a control group and an experimental group as subjects. This can be seen in the table below.**

Tabel. 2
Normality tests assess whether or not the data is normally distributed

Student Learning Outcomes	Class	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
	Pre-Test Experiment (8C)	.197	30	.005	.856	30	.001
	Post-test Experiment (8C)	.285	30	.000	.789	30	.000
	Pre-Test Control (8A)	.136	30	.167	.930	30	.050
	Post-Test Control (8A)	.293	30	.000	.845	30	.000

The normality test results in the table above show **3** **normalities in the data of one of the groups. namely in the saphiro wilk column located in the control pre-test class with a test value of 0.050** which means that the data is less than 0.05. data is said to be normal if > 0.05. With this non-normality, the researchers decided to use the Wilcoxon test. This Wilcoxon test is a not parametric approach that's effective better with data that is not regularly distributed. The Wilcoxon test is a not-parametric approach that is more effective in dealing with data that is not normally distributed.

Table 3
Wilcoxon Test is used to assess whether there is significant variation between the two paired data sets.

	Post-test Experiment – Pretest Experiment	Post-test Experiment – Pretest Experiment
Z	-4.869 ^b	-4.817 ^b
Asymp. Sig. (2-tailed)	.000	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative rankings, evaluate whether there is a significant statistical difference between the two groups tested.

According to Table 3, the Wilcoxon test, which was used to compare two groups of data that did not satisfy the normality assumption, provided significant results. This non-parametric test determines whether there is a difference of statistical significance among both test groups without making assumptions about data distribution. The authors found substantial differences between the control and experimental groups, particularly in the pre-test and post-test phases, when the experimental group had a significant increase in scores following the use of the Cake app. Similarly, the control group's pre-test and post-test scores improved significantly when compared to before getting instruction using conventional methods.

Table 3 clearly shows the difference between the experimental and control groups, with the experimental group's Z scores on the pre-test and post-test showing a significant difference from the control groups. Furthermore, these Z-values were utilized to compute the p-value (probability), which represents the probability of a random difference between the two groups. A p-value of less than 0.05 indicates a significant difference. Based on the study's findings, the scientists discovered a significant difference between the control and experimental groups, showing the effectiveness of utilizing the Cake app to boost students' vocabulary. The validated acceptance of the premise of this study demonstrates the students' vocabulary and listening ability using the Cake app. The statistically significant improvement in listening abilities found in both the control and experimental groups demonstrates that using this Cake application can help children enhance their vocabulary.

The researches proved that the Cake application is useful for improving students' vocabulary skills. The students' interest in choosing learning materials and the variety of stories in the form of videos make the learning process more fun and memorable. The use of Cake application in vocabulary learning is effective because it motivates students to learn by choosing materials they like and presenting various interesting stories in the form of videos.

This study shows that the "Cake" app is effective in improving students' vocabulary test scores. This is in line with Montgomery (2007) which states that the use of videos is a useful method of learning vocabulary, getting listening practice, as well as helping students in developing critical thinking skills [16]. The findings of this study support previous research by Kuo (2010) cited in the journal Abdul Latif, (2019) showing that the dictation method is effective in improving students' vocabulary acquisition [17]. The Cake app, which uses the drill method, proved useful for the same purpose. Both the dictation method and the Cake app, which are both drill-based, demonstrated their ability to improve students' vocabulary skills.

Listening improves our understanding of the speaker's message by helping us understand their pronunciation, vocabulary and grammar simultaneously [18]. This is supported by Momen (2022) who explains that the primary objective of this app is to help

students learn a language improve their abilities to learn by watching authentic films that reference language use in specific circumstances. [19]. Marian Tyson's (1989) research proved that intermediate level ESL students who listened to audio tapes in an instant recovery protocol achieved better scores in listening comprehension tests compared to students who only viewed the same content. This shows that listening to live text is more effective in improving ESL students' comprehension compared to just reading the text [20].

V. CONCLUSION

1 Based on the analysis of data and research findings, the research concludes that the Cake application is beneficial in improving students' vocabulary mastery. With a 95% confidence level, the findings of this study show a substantial difference in students' average scores before and after being taught using the Cake application. This proves that the Cake application is able to improve the quality of students' vocabulary mastery which was previously classified as low. Although there is a possibility of error of 5%, this study recommends Cake application as an effective learning media and learning resource to improve students' vocabulary mastery.

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