

Cake Application to Increase Students' English Vocabulary Mastery at SMA Bakti Parit Tiga

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ABSTRACT

Keywords:

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This study's goal is to find out if students in Bakti Parit Tiga High School's class XI can increase their vocabulary by using the Cake app using quasi experimental design. This study focused on employing narrative analysis to look at adjectives, nouns, and verbs in written language. The test results were statistically analyzed using t-test. The results of the study revealed that: (1) students in the treatment group that utilized the cake application achieved an average comprehension score of 94.79; (2) the control group achieved an average score of 88.89; and (3) students in the experimental group who used the cake application excelled at vocabulary mastery compared to the control group at a significance level of 0.03. Since, the two-tailed significant level of 0.03 was lower than the computed significance level, and the t-value of 3.058 was more than the t-critical value of 2.005. The alternative hypothesis (H_a) was validated while the null hypothesis (H_o) was not supported. Based on the previously mentioned data, it can be concluded that there was a significant difference in the students' vocabulary levels according to how they used the Cake app for learning.



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Introduction

As a means of communication, a nation's language defines its identity. (Noermanza, 2019), each person needs language when interacting, expressing ideas and opinions as well as relationships other social activities. It is clear that language is a mean of communication that can be the tool to express peoples thought, feeling, ideas, and opinion, to interact with other people and to build a social life.

English is solely studied in schools in Indonesia and is not applied in daily situations. As a result, English is frequently taught in Indonesia as a second language. In the language teaching field, the term 'foreign language' is distinct from the term 'second language'. A foreign language is one that is not commonly spoken for everyday communication in specific countries where the language is taught.

Mastering vocabulary is essential for English learners, as it can be developed through the four fundamental language skills. Rosiyana (2020) defined vocabulary as words or phrases with specific meanings, used in communication by individuals. Vocabulary helps students to use language successfully. Students are helped to understand how words work in writing and speaking. Vocabulary helps students to communicate well because it refers to concepts that occur in the listener's mind during speaking or actively speaking.

Written content and software programs are just two of the many learning options available to English teachers and students in the internet age. Nevertheless, it is important for an English teacher to be careful in using learning sources or media and deciding which ones are the most suitable and advantageous for their students. smartphones are technological aids that support English language learning, including the use of various interactive language skills learning applications, smartphones can be used as English learning tools for all skills, both listening, speaking, reading, and writing (Suhendar,2022). English learning can be maximized by using smartphone is English lessons. Currently, there are many smartphone applications that can help students learning English, both in the form of paid and unpaid program applications. One of

applications found in internet is Cake Application people have downloaded it 100 million times with 4,5 stars reviews (Ratminingsih, 2023).

The cake application gives grammatical explanations, vocabulary explanations, and commonly used expressions in suitable contexts to help English learners make them more practical and useful (Chusnul Chotimah, 2022). The Feature Cake contains an introduction recognition feature that enables users to verify pronunciation, capture their voice, and receive immediate feedback on their pronunciation skills. This function is very helpful for English learners as they use it to learn common phrases and mimic how native speakers talk.

Indeed, the cake app caters to users of every level of proficiency. According to Wilson (2022), it is the most effective tool for teaching vocabulary as it consistently introduces students to unfamiliar words. These new words were not removed from their context in order to aid students in remembering and learning their meanings and pronunciations. Simply put, we can effectively learn English words and phrases in an enjoyable manner through the use of engaging movie clips. Hence, utilizing the Cake app is seen as a suitable method for teaching new vocabulary, as it allows students to learn meanings in an enjoyable manner through brief movie clip videos.

After observing and interviewing an English teacher at SMA BAKTI Parit Tiga, it was determined that students had poor vocabulary skills and were not very engaged in the learning activities. They encountered difficulties with mastering vocabulary. The signs of the issues included: firstly, the students struggled to remember the definition of words and had trouble utilizing vocabulary. Secondly, students struggled with pronouncing words accurately as they relied solely on how the words were written, instead of observing the correct pronunciation. Thirdly, they were not as active, felt drowsy, and uninterested during the teaching session. Finally, the students lacked motivation and attention during the learning process.

According to the study conducted at SMA BAKTI Parit Tiga, there are 3 classes up to class XI, each with 20 students. Students in the eleventh grade took the test used in this study. There are twenty questions on the test. The questions, which resembled multiple-choice questions, were given to the students. The researcher's aim in conducting the test is to assess the students' proficiency in vocabulary. According to the data findings, Class XI IPS1 and XI IPS 2 show a reduced proficiency in vocabulary. The average value of XI IPS 1 class is 60.30, while XI IPS 2 class has an average value of 62.18. In addition, Class XI IPA 1 demonstrates a strong vocabulary proficiency, averaging a score of 68.15. This exam contains 20 multiple choice questions.

The teacher mentioned that students typically find English vocabulary to be dull and challenging. The researcher is looking into using media to make learning more enjoyable for students in order to help them overcome boredom and difficulty in expanding their vocabulary. By utilizing media, students can gain an understanding of the definitions of words. English has a wide vocabulary, making it challenging for students to memorize all the words. By utilizing the Cake app, the goal is to accomplish teaching goals while enhancing the efficiency and effectiveness of the learning process. This app appears to be able to capture students' attention while they are learning by presenting them with a brief video. Next, the classroom activity will be diverse and fun.

After reviewing the available data, the researcher made the decision to investigate the potential benefits of Cake as an English language learning tool for enhancing high school pupils' vocabulary. Cake Application to Increase Students' English Vocabulary Mastery at SMA Bakti Parit Tiga is the title of the study.

Method

This study utilizes quantitative techniques to analyze data and determine the study findings. Pre-test and post-test interventions are part of the quasi-experimental design used in this study. This study compared a control group with an experimental group in order to assess student performance outcomes. A pre-test will be given to both the experimental and control groups to evaluate the students' skills before to the intervention, which is crucial for the study's advancement. Afterwards, the experimental group members used the Cake App to improve their study vocabulary. Finally, to find any significant score changes, a post-test was given to both the experimental group and the control group.

Researchers consider population as all individuals who show certain traits that are deemed to be a more reliable source of information (Kurniawan, 2018). Kurniawan classified the population into two segments for the research: restricted population and unrestricted population. Three classes from SMA BAKTI Parit Tiga made up the tiny sample size for this study. X1 IPS 1 served as a control group and X1 IPS 2 as the group that underwent the experiment; they were selected based on their similar sizes and characteristics.

In collecting the data, the researcher used test, observation, and documentation:

1. Test

The test was employed as a tool by the researcher in this investigation. The evaluation included both an initial exam and a final exam. A test is a tool utilized by researchers to measure students' vocabulary progress prior to and post intervention, evaluating effectiveness and significance. While the post-test was given after the educational phase, the pre-test was given before the instructional phase. The researcher administered assessments before and after the intervention to both the control and experimental groups.

2. Documentation

The researcher utilized photographs as a tool for gathering data in the documentation. Documentation is designed to gather data directly from the study, and data that is pertinent to the research. The researcher gathered the data by utilizing documentation as the primary source. A documentation is a readily accessible source as many already exist in the institutional system. Documentation as additional supporting data or seconder data. There are some kinds that include in documentation such as lesson plan, students' attendance list, book, photos, notes, etc.

Following data collection, test, observation, and documentation data were analyzed:

1. Data of Test

The researcher used statistical techniques to analyze the data. To ascertain whether there was a significant difference between the experimental and control groups, the researcher used a t-test. The researcher used SPSS 26 to calculate the data.

Before use t-test, firstly the researcher counts the base score of students. The formula is as follow:

$$S = \frac{f}{N} \cdot 100$$

Where:

S: the real score

F: number of raw scores

N: maximum of raw score

Following the collection of base score data, the researcher computed the post-test and pre-test means. The mean can be calculated using this formula:

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

Where:

$\sum X$: "the sum of all individual scores

N: the total number of students"

2. Data of documentation

Documentation data were analyzed by using non-statistical analysis. Such as follows:

a) Lesson plan

The researcher in this study focuses on instructional strategies that use cartoon videos to educate pupils how to expand their vocabulary. Lesson plans consist of competency standards, indicator, teaching and learning activities, resources, media and assessment.

b) Photos

In this study, photos were taken during the action implemented. Since photographs can give a true picture of the process of learning and instruction, they are utilized to document activities that take place in the classroom.

Students from various schools at identical academic level participated in a trial that the researcher ran in order to evaluate the study's validity. Thirty eleventh grade students from SMA N 1 Mendo Barat participated in the test trial, which used a test instrument with fifty multiple-choice questions. Following this, the information collected from the students was analyzed using SPSS 26. The validity results revealed that out of 50 questions, 26 questions were deemed valid while 24 were considered invalid. The Cronbach's Alpha value is 0.821, with an r-table value of 0.361. This shows that the data was dependable because the Cronbach's Alpha exceeded the standard r-table regulation. It indicates that the tool is dependable and suitable for both pre-testing and post-testing.

Findings and Interpretations

1. Statistical Analysis of Pre -test and post-test of the Experimental Group and Control Group

The researcher wants to talk about the results of the statistical evaluation of both the control and experimental groups in this part.

- a. The statistical analysis of pre-test and post-test of experimental group

Table 3 <Paired Sample Statistic in Experimental Group>

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	71.68	28	13.462	2.544
	Post-test	94.79	28	6.136	1.160

The experimental group's average score on the pre-test was 71.68, and on the post-test, it was 94.79, based on the matched sample statistics. 13.461 was the standard deviation before the test, and 6.136 was the standard deviation after the test. The pre-test's average error of the mean was 2.544, whereas the post-test's was 1.160.

Table 4 <Paired Sample Test in Experimental Group>

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-test & Post-test	23.107	13.351	2.523	-28.284	-17.930	-9.158	27	.000

The experimental group displayed an average pair differences of -20.05, with an average standard deviation of 4.56 with a standard error of the mean of 1.04, according to the paired samples test table. The comparison between the pre-test and post-test yielded a t-value of -19.15. When using their Cartoon Video, pupils' vocabulary performance improved from the pre-test to the post-test if the 0.000 value was less than 0.05. The paired sample test table showed that the experimental group's mean difference between the pre-test and post-test was 23.107, with a standard deviation of 13.351. Additionally noted were the standard error of the mean, a t-value of 2.523, significance at $p < 0.00$ for two-tailed testing, and 27 degrees of freedom. Since the result of 0.00 was less than the significance level of 0.05, it suggested that using the Cake app for instruction improved student performance from the pre-test to the post-test.

- b. The statistical analysis of pre-test and post-test of control group

Table 5 <Paired Sample Statistic in Control Group>

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	74.78	27	20.778	3.999
	Post-test	88.89	27	8.0869	1.553

The control group displayed an initial mean of 74.78, with an average variation of 20.778 and an average error of the mean of 3.999, based on the provided paired sample statistics. With a standard variation of 8.069 and an error margin of 1.553, the average outcome of the test was 88.89.

Table 6 <Paired Samples Test in Control Group>

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre test - Post test	-14.111	16.386	3.153	-20.593	-7.629	-4.475	26	.000

In the paired sample test, the data table showed a t-value of 4.475, an average deviation of 16.386, a standard error of 3.153, and a mean deviation of 14.111 between the pre-test and post-test results for the control group. A two-tailed test with 26 degrees of freedom yielded a significance level of .000. The likelihood value of 0.05 was more than the p-value of .000.

2. The Difference Analysis of Student's Pre-test Between Experimental and Control Group

Table 7 <Group Statistic>

Category		Mean	N	Std. Deviation	Std. Error Mean
Score	Pre-test (exp)	71.68	28	13.461	2.544
	Pre-test (control)	74.78	27	20.778	3.999

Pre-test results for students in the experimental and control groups differed, according to group statistics data: the experimental group's mean score was 71.68, with a standard deviation of 13.461 and a standard error of 2.544. In contrast, the comparison group displayed a mean error of 3.999, a deviation of 20.778, and an average of 74.78.

Table 8 <Independent Sample Test>

		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score	Equal variances assumed	3.767	.058	.659	53	.513	-3.099	4.704	-12.533	6.335
	Equal variances not assumed			.654	44.314	.517	-3.099	4.739		6.450

The pre-test mean difference between the control group and the experimental group was 3.099, while the standard error difference was 4.704 during the independent sample t-test. With two tails, the significance level was .513, the t-value was .659, and the degrees of freedom were 53. With a t-value of .654 below the crucial t-value of 2.005 and a p-value of .517 above the 0.05 significance level. Consequently, it may be concluded that there were no significant differences between the experimental and control groups' students' pre-test scores.

3. The Difference Analysis of Student's Post-test Between Experimental and Control Group

Table 9 <Group Statistics>

Category		N	Mean	Std. Deviation	Std. Error Mean
Score	Post-test (exp)	28	94.79	6.136	1.160
	Post-test (control)	27	88.89	8.069	1.553

The contrast of post-test changes between both the control and experimental groups was displayed in Table 20. The mean, standard deviation, and standard error for the experimental group were 94.79, 6.136, and 1.160, respectively. With a mean deviation of 1.553 and an acceptable deviation of 8.069, the control group's average score was 88.89.

Table 10 <Independent Sample Test>

		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
score	Equal variances assumed	1.511	.224	3.058	53	.003	5.897	1.928	2.029	9.765
	Equal variances not assumed			3.043	48.548	.004	5.897	1.938		9.972

Students' post-test scores in the experimental and control groups differed by an average of 5.897 in the independent sample t-test. There were 53 degrees of freedom, a t-value of 3.058, a two-tailed significance of .003, and a standard error gap of 1.928. A t-score of 3.058 above the essential t-value of 2.005, and a p-value of .003 is below the 0.05 significance level. Consequently, it may be concluded that neither the experimental nor control groups' pre-test results showed any appreciable differences. As a result, the alternative hypothesis (Ha) was verified and the null hypothesis (H0) was rejected. In conclusion, a p-value below 0.05 and a t-value over the t-table value indicated a significant difference in vocabulary learning between students who played the word square game and those who used the Cake app.

4. The Comparison between Experimental Group and Control Group

Table 13 <Comparison between Experimental Group and Control Group>

Group	Highest pre-test	Highest post-test	Mean of Pre-test	Mean of Post-test
Experimental	96	100	71.68	94,79
Control	96	96	74,78	88.89

The table above lists the distinctions between the control and experimental groups. A maximum pretest score of 96 was attained by both the control and experimental groups, respectively. The experimental group in the experiment received a maximum post-test score of 100, whereas the control group received a maximum score of 96. The pre-test average for the experimental group was 71.68, whereas the pre-test average for the control group was 74.78. The post-test average for the experimental group was 94.79, whereas the control group's was 88.89. The table showed a significant difference among the experimental and control groups, showing that the experimental group's average post-test value was greater than the control group's.

Conclusions

The results of the implementation and analysis are shown in the paper, “The Impact of the Cake App on Enhancing Students' English Vocabulary Proficiency at SMA Bakti Parit Tiga”. After analyzing the researcher's implementation of the Cake application using observation sheets, student performance in participation, cooperation, and understanding of concepts was assessed. In terms of students working together, the researcher found that there was a noticeable improvement in student collaboration during the learning process. Most students were found to collaborate effectively with one another. The researcher assesses the student's response when they join a group and begin utilizing the Cake app.

Statistical analysis indicates a notable disparity in vocabulary skills between students who utilized the Cake app for instruction and those who did not. Therefore, the researcher's theory is confirmed as the null hypothesis is disproven. This assertion was supported by the test results, which showed that the experimental group's average scores were greater than the control group's. The T-score of 3.058 is higher than the essential T-value of 2.005 derived from the T-table, per the independent samples t-test. Furthermore, comparing the results to the computation with a significance level of 0.05 reveals a significant difference of 0.003. This demonstrates a clear difference between the experimental and control groups' post-test scores. Students who were taught using the Cake app showed a significant difference in post-test outcomes from those who were not, according to the results of the independent sample t-test. With average post-test scores of 94.79 and 88.89, respectively, the experimental group outperformed the control group. Thus, it can be said that the researcher's hypothesis is accepted and the null hypothesis is not supported. Therefore, using the Cake app can help pupils improve their vocabulary.

References

- Aminizadeh, Sarina, Arash Heidari, Shiva Toumaj, Mehdi Darbandi, Nima Jafari Navimipour, Mahsa Rezaei, et al., *The applications of machine learning techniques in medical data processing based on distributed computing and the Internet of Things*, Computer Methods and Programs in Biomedicine, 2023, 107745
- Chotimah, Chusnul, *The Use of Cake Application on Students' speaking Skill in English for Specific Purposes (ESP)*,” *Lingua*, 18.1 (2022), 60–70
- Forinash, Michele, *Qualitative research methods, data collection and analysis: Interviews, observations, and content analysis*, Dance/ movement therapists in action: A working guide to research options, 2012, 141–66
- Gaol Lumban, dan Desi Sastria, *The Effect of Using Cake Application on Student' Vocabulary Mastery at Second Grade of Junior High School HKBP Sidorame Medan*, 2022
- Juliani, Sri, *Pengembangan Media Pembelajaran Berbasis Aplikasi Android Berbantuan Smart Apps Creator pada Materi Sistem Peredaran Darah Kelas Xi* (Universitas Jambi, 2022)
- Kasim, Nur Aeni, *Increasing The Student's Vocabulary Mastery by Using Word Wall Media*, Universitas Negeri Makassar, 2011
- Kurniawan, Asep, *Metodologi penelitian pendidikan* (Remaja Rosda Karya, 2018)
- Noermanzah, *Bahasa sebagai alat komunikasi, citra pikiran, dan kepribadian*, in Seminar Nasional Pendidikan Bahasa dan Sastra, 2019, hal. 306–19
- Rosiyana, *Pengajaran Bahasa dan Pemerolehan Bahasa Kedua dalam Pembelajaran Bipa* (Bahasa Indonesia Penutur Asing), *Jurnal Ilmiah KORPUS*, 4.3 (2020), 374–82 <https://doi.org/10.33369/jik.v4i3.13839>
- Sugiyono, *Metode Penelitian Kuantitatif Kualitatif dan R&D* .pdf, Bandung Alf, 2011.