The Effectiveness of U-Dictionary as Learning Media to Improve Students' Vocabulary Achievement at Senior High School

Febi Adinda[1*], Endang Mastuti Rahayu[2]
[1,2] English Language Education Department, Universitas PGRI Adi Buana Surabaya, Indonesia

A B S T R A K

Kosakata sangat penting dalam belajar bahasa Inggris. Siswa yang belajar tata bahasa tanpa kosakata akan kesulitan memahami apa yang ingin mereka katakan. Sedangkan ketika mempelajari bahasa Inggris sebagai bahasa kedua, orang harus memiliki kosa kata yang cukup untuk mengekspresikan diri dan mempelajari berbagai macam kata agar tidak terdeteksi ketika mereka membaca, menulis, mendengarkan, atau berbicara dalam bahasa Inggris. Penelitian ini bertujuan untuk menganalisis keefektifan U-Dictionary sebagai media terhadap pencapaian kosa kata siswa di SMA kelas sepuluh. Pada penelitian ini, desain yang digunakan adalah kuantitatif pre-experimental. Populasi Dalam penelitian ini yaitu siswa kelas X SMA yang dibagi ke dalam lima belas kelas dengan menggunakan teknik random sampling. Instrumen dalam penelitian ini menggunakan tes berbentuk objektif. Hasilnya dapat disimpulkan terbukti bahwa hipotesis alternatif (Ha) diterima, sedangkan hipotesis nol ditolak (H0) ditolak. Setelah menggunakan rumus uji-t setelah dilakukan pengujian, dimana nilai uji-t (3053) lebih besar dari nilai t tabel (1,994) pada taraf signifikansi 0,05 atau 5% pada uji dua sisi dengan df 70. Kesimpulan menunjukkan bahwa U-Dictionary efektif untuk pencapaian kosa kata siswa di sekolah menengah atas.

A B S T R A C T

Vocabulary is very important in learning English. Students learning grammar without vocabulary will have a hard time understanding what they are trying to say. Meanwhile when studying English as a second language, people must have a sufficient vocabulary to express themselves and learn a wide variety of words to avoid being detected when they read, write, listen, or speak in English. This study aims to analyze the effectiveness U-Dictionary as media to students' vocabulary achievement at senior high school at tenth grade. In this study, the design used quantitative pre-experimental. Population In this study that was students at tenth grade in senior high school, divided among all fifteen classes using the technique of random sampling. Instrument in this study used test in objective form. The result could be concluded was proved that the alternative hypothesis (Ha) accepted, meanwhile the null hypothesis rejected (H0) rejected. After using the t-test formula after the test, where the t-test value (3053) was greater than the table value t (1.994) at the 0.05 or 5% significance level in the two-tailed test with df 70. The conclusion showed the U-Dictionary can effective to student's vocabulary achievement at senior high school.

1. INTRODUCTION

Learning vocabulary is an important part of learning a foreign language, as the importance of new words is often stressed, both in books and in the classroom. It is also the center of language learning and is very important for language learners (Ahmadi et al., 2012; Alqahtani, 2015; Puspitasari, 2016). Language comprehension can be successful when discovered and understood. For this reason, when learning English, students should learn as many vocabulary words as possible, as this will help them become proficient in the language. People cannot use language effectively unless they have a good vocabulary. People are better at conveying their feelings, thoughts, emotions, and goals when they have a large vocabulary. That is why it is important to master the vocabulary (Munawir et al., 2022; Nurjanah, 2018; Rahmasari, 2021). Little can be communicated without grammar and nothing without vocabulary. In other words, the first thing students should master when learning a language is vocabulary (Ali & Anwar, 2021; Wangru, 2016). They can reach their full potential in vocabulary learning by developing strong vocabulary. Some of the language present in English textbooks needs to be learned. Nobody could speak or understand the language without them. This implies that when people lose control, they are unable to spell a word or a sentence correctly. Learning English vocabulary offers students a number of benefits (Alisha et al., 2019; Cole & Feng, 2015; Pratiwi, 2016). However, some students of SMA Al-Islam Krian during PLP 2.2, particularly in the tenth grade, had difficulty managing their

vocabulary. In this case, the author seen from the results of the pre-test data that about 19 out of 36 students have below-average results. 19 students scored less than 60 points. This means that the student's score was not good. The pretest was performed by the author before the students performed the treatment. According to the author's research, students struggle with poor vocabulary, many students do not understand the meaning of words in sentences, have limited ability to memorize vocabulary due to laziness, and do not understand how to use English so as not to communicate. In addition, in this study found that students encounter certain problems when they begin to share their thoughts, ideas, and opinions with the other person. Problems that can be identified are poor student vocabulary mastery, teachers use popular dictionaries to learn vocabulary, low teacher creativity in teaching, teacher did not know about new technology, contagious vocabulary teaching and applied study techniques, students generally tend to lose interest in vocabulary learning due to monotonous use of losing words.

There were usually several strategies for teaching vocabulary. However, most English teachers had a few things to consider when they had to teach students new vocabulary or lexical items. This means that English teachers need students to memorize new vocabulary, so they need to memorize, practice, and revise so that students do not forget (Anggraeni et al., 2021; Santoso & Andriyadi, 2019). In now days, technology was undergoing incredible changes many fields and education is one of the main fields requires reform. Education is hard to imagine organization without computer and internet access. Use it the internet and computers have brought us great changes (Leksono et al., 2020; Rahayu & Bhaskoro, 2022; Sułkowski et al., 2021). Students are clearly influenced and interested in the technology that has powered the world the latest technology products. For the students, due to its portability and accuracy, a mobile phone would be the most effective tool for students at high schools in contemporary society to use during the learning process. Students can access a variety of informational resources (Ismail et al., 2018; Subedi et al., 2020). Electronic Dictionaries were spreading like new technological tools for learning vocabulary among high school students used more in the language students. (Kefah, 2017; Onojah et al., 2020). Students can gain as much practical experience as possible using this method. The usage of interactive media is another viable option because it encourages students to participate in lectures.

To solve this trouble, this study choose a digital dictionary because the medium for the students' vocabulary. The demands of 21st century education need that educators be well-equipped with the knowledge, experience, and training necessary to fulfill these new demands (Maamuujav et al., 2019; Rahayu & Bandjarjani, 2021). The digital or electronic dictionary had greatly superior the manner college students learn a foreign language, even as paper dictionaries are change the digital dictionaries are currently being revised. In addition, it become crucial that electronic dictionaries had been used in the teaching and getting to know of the language, as students had the possibility to be more engaged and inspired inside the look at of the language (Levy, 2015; Sarmila & Muhammadi, 2022). Electronic dictionaries can open up various situations for students, helping to open access to research. Using an English Dictionary is one of the useful studies for a media student. As a class used to using the big English dictionary, it would certainly be easier to customize the time with this program. It is also very simple and easy to carry anywhere (Suniyasih et al., 2020; Yuliyanti & Siahaan, 2022).

Any dictionary can be an introduction to some points about the use of a dictionary. Since this electronic dictionary can be used independently or in groups, it can be used to learn vocabulary. In the features or application of U-Dictionary also had advantages and disadvantages (Maslawati et al., 2017; Zheng & Wang, 2016). This application as u-dictionary includes a number of features that can aid students in learning English. A few benefits of using u-dictionary to learn English quickly include the following: 1) Students could used the camera to saw anywhere in English and interpret pictures. 2) Use the Android lock screen to detect English; if students had the U dictionary installed on the phone, could also recognize English from the lock screen without using a camera. 3). With the aid of a dictionary, students might quickly and easily learn English by playing. 4). Find English-language articles written in English, the articles are written in a conversational style so that we can discover ways to read English even as also gain perception (Wulandari & Handayani, 2020; Yulianti & Holman, 2022; Yuliyanti & Siahaan, 2022). By employing a few earlier investigations, the author of this study used some analogous studies. Previous study state students only recognized fifty words from each of the four categories noun, adjective, verb, and adverb for each category, according to the pre-test findings. It's not ideal that students in senior high school only know about fifty words. The vocabulary was appropriate for students in elementary school. Even so, it is now recognized that students in primary school typically know 100 words in English (Nurjanah, 2018). There are also results of the studies affects the improvement of college students in vocabulary (Tabrizi & Fard, 2016). The aims of this study is to analyze the effectiveness U-Dictionary as media to students' vocabulary achievement at senior high school at tenth grade.

2. METHOD

In this study, the conceptual framework represents how theory and elements that are acknowledged as significant problemsshould be related. Figure 1 illustrates the theoretical underpinnings of this investigation.
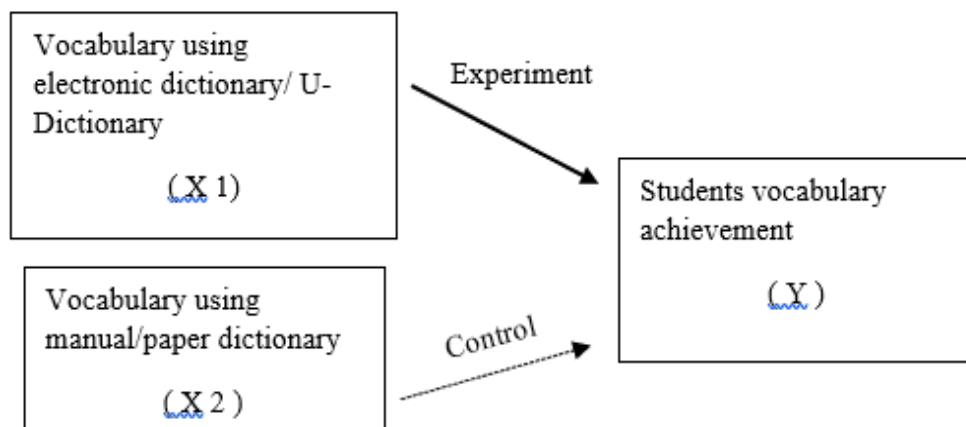

Figure 1. Conceptual Framework

The data analysis for analyze this study, the researcher choosed or used t-test formula by manual. To enable statistical analysis of numerical data, these variables can be measured, often using instruments. Quantitative research aims to develop theories that can be verified and tested. The final report follows the defined structure. The researcher used a quantitative experimental design to determine the effectiveness of the U-Dictionary for high school students' vocabulary. The purpose of experimental research is to determine how the therapy or intervention leads to certain outcomes, while controlling for additional variables that may have an impact (Cohen et al., 2019). In this study, the researcher used pretest-post-test control group design. In this approach, groups are randomly chosen and then given a pretest to see if there is initially a difference between the experimental group and the control group. Pretest effects were appropriate if the evaluations for the experimental group did not differ considerably. The sample was split into an experimental group and a control group for the experimental investigation (Sugiyono, 2019). The research design is show in Table 1.

Table 1. Research Design

Group	Pre-Test	Treatment	Post-Test
Experimental	O_1	X	O_2
Control	O_3		O_4

During the study, the research subject was students at tenth grade in senior high school. Using the cluster random sampling approach, the researcher selected a sample from the population identified in the results of the research for two reasons: first, the teacher at SMA Al-Islam Krian only taught two classes during PLP 2.2. The second, there were too many classes, which limited the researcher's time. In this study, within the 10th grade at SMA Al-Islam Krian contributed for the study's population. There had been 540 students for all of tenth class, divided a few of the fifteen classes, every of which consists of 36 students. The sample for this study was randomly drawn from the cluster population, a process known as random cluster sampling. Specifies that the sample must include all cluster members. The researcher attended only two conferences during the reporting period. The experimental class is one class and the control class is another. The experimental class was assigned by the researcher to the X-04 class and the control class to the X-03 class. The method of data collecting is tested by the author. A test was used to assess both a person's degree of competency and their ability to accomplish the goal (Sinaga & Pasaribu, 2020). The data collection in this study, used t-test formula to count the results of the test. The instrument, the researcher given a vocabulary test in objective test. There were numerous processes involved in gathering the data for this study. Tests are performed before and after treatment. Before using the U-Dictionary application, students must take a pre-test to assess their vocabulary and a post-test to see if U-Dictionary is effective for students' vocabulary performance. The following instrument grids show in Table 2 and also instrument validity test were taken by the author to gather the data is show in Table 3.

Table 2. Instrument Grids

Pre-Test	Treatment	Post-Test
The author used a vocabulary test with fill-in-the-blank items in both the pre-test and post-test for both classes (the experimental class and the control class). The test's goal is to identify students' vocabulary proficiency. The goal was to determine the level of vocabulary that would be required for the course of treatment.	The experimental group had a different course of treatment than the control group. Care for the experimental group includes using U-Dictionary to pick up new terms. The control group was given manual or paper dictionaries as opposed to the experimental group, which received the same care.	The author administered the post-test to the students. The pre-test and the test had a similar structure. Results from the pre-test and post-test were compared by the author. It is also possible to assess the effect of using U-Dictionary on students' vocabulary using those two scores as numerical data.

Table 3. Instrument Validity Test

Degree of Freedom	Probability				
	0.20	0.10	0.05	0.02	0.01
69	1.294	1.667	1.995	2.382	2.649
70	1.294	1.667	1.994	2.381	2.648
71	1.294	1.667	1.994	2.380	2.647
72	1.293	1.666	1.993	2.379	2.646

The outcomes of the data analysis by using t-test, which involved analyzing the pre-test and post-test data, If the Experimental class is provided by (X1) and the Control class is provided by (X2). The experimental class demonstrated that while the control class learned to use a paper manual or dictionary, the experimental class learned to use the U dictionary. The researcher used the t-test procedure to evaluate the data in order to determine the outcomes and determine if utilizing an electronic dictionary or U-Kamus is more effective at helping students in class VII-A at SMA Al-Islam Krian was achievement their vocabulary However, in this study initially used tests to assess the data.

3. RESULT AND DISCUSSION

Result

The researcher provided and tested the recordings for this chapter. The researcher implemented the components of the t-test to study the information. The test results have already been taken into account when collecting records. The statistics were gathered by the researcher through objective testing of the study. The X-03 and X-04 lessons of the students of SMA Al-Islam Krian are at the center of this look. The final score of the research taken from the experimental class and the sample. In this result of study, would like presented it. The data was analysed used T-tes statistic by manual. The score of experimental class is show in Table 4.

Tabel 4. The score of Pre test and Post test (Experimental Class)

No	Name	Score Pre-Test	Score Post-Test	D(X1)	(X1)²
1	AY	60	75	15	225
2	AA	70	85	15	225
3	AF	65	85	20	400
4	AD	60	80	20	400
5	AS	70	85	15	225
6	AD	70	90	20	400
7	AD	65	80	15	225
8	BD	70	85	15	225
9	CA	60	80	20	400
10	CA	65	80	15	225
11	Dr	70	90	20	400
12	EF	60	80	20	400
13	FA	65	80	15	225
14	GM	70	90	20	400

No	Name	Score Pre-Test	Score Post-Test	D(X1)	(X1)²
15	GN	65	90	25	625
16	ID	70	85	15	225
17	JL	65	85	20	400
18	LE	65	90	25	625
19	MD	70	85	15	225
20	MR	75	90	15	225
No	Name	Score Pre-Test	Score Post-Test	D(X1)	(X1)²
21	MI	60	80	20	400
22	MS	60	70	10	100
23	NR	65	80	15	225
24	NK	75	90	15	225
25	NJ	75	95	20	400
26	NA	70	90	20	400
27	RW	65	85	20	400
28	RR	80	95	15	225
29	RA	65	85	20	400
30	RA	65	80	15	225
31	SM	60	80	20	400
32	SA	65	80	15	225
33	TK	65	85	20	400
34	VM	65	80	15	225
35	VI	60	75	15	225
36	ZS	60	70	10	100
	SUM	2385	3010	625	11275

After it is known the result of student score in experiment class as show in Table 4, then the result of students score of pretest and posttest in control class is show in Table 5.

Tabel 5. The score of Pre test and Post test (Control Class)

No	Name	Score Pre-Test	Score Post-Test	D(X2)	(X2)²
1	AA	65	75	10	100
2	AF	50	70	20	400
3	AR	70	85	15	225
4	AR	60	80	20	400
5	AD	50	65	15	225
6	AH	70	80	10	100
7	AM	50	60	10	100
8	AP	60	80	20	400
9	AN	70	80	10	100
10	CN	50	65	15	225
11	DK	40	60	20	400
12	ED	70	85	15	225
13	FN	35	50	15	225
14	GA	30	50	20	400
No	Name	Score Pre-Test	Score Post-Test	D(X2)	(X2)²
15	Gs	60	75	15	225
16	H	40	60	20	400
17	IZ	45	65	20	400
18	LF	50	60	10	100
19	MC	80	85	5	25
20	MR	45	60	15	225
21	ML	50	60	10	100
22	MR	55	65	10	100
23	MA	50	65	15	225
24	MZ	75	85	10	100
25	NP	60	75	15	225
26	NW	70	85	15	225

No	Name	Score Pre-Test	Score Post-Test	D(X2)	(X2)²
27	PR	60	70	10	100
28	PR	40	60	20	400
29	RP	55	70	15	225
30	R	65	85	20	400
31	RR	45	55	10	100
32	SI	40	60	20	400
33	SH	50	65	15	225
34	SA	60	75	15	225
35	VA	70	85	15	225
36	ZP	70	80	10	100
	SUM	2005	2530	525	8275

Base on Table 4 and compare with Table 5 count the result of score in senior high school at experimental dan control class, After the getting knew for the data analysis by using *t-test,* it can take conclude there was no effectiveness of using U-Dictionary to student's vocabulary achievement of tenth grade SMA Al-Islam Krian. By using significant of 5%, was 1.994 with df 70, it makes H_0 (Nul Hypothesis) was rejected because the result from the research that showed in t-test is 3.053. From the analysis above, it can be known that Ha (Hypothesis Alternative) was accepted (3.053>1.994).

Discussion

The application of a Digital dictionary or an electronic dictionary by the students of SMA Al-Islam Krian at tenth grade was effective in terms of vocabulary achievement, according to the results of the result data. The author's usage of this media demonstrated that efforts to improve pupils' vocabulary achievement were successful. It indicates that 1.994 is shown from the result or data of 3.053 using the significant standard of 5%. The t-test was used to analyze the study's results, which are known. This study's findings were consistent with earlier research. In-depth analysis, can be achieve students' vocabulary. The results, showed that the count was equal to 3053 in the deviation of freedom (df) = 70 under the significance standard of 5% (0.05). It could be concluded that t-count (3053) was greater than the t-table (1994) . t-count > t-table (3053 > 1994) .Therefore, that t-count (3053) as the alternative hypothesis (Ha) was accepted and the t-table (1994) as null hypothesis (H0) was rejected.

This study, related to previous study with the same result. Based on the previous study related to the use of the U-Dictionary app affects the pronunciation of SMK Negeri 1 Perbaunga students of the XI (Dwi & Satria, 2023). It is proved that the alternative hypothesis (Ha) is accepted and the null hypothesis rejected (H0) after using the t-test formula after the test, where the t-test value (8.905) is greater than the table value t (2.021) at the 0.05 significance level in the two-tailed test with dl 40. The study results show that in-depth analysis can motivate students to learn English, and intensive reading can improve students' vocabulary (Aba, 2019). The similarity is related to the vocabulary performance of the students. But there is a difference between this case study and the previous study which not only focuses on vocabulary but also students' motivation to learn English and the variables used in study. The implications of this study indicate that the use of the U-Dictionary as a learning medium can improve students' understanding and mastery of vocabulary in secondary schools. This can have a positive impact on a student's ability to read, write, and speak the language being studied (Berninger & Fayol, 2008; Wulandari & Handayani, 2020). In this study, the U-Dictionary was used as an interesting and interactive learning tool. The use of technology in learning can increase students' motivation to learn and develop their language skills. This can help students get more involved in the learning process and increase their interest in learning vocabulary (Deris & Shukor, 2019; Knauer et al., 2020).

The limitations of this study are this research conducted in one particular school or area. Therefore, the results may not be generalizable to the wider population of students in secondary schools. Further research is needed to confirm the effectiveness of the U-Dictionary as a medium for learning vocabulary in various school contexts. This research may not have considered other variables that could influence the results, such as students' backgrounds, previous experience with using technology, or students' level of motivation. Consideration of these variables can provide a more comprehensive understanding of the effectiveness of the U-Dictionary as a learning medium. Based on the findings of this case study, it is known that using U-Dictionary helped students in SMA's tenth grade attain higher levels of vocabulary proficiency. The researcher offers some advice to the teachers. Teachers can use the U-Dictionary resource to assist their students in understanding the topic and learning new words. Teachers should set a positive example for students by constantly using English in their vocabulary use in order for learning to be fun and engaging for them. In addition, teachers should use technology to teach the students in today's technologically advanced world. Encourage students to use technology more judiciously, especially when studying and learning something new.

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4. CONCLUSION

Based at the results of the information evaluation with t-test method it supposed there has been considerable effectiveness of using U-Dictionary on college students' vocabulary achievement in SMA Al-Islam Krian. The students who studied thru of test. From the end result of the evaluation of the look at, the scholars' who were studying vocabulary via using U-Dictionary will be less difficult to locate vocabulary and find plenty of new vocabulary meanings to did the check, then the rating of the scholars' of check regarded better than before the use of U-Dictionary. U-Dictionary changed into appropriate media to be carried out in coaching vocabulary. Sothat the teaching on vocabulary had been more effective and interesting.

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