The Effectiveness of Using Macbox Media to Improve Students' Grammar Mastery

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ARTICLE INFO	ABSTRACT
	Grammar as essential aspect of English component helps students to recognize pattern and avoid errors. Alternative media is needed to make grammar learning more successful since students find it challenging to master grammar when it is taught using conventional method. This research aimed to find out about how effectively Macbox media works to help students in improving their grammar mastery. True-experimental research design was used in this research by using class X MA Matholi'ul Huda Bugel students as the research population. The two classes used as sample are 36 students of XG as the experimental class and 38 students of XH as the control class. Both classes received pre-test, treatment and post-test in order to gather research data. Then, SPSS 25.0 was utilized to examine the data outcomes. The findings of the research showed that the differences were seen in the two classes' average scores. For pre-test, the experimental class's average pre-test score was 48.47, while the control class' was 48.02. For post-test, the experimental class's average score was 75,41 and the control class' was 62,76. The significance value for both classes was revealed by the independent sample t-test analysis result, which were 0.000 (sig (2-tailed) < 0,05). It means that there are the significant differences between both classes. The result and discussion show the use of Macbox media is significantly effective in improving students' grammar mastery. It means that the use of Macbox media is more effective in improving students' grammar mastery compared to the use of conventional learning method.

Introduction

English is a global language that is primarily used in the world. It is studied not only in elementary and secondary school, but also in the college. (Moh & Bafadal, 2019). The development and mastery of language skills is one of the most important things that helps students communicate and navigate successfully (Hidayah, Hasyim & Azizah, 2023).

In learning English, students need to be competent in language skills such as writing skill, reading skill, speaking skill, and listening skill (Ali, 2022). Before mastering these skills, students must first be comprehended the language components of English, such as vocabulary, pronunciation, and grammar (Sumarni, Bhatta & Kho (2022). Language component is such a basic knowledge of English. Students will find it difficult to master English if these components are not acquired language components and language skills have corelated each other in the process of learning.

One of important part of language component that help students understanding the rules for organizing linguistic elements into meaningful unit is grammar (Prasetia, Eliza, Roza & Reflinda, 2022). Language grammar is important matter if studying English as first language or as their second language. According to Saengboon, Panyaatistin & Toomaneejinda (2022), grammar is essential aspect of English because without it very little can be conveyed by students. Learning grammar helps students to recognize patterns and avoid errors. Armadi (2020) stated students strongly think that they need to have a strong understanding of grammar in order to strengthen their oral and written communication skills. Mastering grammar is needed to write meaningful sentences that help understand the ideas or messages conveyed. Grammar is also useful for learning appropriate techniques to achieve mastery of English both in spoken and written form (Visakha, 2019).

Sintadewi, Artini & Febryan (2020) said the inaccurate selection of variations in the learning method and media used in the classroom is assumed to be the cause behind students' diificulties in improving their grammatical mastery. Widyaningsih, (2020) found that grammar learning is more often taught by conventional methods. Students that are bored and uninterested in learning are those who are taught material orally through textbooks without the use of engaging media.

However, grammar material should be given in a communicative way to help students understand the various components of speech without feeling overwhelmed by the learning process. One way to assist students that make it easier for them in improving grammar mastery is through learning media. The student will be more motivated to study English if there is media that is interesting and helps them be more active in class. Darmayanti, et.al. (2022) stated learning media is a tool that provides attractive teaching materials and easy to understand by student.

One of learning media that offers attractive material and can be used to enhance students' skill is flashcard (Nurgiansah, 2022). Flashcard is card printed with images that can be easily arranged by teachers in the classroom (Agustina, Amalia & Pavita, 2023). Through flashcards, students' imaginations can be encouraged to develop their ideas (Armadi, 2020). According to Safira, Mukhlasin & Suroya (2021) in term of teaching English, flashcards can be a useful visual aid for teaching grammar rules and pronunciation. In teaching grammar, action pictures can be used to practice specific English grammatical rules (Lutfiyah, et al., 2022). Khafiza (2023) stated Flashcards can be used for both easy recognition exercises, like matching words to pictures, and harder exercises, such using the new words to form sentences or tell stories.

The effectiveness of flashcard in English learning process has been the subject of several studies. A research conducted by Zakaria, Nursyuhada, et al. (2022) evaluates about learning grammar using a card game entitled 'Jester'. The result shows that Jester as card game has effectively increase students' motivation in learning grammar. Another research was conducted by Armadi (2020) with an article about increasing grammar mastery using flashcard for MTs students in Kutai Kartanegara. The result shows that flashcard significantly improved students' grammar mastery because the result of study was significant and Ho was not accepted. Fauziah (2023) conducted a research about the effect of employing flashcard of seventh grade students' vocabulary mastery. The study's findings

indicate that the t-test score was 3.75 and the t-table was 2.04. It means that students' vocabulary is significantly improved by using flashcards.

Those studies mentioned above are used as consideration for the researcher to investigate how Macbox (Matching Card-Box) can help students in improving their grammar mastery. The researcher chose Macbox media to teach grammar because this media appropiated with grammar material. This media is specifically designed according to grammar material and students can learn grammar in an interesting way, not only through flashcard but also matching game. he researchers attempted to use Macbox media with some differences from previous studies. First, this research used macbox media as developing flashcards to improve students' grammar mastery. Second, the macbox media is applied to tenth grade students of senior high school. Third, true experimental design used in this research. This research's novelty was its focus on improving students' grammar mastery using Macbox as developing flashcard based on matching game. So, considering the study's background, the main problems of this research are:

1. How is the differences between grammatical mastery achieved by students taught using Macbox media and those taught using conventional teaching method?

2. How effective is the use of macbox media in improving students' grammar mastery for tenth grade students?

Research Methods

This research used quantitative research approach with a true experimental design in order to get research data. According to Rahawi (2021) experimental design is used to test a theory, method, or technique to determine whether it affects a dependent variable or an outcome. Students in the tenth grade at MA Matholi'ul Huda Bugel for 2023–2024 academic year are included in the population of this research. There are 259 students in total in the population that consist of 11 classes and simple random sampling was used to gather the sample which consist of 74 students. Simple random sampling is used to take the sample because every member of the population has the same probability to be enhanced as the sample (Obata, A., 2022). The two classes used as sample are XG which has 36 students, and XH, which has 38 students.

In this research, the instruments used to collect research data are grammar tests, namely pre-test and post-test questions. The tests are in the form of 20 multiple choice questions that require students to identify grammar usage, understand vocabulary, analyze sentences, and identify detail information. Before the grammar test was given to students as a pre-test and posttest, its validity was examined by trial questions and analysis using SPSS. In addition, reliability test of instrument also measured to get its consistency when used at different time (Melinger & Hanson, 2020). Validity test was necessary to evaluate whether the research's instruments appropriate or not (Hilaikal, Wahyudin & Ayu ,2023).

Moreover, the SPSS 25.0 was used to measure that both groups were homogeneous and normal. However, the researcher carried out a normality test to determine the significant differences in the two classes. Kolmogrov-Smirnov test was used to prove that the groups

were distributed normally. The T-test used to find out the significant differencens result of students' achievement between experimental class and control class.

Findings

The result of the validity test was calculated used SPSS 25.0 after testing the instrument on students outside the research sample. There are 40 multiple-choice English test questions, and an item is considered valid if $r_{count} > r_{table}$. The researcher used all questions to be tested to the students of XK class. The following table provides the description of the valid and invalid test result conclusions:

Table 1. The Validity of Trying Out Instrument Test

Valid Questions	Invalid Questions
1,2,3,4,8,9,12,14,16,17,19,22,24,25,29,30,33,37, 39,40	5,6,7,10,11,13,15,18,20,21,23,26,27,28,31,32,34,35, 36,38

The table showed that there were 20 valid questions from 40 questions from the questions tested on students. For the research test, the researcher used 20 valid questions and the other 20 invalid questions were not used in the research.

The researchers then utilize Cronbach's Alpha to measure the instrument's level of reliability in order to determine its reliability. The calculation of instruments reliability uses SPSS 25.0. The results of the reliability test analysis are displayed in the following table:

Table 2. Reliability Statistic of Research Instrument

Reliability Statistics	
Cronbach's Alpha	N of Items
.726	40

According to the table, the Cronbach's Alpha research reliability was 0,726 > 0,60. So, the grammar test instrument was reliable due to criteria is $0,60 < r11 \leq 0,80$ (high reliability).

After the reliability test, using SPSS 25.0, the sample's normality was examined. The results of the normality test using the Kolmogorov-Smirnov test are described in the table below:

Table 3. Sample's Normality Test Results

	Classes	Learning Activity	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
			Statistic	df	Sig.	Statistic	df	Sig.
Learning Outcomes	Experimental Class	Pre-test	.173	36	.008	.869	36	.001
		Post-test	.132	36	.115	.964	36	.286
	Control Class	Pre-test	.171	38	.007	.930	38	.020
		Post-test	.103	38	.200*	.965	38	.283
	*. This is a lower bound of the true significance.							
	a. Lilliefors Significance Correction							

Based on the results described in the table above, it can be seen that the two classes, namely the control class and the experimental class, have significantly different values in

both the pre-test and post-test values. The both values are higher than 0.005. In experimental class's pre-test result, the significant value is 0.008 (0.008 > 0.005). Then, its significant value for posttest is 0.132 (0.132 > 0.005). For control class, the pre-test's significant value is 0.007 (0.007 > 0.005). Then, its post-test's significant value is 0.103 (0.103 > 0.005).

To determine whether or not the two classes in the research sample have homogeneous variants, a homogeneity test is conducted following the normality test. The sample can be considered homogenous if the results of the homogeneity test indicate a significance result of greater than 0.05. If the significance result is less than 0.05, the sample is taken to be non-homogeneous. The significant value of the homogeneity test of posttest scores in this research are as displayed below:

Table 4. Homogeneity Test on Pretest Scores for Control Class & Experimental Class

Homogeneity Test of Variance		Levene Statistic	df1	df2	Sig.
Learning Outcomes	Based on Mean	.301	1	72	.585
	Based on Median	.355	1	72	.553
	Based on Median and with adjusted df	.355	1	66.258	.553
	Based on trimmed mean	.373	1	72	.543

The significance value of the pre-test results based on the table above shows that based on the average value, the significant value result is 0.585. then it is stated that the data is homogeneous because the significant value is greater than 0.005. (0.585 > 0.005).

Table 5. Homogeneity Test on the Post-test Scores

Homogeneity Test of Variance		Levene Statistic	df1	df2	Sig.
Learning Outcomes	Based on Mean	3.637	1	72	.060
	Based on Median	3.806	1	72	.055
	Based on Median and with adjusted df	3.806	1	70.130	.055
	Based on trimmed mean	3.617	1	72	.061

The homogeneity test for post test scores in the table above showed that the significance value based on the average value is 0.060. With this value, it can be stated that the post-test data variance has a homogeneous value because the significance result is greater than 0.005 (0.060 > 0.005).

Independent Sample T-Test

To obtain research data, namely the influence of Macbox media on students' grammar mastery, using the Independent Sample T-test, the scores of the two classes, namely the experimental class and the control class, were compared. Apart from that, this test is also to find out whether the research hypothesis is accepted or rejected.

1. Hypothesis

   Ha = There is a significance difference between students who were taught using Macbox media and students who were taught without Macbox.

   Ho = There is no significance difference between students who were taught using Macbox media and students who were taught without Macbox.

2. Hypothesis Criteria
   - Rejecting Alternative Hypothesis (Ha) and accepting Null Hypothesis (Ho) if t_{test} (t_0) < t_{tabel} (t_t)
   - Rejecting the null hypothesis (Ho) and accepting the alternative hypothesis (Ha) if t_{test} (t_0) > t_{tabel} (t_t).

Table 6. Statistic Descriptive of Post-test Score

Group Statistics					
	Classes	N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	Post-test of Experimental Class (Macbox Media)	36	75.42	9.515	1.586
	Post-tets of Control Class (Conventioanl)	38	62.76	12.395	2.011

The results of the post-test scores for the two classes shown in the table above are that the experimental class of 36 students had an average post-test score of 75.42. Meanwhile, in the control class with a total of 38 students, the figure was 62.76. Based on these results, it is stated that the two classes have different average post-test results.

Table 7. Independent Sample T-Test of Post-Test

Independent Samples Test									
		Levene's Test for Equality of Variances		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
Hasil Belajar Grammar	Equal variances assumed	3.637	.060	4.906	72	.000	12.654	2.579	7.512 / 17.795
	Equal variances not			4.941	69.087	.000	12.654	2.561	7.545 / 17.762

	assumed

The significance value of the experimental class and control class seen from the table above shows a value of 0.000, which is less than 0.05. Then, based on Equal variables assumed, the T-test results were 4,906 with a value of df = 72, a mean difference of 12,654, a difference in standard error of 2,579, the highest value was 17,795 and the lowest value was 7,512.

From the table, on the equal variances assumption section with sig (2-tailed), with a value of 0.000 which is smaller than 0.05, so the results of hypothesis is rejecting Ho and accept Ha (0.000 < 0.05). Then, the T-test results indicated that the T-test value was 4.906 which is higher than 1.993. So, it can be said that Ha is accepted while Ho is rejected.

Based on the research results described above, on the post-test scores indicated that the results of the independent sample t-test of the two classes, namely the experimental class which used Macbox media in learning and the control class which did not use Macbox media, had significant differences in results. With this it can be concluded that in class X MA Matholi'ul Huda, the use of Macbox media was effective in helping students improve their mastery of grammar.

Discussion

Find out the effectiveness of using Macbox media in improving grammar mastery is the aim of this research. The researchers used Macbox media as an alternative solution in improving students' grammar mastery. Macbox media, which is a flashcard developed based on matching games, makes learning English more enjoyable for students by allowing them to participate more actively in the class. Students' interest for learning English, especially grammar, is increased by these media. Arifin & Al Halim (2021) stated, using card media in the classroom can increase students' motivation to study and help them become more aware of their object knowledge.

The researcher conducted this research by quantitative method using true experimental design that used X G (experimental class) and X H (control group) as research sample. The experimental class was given learning treatment using Macbox media, while the control class was given treatment without using the media. In implementing Macbox media in the experimental class, students learn in groups when using Macbox media and each group understands the subject material. afterwards, every group discussed on the vocabulary presented in the flashcards and classified each card according to the category of grammar, namely part of speech. After that, each group member matched the cards into the card box and then continues the game by taking instruction cards randomly. Finally, the students followed the instructions on the cards individually. By using MacBox media in the learning process, students became more active in learning and can understand grammar material in an interesting and fun way. Armadi (2020) provided supporting for it that flashcard was able to improve student's grammar mastery. With this media, students were enthusiastic and enjoyed learning grammar. They enjoyed discussing the type of cards with their friends and

playing the matching card game. By using this media, the students were able to understand the grammatical material better. So, Macbox has effect on improving students understanding on grammar material and nad increasing their post-test score. However, in the control class, grammar material was taught using conventional method. In understanding the material, students only focused on the teacher's explanation using textbook. Students tend to be passive and have difficulty understanding the material being studied

As long as students receive treatment from researchers, the first meeting is used to conduct a pre-test and the final meeting is used to conduct a post-test at the end. Both classes received the same test questions for each student in the control group and experimental group. Therefore, after gathering data, the results analysis using SPSS 25.0 as statistical analysis. The result revealed between the experimental class that used Macbox media in their learning and the control class that did not, the results of the post-test scores for the two classes have significant differences value. It is supported by Zakaria, Nursyuhada, et al. (2022) and Armadi (2020) stated that students' grammar mastery can be enhanced through the usage of flashcard media. The experimental class and control class got different average score in their pre-test and post-test. In the pre-test, the experimental class got 48,47 as the average score and control class got 48,02. Meanwhile, the post-test average score for both classes increased with significant differences. The experimental class got 75,41 as the post-test average score and control class got 62,72. In addition, the analysis of Independent Sample T-test, using sig (2-tailed) and equal variances assumed, revealed value 0.000. This value is less than 0.05 (0.000 < 0.05). Then, the T-test value was 4.906, which is this value was higher than 1.993. So, according to the results of data, the result that can be revealed is accepting Ha and rejecting Ho.

Based on the explanation of the result, researcher found that the use of Macbox media in the grammar learning indicated a significant difference score for the experimental class and control class. The research was carried out 5 meetings which includes a pre-test at the first meeting, 3 times treatments at the next meeting, and post-test at the last meeting. Students in the experimental class who received learning through Macbox media achieved better academically than those in the control class who received instruction through conventional methods. Descriptive statistical data has been used to show the differences score of experimental and control class.

Conclusion

Based on the findings that were previously discussed, some conclusions were formulated as follows. The t-test value based on the independent sample t-test result was 4,906 with a value of df = 72. The t-table was 0.000. The t-table value was smaller than 0.05 (0.000 < 0.05). So, the decision taken was rejecting Ho and accepting Ha. The study's results showed that students' grammar mastery had improved as a result of using Macbox media. It means the answer of the research problem is "Using Macbox significantly improves the grammar mastery of tenth grade students at MA Matholiúl Huda Bugel for 2023/2024." This means teaching grammar using Macbox media significantly increase gramma academic year. In addition, finding of research showed that students who were learn grammar using Macbox

get better score on grammar than the students who were learn without Macbox media in learning grammar.

We recommend the use of other alternative media for other researchers. There are many exciting media that can be used to help students improve their grammar mastery and help students be more active and interested in learning.

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