THE EFFECTIVENESS OF THE USE "BASIC ENGLISH GRAMMAR E-MODULE" AS AN AUTONOMOUS LEARNING MEDIA TOWARD STUDENTS' ENGLISH GRAMMAR COURSE ACHIEVEMENTS

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ABSTRACT

This study aims to explore the effectiveness of Basic English Grammar E-Module as both learning and autonomous learning media in Basic English Grammar courses for English Education Department (*Tadris Bahasa Inggris*) students at UIN Maulana Malik Ibrahim Malang. Using a quantitative pre-experimental approach with a one-group pre-test post-test design, the sample of the study consisted of 30 students. The research instrument was validated through construct and content validities by expert judgment, item validation, and reliability. The data analysis techniques are descriptive and inferential analysis which were taken from the mean values, normality test, and *Paired Sample T-Test* of the data. The results indicate that the use of learning media has proven to be effective. It is proven that the mean of the post-test result is higher than the pre-test, which is 78.38. Moreover, the *Paired Sample T-Test* results significantly show 0.000, which was ≤ 0.05. Thus, it can be concluded that using Basic English Grammar E-Module learning media in Basic English Grammar courses effectively improves the grammar learning outcomes of English Education Department students at UIN Maulana Malik Ibrahim Malik Malang.

Keywords: E-Module, Learning Media, English Grammar, Learning Achievement, Students

Introduction

Learning the English language is more than just mastering the four basic skills. Apart from listening, reading, speaking and writing, grammar mastery is also fundamental to pay attention to, including in learning English. Ayu and Sari (2022) found that learning English grammar often becomes a challenge for English teachers to understand their students. This because English is not the mother tongue in Indonesia, many English learners doubt their grammar skills, even to have simple conversations.

More than that, Grammar skills are often underestimated under the pretext of learning a language based on habit, so there is no problem with someone's Grammar that is still bad enough because the most important thing is to keep practising. The phenomenon is partially deviant, but it would be better to prioritize students' understanding of Grammar. Because in practice, Grammar has a robust correlation in supporting the four basic skills in English. Grammar skills mastery should be considered in writing, speaking, reading, and listening (Santosa, 2017).

Therefore, besides the learning methods and strategies applied in the classroom, several other components must also be considered to improve students' understanding of learning grammar. One learning element essential to support student understanding is learning media as an electronic learning module (E-Module). E-Module learning is a medium of learning creation to support transferring knowledge from teachers to students about a material independently (autonomously) and together in class (Pujiati et al., 2019). The E-Module design is more flexible to use anytime and anywhere via mobile phone or smartphone.

In addition, there is a learning E-Module, the learning cycle carried out in a certain period (semester). The existence of an E-Module in a lesson helps students understand or read briefly about the learning material. Students can also easily re-access the learning materials to gain a deeper understanding. More than that, the E-Module, as a teaching material, guides students to learn outside the classroom and becomes a reference for teachers rather than out of the context of competence, which will be learning outcomes (Sungkono, 2009).

Based on the preliminary study, the researcher found that one of the teachers in the English Tadris study program at UIN Maulana Malik Ibrahim Malang, succeeded in researching the development of an E-Module with the title "Basic English Grammar E-Module: A Self-Study Reference with Answer Key". The E-Module development aims to provide learning media facilities for International Class Program students at UIN Malang. Based on interviews with researchers, the informant stated that the learning media in the form of an E-Module was valid and effective for international class students because it adapted from the need analysis of international students who did not have English language development courses to support their abilities.

However, the effectiveness of the learning media at that time was carried out through surveys or questionnaires after students briefly analyzed the learning E-Module. Therefore, further research is needed which provides more significant results through direct treatment in the classroom. More than that, this research was conducted on non-international program students so that if the results show a positive value, the E-Module can also be effective to use by non-international program students. Because apart from being able to be used flexibly both in class and outside the classroom, accessible free of charge, does not require a heavy internet network, and is memory or storage-friendly, the material contained in this learning E-Module is also almost in line with the learning material for the Basic English Grammar course in the English Education Department at UIN Maulana Malik Ibrahim Malang.

Thus, this study aims to explore the effectiveness of using the Basic English Grammar E-Module as a learning medium in Basic English Grammar courses and autonomous learning media for English Education Department Students at UIN Maulana Malik Ibrahim Malang. The expected research results are to be a reference for Grammar teachers and students who are studying Grammar to take advantage of the E-Module to support the learning process while increasing their Grammar mastery and their learning outcomes.

Research Method

This research is pre-experimental quantitative research with a One-Group design Pre-Test and Post-Test. Sugiyono (2017) described the One Group Pre-Test and Post-Test research design as follows:

Table 1. One-Group Pre-test Post-test Research Design

Pre-test	Treatment	*Post-test*
O_1	x	O_2

Information:

O_1 : Pre-test, namely a test to measure students' abilities before being treated in the form of using Basic English Grammar learning media E-Module

X : Treatment

O_2 : Post-test, which is a test of learning outcomes after using additional learning media in the form of Basic English Grammar E-Module

The population in this study were English Education Department students' class of 2021 who were taking Basic English Grammar courses, namely 74 students. In this study, the

sampling technique used a simple random sampling technique. The simple random sampling was carried out randomly from the existing population, regardless of the presence of certain strata, because the population is considered homogeneous. This is proved by the population that comes from students who are in the same study program, class and are taking the same course (Sugiyono, 2017). Thus, the sample was 30 students' representatives with details of 17 male and 13 female students.

The location of the study is UIN Maulana Malik Ibrahim Malang, Jalan Gajayana No. 50, Dinoyo, Lowokwaru, Malang City, East Java, Indonesia 65144. The research was conducted in the Odd semester of the 2022/2023 academic year in September and October 2022, conducted in the Basic English Grammar course. The following is a more detailed research schedule:

Table 2. Research Schedule

No.	Activities	Month/Date/Year
1	Preliminary Study	September 8 and 15, 2022
2	Pre-test	September 22. 2022
3	Treatment (Conditional Sentence Material)	September 29. 2022
4	Autonomous Learning about Conditional Sentence	September 28 – November 5, 2022
5	Post-test	November 6, 2022

Source: composed by the researchers (2022)

Abdullah (2015) defines the hypothesis as a temporary answer whose truth is tested through research stages. There are two types of hypothesis, namely, the null hypothesis (H_0) and the alternative hypothesis (H_a) (Yam & Taufik, 2021). The null hypothesis is the tested hypothesis, usually a parameter arranged through statements with a specific value. In contrast, the alternative hypothesis will state the opposite parameter values from the null hypothesis (Lolang, 2015). Thus, the null hypothesis (H_0) formulated in this study is "the use of Basic English Grammar E-Module learning media is **effective** to increase English Education Department students' understanding of Grammar in Basic English Grammar courses. Meanwhile, the alternative hypothesis (H_a) in this study is "the use of Basic English Grammar E-Module learning media is **not effective** to increase English Education Department students' understanding of Grammar in Basic English Grammar courses.

This study collected data through the pre-test and post-test results before and after the treatment. The instruments used were questions that aligned with the learning materials during the treatment. Sugiyono (2013) states that the instrument is a measuring tool for exploring research data. Therefore, the instrument must be valid and measurable (reliable).

In this study, there are two stages in instrument validation: construct and content validities. A Grammar expert carried out the construct validity, and content validity was carried out through item validation and reliability for all items. Sugiyono (2017) revealed that the validity of the instrument in the form of a test must fulfil two stages of validation, namely construction and content validity, while the validity of the instrument in the form of a non-test may only use construction validity without content validity (Sugiyono, 2017).

The instrument validity test was carried out on 30 English Tadris students in addition to the sample that was the object of the treatment. Novikasari (2016) explains that the empirical validity of the research instrument must be carried out on respondents outside the research sample. Figure 1 shows the results of the question bank test. From the 25 questions made by the researcher, 13 questions were invalid because r count < r table, while 12 questions were declared valid because r count > r table. Conversely, if according to the product moment

formula r count < r table, then the item is declared invalid (Sudaryana, 2020). Therefore, the researcher used ten multiple-choice items confirmed as valid measuring tools in the study. The questions in the pre-test and post-test are the same, but a difference is given in the order of the available answer choices.

After the items' confirmation has been valid, the reliability of the items is determined using the Cronbach Alpha test (α) using the Excel formula 10 ÷ (10-1)*(1-(variance of each item ÷ total variance)). While the formula used to find the variance is: VAR (vertical items). The Cronbach Alpha test (α) shows a value of 0.809, which was > 0.60, so the items in the research instrument were reliable. Rosita et al. (2021) stated that the research instrument is reliable if p, as the result of Cronbach Alpha calculations, is > 0.60.

While the instrument has been valid and reliable, the next stage is collecting data through a pre-test and post-test in the field. The study results were then analyzed using descriptive statistical analysis and inferential statistics. Descriptive analysis was carried out to see how high the students' mastery of the material was after the treatment. In this study, descriptive analysis was taken through the results of the distribution of the average (mean) scores of students' pre-test and post-test. As a reference in determining the level of students' mastery of the material obtained through descriptive analysis, the following is *the range of learning outcomes categories* according to (Arikunto, 2008):

Table 3. Range of Learning Outcome Categories in Descriptive Analysis

Mastery Level	Categories
85-100	Very High
65-84	High
55-64	Medium
35-54	Low
0-34	Very Low

Then, inferential analysis was carried out through the normality test and the Paired Sample T-Test. The research data normality test was conducted to prove that the research sample came from a normally distributed population. In this study, the normality test used a Shapiro-Wilk method in SPSS. If the results of $p \geq 0.05$, then the data frequency distribution is declared normal. Conversely, if the results of $p \leq 0.05$, then the data frequency distribution is declared abnormal (Yulianto et al., 2022).

Afterward, the Paired Sample T-Test aims to conclude whether the learning media given to the treatment are effective or not in helping improve students' Grammar skills. The Paired Sample T-Test test was carried out on the results of the post-test scores that the researchers had recapitulated. The criterion used is if p (sig.2 tailed) ≤ 0.05, then H_0 is accepted. Conversely, if p (sig.2 tailed) ≥ 0.05, then the H_0 study is rejected (Malmia et al., 2020).

Result and Discussion
Pre-test and Post-test Statistic Descriptive
In the data collection stage, 30 students, who were the object of treatment in the study, were required to take the pre-test and post-test. The pre-test was carried out before the treatment, and the post-test was after the treatment. Before heading to the conclusion of whether the instructional media is adequate or to the contrary, the first stage is finding students' level of mastery of the material given during the treatment through descriptive analysis. The following are the results of the descriptive analysis of the results of the students' pre-test and post-test scores:

Descriptives

			Statistic	Std. Error
Pretest EModule	Mean		54.6667	3.24244
	95% Confidence Interval for Mean	Lower Bound	48.0351	
		Upper Bound	61.2982	
	5% Trimmed Mean		55.0000	
	Median		50.0000	
	Variance		315.402	
	Std. Deviation		17.75957	
	Minimum		20.00	
	Maximum		80.00	
	Range		60.00	
	Interquartile Range		30.00	
	Skewness		-.100	.427
	Kurtosis		-1.012	.833
Posttest EModule	Mean		78.6667	2.38450
	95% Confidence Interval for Mean	Lower Bound	73.7898	
		Upper Bound	83.5435	
	5% Trimmed Mean		78.8889	
	Median		80.0000	
	Variance		170.575	
	Std. Deviation		13.06043	
	Minimum		50.00	
	Maximum		100.00	
	Range		50.00	
	Interquartile Range		20.00	
	Skewness		-.235	.427
	Kurtosis		-.521	.833

Figure 1. Pre-test and Post-test Descriptive Analysis Results

The mean value of the pre-test was 54.67, with the lowest score being 20 and the highest score being 80. Meanwhile, the mean value of the post-test was 78.67, with the lowest score being 50 and the highest being the ideal score is 100. The data in Figure 1 shows that the average post-test score of students is higher than the pre-test score, with a lower range indicating a relatively stable distribution of scores among all respondents. If it aligned with the range of Arikunto's learning outcomes categories, the average post-test scores of students after the treatment are in "high" category.

The results of this cognitive assessment indicate that the use of the E-Module Grammar is effective in helping to improve student Grammar learning outcomes. If the average post-test value is higher than the average pre-test value, then the treatment applied to the sample leads to positive results of (Malmia et al., 2020); Istifadah & Ahmadi, 2023). In other words, if the average student score after the treatment is greater than the student's average score before the treatment, there is undoubtedly a change in the final ability in a better direction (Elizabeth & Sigahitong, 2018).

The Normality Data Test
The following inferential statistical analysis is the data normality test to ensure the spread of normal data distribution. The data normality test was conducted using SPSS using the Shapiro-Wilk method because the respondents were less than 100 (Nurhayati & Purwaningroom, 2022). The following are the results of the data normality test in the study:

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest EModule	.139	30	.142	.934	30	.064
Posttest EModule	.174	30	.021	.939	30	.086

a. Lilliefors Significance Correction

Figure 2. Tests of Normality Data Results

From the Figure 2, the results of the data normality test on the pre-test and post-test using the Shapiro-Wilk method show the numbers 0.064 and 0.086, with values ≥ 0.05. Thus, the data distribution in the study was normally distributed. The normal distribution of this data is needed because testing the data uses the T-test. As Sari et al. (2017) stated, if researchers perform data analysis using several statistical tools such as the T-test, F-test, or analysis of variance, then the normal distribution of data is required. Meanwhile, if the researcher does not use several statistical tools, testing the normality of the data is unnecessary.

Paired Sample T-Test on the Pre-Test and Post-Test

The purpose of testing the Paired Sample T-Test on pre-test and post-test values is to determine whether the treatment of the research object is effective. The category used is if the results of sig.2 tailed ≤ 0.05, then H_0 research is accepted, whereas if p (sig.2 tailed) ≥ 0.05, then H_0 research is rejected. The following are the results of the Paired Sample T-Test on the value of the research object's post-test results:

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
				Std. Error Mean	95% Confidence Interval of the Difference				
		Mean	Std. Deviation		Lower	Upper			
Pair 1	Pretest - Posttest	-24.00000	18.86431	3.44414	-31.04405	-16.95595	-6.968	29	.000

Figure 3. Paired Sample T-Test Result

After confirming that the research data is normal, the next step is testing the Paired Sample T-Test. The Paired Sample T-Test was used to ensure a significant difference between the students' scores after and before the treatment (Rachmawati et al., 2020). The results of the Paired Sample T-Test on the post-test showed a tailed sig.2 value of 0.000 ≤ 0.05. Thus, with a 95% confidence interval, it can be concluded that H_0 is accepted.

Ravis et al. (2019) stated that if the significance value is ≥ 0.05, then H0 is rejected. However, if the significance value is <0.05, H0 is accepted. In other words, if the sig. < 0.05, there is a difference in the results of the pre-test and post-test scores, and vice versa (Fitri & Ummah, 2022). Therefore, these results indicate the contribution of the Basic English Grammar learning media to the learning outcomes. The E-Module has proven to be effective in increasing the Grammar understanding of students who are taking Basic English Grammar courses in the English Tadris study program at UIN Maulana Malik Ibrahim Malang.

Conclusion

The results of the descriptive analysis show an increase in the mean or average learning outcomes from before the use of the media 54.67 and after the use of the media 78.67, as well as the results of the significance of the hypothesis test through paired sample t-test which

shows a significant value .2 tailed 0.00 which means < 0.05. So, it is strongly believed that the Basic English Grammar E-Module as additional and autonomous learning media in Basic English Grammar courses can improve students' mastery and learning outcomes of the grammar learning materials.

Nothing is perfect in every way in this world. So there are still many imperfections in this study. Therefore, the researchers hope that the Basic English Grammar E-Module can reach a broader and more diverse population and sample or research object to achieve more significant results. Moreover, future research can also combine the existence of Basic English Grammar E-Module learning media with methods or approaches in teaching English Grammar to get a better combination of results.

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