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The Effectiveness of the BeelinguApp Application on Students' Reading Comprehension of English Texts in Grade Eight Junior High School

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Abstract

The purpose of this research was to determine the effectiveness of the beelinguApp application on students' reading comprehension of english texts in Grade Eight at MTs Al-Azhar Tembungraja, Brebes. This study used a quasi-experiment with a population of 36 students. The sample was selected using random sampling, there were 2 classes where VIII B as the Experimental Class with 17 students and VIII A as the Control Class with 19 students. A pre-test was administered prior to therapy, and a post-test was administered following treatment. The SPSS version 24 formula was utilised in the data analysis method. The results of using the Beelinguapp application indicate that the application is less effective, This is evident from the 54% N-Gain results. The Sig value thus indicates that there was a substantial difference between the experimental and control classes in the Independent Simple T-Test results. (2-tailed) = 0.28. Because Sig (2-tailed) > 0.05, The null hypothesis will be disproved and the alternative hypothesis accepted. Therefore, it can be said that the use of the beelinguapp application throughout the learning process has an impact on the reading comprehension skills of the eighth-grade students at Mts Al-Azhar Tembungraja Brebes.

Keywords: Beelinguapp, Application, Reading, Reading Comprehension

Pendahuluan

Reading comprehension is the application of skills learnt for earlier purposes (listening or spoken comprehension) to new types of input text. (Kendeou et al., 2016). Reading comprehension is typically taught in schools in one of two formats. One approach is to have students read a piece and then respond to comments or questions about it. The comments and queries can vary from the meaning of a certain word to the gist of the entire essay. (Collins & Smith, 1980).

Despite having studied English, most Indonesian students may struggle to understand what they read in varied English books. Furthermore, it demonstrates that many Indonesian high school pupils struggle to read information from texts. Furthermore, the causes and impacts of low reading comprehension among Indonesian secondary school students include a lack of vocabulary, learning support, innovation, and students' reading motivation. (Nanda & Azmy, 2020). This is in line with the conditions in the school that will be studied, based on preliminary research at Mts Al-Azhar Tembungraja on July 20, 2024, it was stated that students' reading comprehension skills were very low due to the lack of facilities and students' interest in English, other factors also because learning seemed monotonous using only books. According to (Mohammad, 2018) current media and applications are very helpful in learning reading comprehension, because there are many advantages and new things in them. Learning a foreign language will be easier if supported by good technology.

The use of technology in educational contexts has experienced rapid growth in recent years. Developments in information and communication technology (ICT) have created new opportunities and problems in education, allowing for the creation of more effective, engaging, and relevant learning methods in the ever-changing digital age (Melati et al., 2023). Many technologies in learning and teaching can be utilised to help students tackle

the difficulty outlined above. One of them is beelinguapp. According with statment from English teacher of MTs Al-Azhar Tembungraja, Brebes. Many students do not know that this application is a learning medium, because of their lack of knowledge and interest in learning English. In fact, many people have used this application as a learning support suggestion.

According to various studies on the use of applications as a medium for learning reading comprehension, everyone has effectively used the application to learn a variety of abilities. There is currently no research on the effectiveness of BeelinguApp in improving reading comprehension among students at MTs Al-Azhar Tembungraja. Therefore, this study will use the Beelinguapp application which has many advantages to support reading comprehension learning, among the advantages are many texts that can be used including audio features, word and paragraph translations. This study was conducted in class VIII MTs Al-Azhar Tembungraja, Brebes. In order to establish the effectiveness of BeelinguApp, this study will employ an experimental methodology. Therefore, this study explores the efficacy of BeelinguApp in reading comprehension of class VIII students, with the title "The Effectiveness of the BeelinguApp Application on Students' Reading Comprehension of English Texts of Class VIII at MTs Al-Azhar Tembungraja, Brebes".

Method

In this investigation, the investigator integrated a quantitative research type with an experimental research approach, namely a quasi-experimental design. Experimental study is designed to determine the causal relationship or causality between one variable and another. (Sugiono, 2011).

Meanwhile, pretest-posttest control group design is used in the study, as the two groups were chosen at random (Sugiono, 2011). The pretest

was administered at the beginning of learning in both groups, with the goal of measuring students' initial abilities, and again at the end of learning both groups were given a posttest to measure abilities after being given different treatments. The two groups under consideration are the control and experimental groups. The test group was given treatment via the Beelinguapp application, but the control group did not.

The study's population consisted of 36 students from class VIII MTs Al; Azhar Tembungraja, Brebes Regency, in the academic year 2023/2024, divided into two classes, VIII A and VIII B. Sampling was conducted out using the saturation sampling technique, which involves sampling all members of the population. The saturation sampling strategy was adopted because to the small population size (Sugiono, 2011). Based on the lottery results, class VIII A was designated as the control class and class VIII B as the experimental class. In this research to collecting the data used: Test, the initial test was a multiple-choice test consisting of 15 questions adopted from eighth grade narrative questions taken from several books and websites, the time allocation for the test was 25 minutes.

Instrument testing, a tool for calculating the value of the variables under study is called a research instrument. The researcher employed a test as the data collection tool in this investigation, the purpose of the test is to gauge an individual's degree of expertise and proficiency. This exam may be given orally or in writing.

The researcher created a research instrument outline in the form of a written test with 15 questions and four possible answers while taking the study sample into consideration. A validation test was carried out to make sure the test questions (pretest and posttest) were actually relevant and could be used to reliably and accurately measure student understanding in data generation before they were given to the sample class. The validation tests carried out were Validity Test and Reliability Test

Result

The findings section contains the data that was gathered during the study. This study sought to ascertain the Beelinguapp application's efficacy as a tool for assessing reading comprehension. This study at MTs Al-Azhar Tembungraja Brebes used a quasi-experimental design. The study's participants were eighth-grade students. The sample was selected by random selection and consisted of 17 students from VIII B, the experimental class, and 19 students from VIII A, the control class. Both the experimental and control groups took a pre-test as part of this study's data collection process. The experimental class was treated using the Beelinguapp app after the pre-test, while the control group was left untreated.

This study used IBM SPSS V 25 software for Windows. Pre-tests and post-tests were used to examine the data collected from both groups. This software was also used to calculate a number of scores, such as the mean, standard deviation, minimum, and maximum. In other experiments, n-gain, paired-sample t-test, and independent-sample t-test were used to evaluate the differences and effectiveness between the experimental and control groups.

Pre-test and post-test in Control Class, the result in this class that without any treatment in learning activity as showed in following table:

Table 1. The Result of Pre-test and Post-test Control Class

No	Statistic	Control Class	
		Pre Test	Post Test
1	N	19	19
2	Minumum	33	47
3	Maxsimum	87	93
4	Mean	61.47	67.84
5	Median	60	67
6	Mode	47	67
Mean Different = 6.37			

From table 1, there are 19 pre-test and post-test data in the control class. The first data from the pre-test results shows that the average score is only 61.47. This means that students have low mastery in learning reading skills, the minimum criterion score is 75. The median is 60, while the mode is 47. The second data from the post-test, there are 19 data. This shows that the average score is only 61.47 and is categorized as students experiencing an increase in score but not too high. The median is 60, while the mode is 47.

Based on the pre-test and post-test scores, the average difference is 10.50. This means that there is an increase in score of 6.37 from the pre-test to the post-test. Another difference from the minimum pre-test score is 33 and the maximum score is 87. Meanwhile, the minimum post-test score is 47 and the maximum score is 93.

Pre-test and post-test in Experimental Class, the result in this class that without any treatment in learning activity as showed in following table:

Table 2. The Result of Pre-test and Post-test Experimental Class

No	Statistic	Control Class	
		Pre Test	Post Test
1	N	17	19
2	Minumum	33	47
3	Maxsimum	87	100
4	Mean	59.65	80.06
5	Median	60	87
6	Mode	67	87
Mean Different = 20.41			

From table 4.3, there are 17 pre-test and post-test data in the experimental class. The first data from the pre-test results shows that the average score is 59.65. This is categorized that students have low mastery of reading skills, because the minimum criterion score is 75. The median is 60, while the mode is 67. The second data from the post-test results, there are 17 data. This shows that the average score is only 80.06. This is categorized that

students have increased their scores but have not yet reached the minimum criterion score (KKM 75). The median is 87, while the mode value is 87.

From the pre-test and post-test results in the experimental class, the difference in the average score is 20.41. This means that in this class there was an increase in scores of 20.41 from the pre-test to the post-test. Another difference can be seen from the minimum value in the pre-test, which is 33 and the maximum value is 87. While in the post-test, the minimum value is 47 and the maximum value is 100. It can be concluded that after being given treatment using the Beelinguapp Application, the learning outcomes in the experimental class were higher compared to the control class.

Data Analysis Results, the N-Gain test aims to determine the effectiveness of using a learning model. The data used in this N-Gain test comes from the pretest and posttest values.

Table 3. N-Gain Score Criteria

N-Gain Score Value	Criteria
$-1,00 \leq N - Gain < 0,00$	Decrease Occurs
$N - Gain = 0$	Remains
$0,00 < N - Gain < 0,30$	Low
$0,30 < N - Gain < 0,70$	Medium
$0,70 \leq N - Gain \leq 1,00$	High

Tabel 3. Statistics of N Gain Score Values of Control Class

N-Gain Score value data for control class	Number of Students	Highest Score	Lowest Score	Average
	19	0.65	-0.65	0.19

The statistics of the N-Gain Score Value of the Control Class in the table above show that, Number of Students 19, Highest Score 0.65, Lowest Score 0.65, and the average N-Gain Score for the control class is 0.19, which is considered low.

Tabel 4. Distribution List of N-Gain Score Values for Control Class

N-Gain Score	Value Criteria	Frequency	Percentage
$N\text{-Gain} \geq 0.70$	High	0	0%
$0.30 < N\text{-Gain} < 0.70$	Medium	9	47%
$N\text{-Gain} \leq 0.30$	Low	10	52%
Amount		19	100

The distribution of N-Gain scores for the Control Class can be seen in the table above. The statistical data shows that 0 students achieved a high N-Gain score. Nine students, representing 47% of the average score, achieved an N-Gain score. Ten students, representing 52% of the low score, achieved an N-Gain score. Overall, the N-Gain scores of students in the control group were in the low category, indicating an improvement in English reading comprehension learning outcomes in the control class (an improvement in the low category).

The following are the data of the reading comprehension N-Gain Score value in the Experimental Class:

Table 5. Statistical Data of Experimental Class N-Gain Score Values

N-Gain Score value data for control class	Number of Students	Highest Score	Lowest Score	Average
	19	1	-0.22	0.54

The statistics of the N-Gain Score Value of the Control Class in the table above show that, Number of Students 17, Highest Score 1, Lowest Score -0.22, and the average N-Gain Score for the control class is 0.54, which is medium category.

Table 6. Distribution List of N-Gain Score Values for Experimental Class

N-Gain Score Value	Criteria	Frequency	Percentage
$N\text{-Gain} \geq 0.70$	High	6	35%

$0.30 < \text{N-Gain} < 0.70$	Medium	6	35%
$\text{N-Gain} \leq 0.30$	Low	5	30%
Amount		17	100

The Distribution List of N-Gain Scores for the Experimental Class above shows that six students, or 35% of the total students, obtained a high N-Gain Score. N-Gain scores in the moderate category were obtained by six students, or 35% of the total students. Then, five students (30%) in the low group had N-Gain Scores. Overall, the experimental class students obtained scores in the moderate range, or it can be said that the experimental class' learning achievement in English reading comprehension increased (increased in the moderate category). The average N-Gain Score for the control and experimental classes is shown in the table below.

Table 7. Effectiveness of Using the Whiteboard in the Control Class

Frequency	Average N-Gain Score Value	Percentage	N-Gain Score Percentage	Criteria
19	0.19	19%	< 40	Ineffective

The effectiveness of using a whiteboard in the control class shows that from the statistics mentioned, it is known that the average N-Gain score of the control class is 0.19, with a percentage of 19%. Based on the effectiveness criteria of the N-Gain score, the whiteboard media is in the ineffective criteria.

Table 8. Effectiveness of Using the Beelinguapp Application in the Experimental Class

Frequency	Average N-Gain Score Value	Percentage	N-Gain Score Percentage	Criteria
17	0.54	54%	40-55%	Less Effective

The Effectiveness of Beelinguapp Application use in the Experimental Class, the aforementioned statistical data shows that the average N-Gain

Score for the experimental class was 0.54, representing a percentage of 54%. Based on the N-Gain Score effectiveness criteria, the Beelinguapp application falls into the less effective category.

T-Test Results in this study, the experimental class that received treatment using the Beelinguapp application provided the second set of data, whereas the control class, which received no treatment, provided the first set. The table below displays the findings of the Paired Sample T-test on the control group, which was computed using IBM SPSS V 25 for Windows software:

Table 9. Result Paired Samples Statistics control class

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	61.11	19	21.597	4.955
	POSTTEST	71.58	19	21.183	4.860

The paired sample statistical table shows the descriptive value of each variable in the paired sample. The pre-test mean value is 61.11 from 19 data and the data distribution (Std. Deviation) is 21.597 with an average standard error (Std. Error Mean) of 4.955.

In the meantime, the data distribution (Std. Deviation) is 21.183 with an average standard error (Std. Error Mean) of 4.860, and the post-test mean value is 71.31 from 19 data. It is reasonable to believe that the post-test findings are better than the pre-test results based on the previously described outcomes.

Table 10. Result Paired Samples Statistics experimental class

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	65.82	17	19.590	4.751
	POSTTEST	73.41	17	17.777	4.311

The paired sample statistical results for the experimental class are shown in the paired sample statistical results for the experimental class as follows.

The data distribution (standard deviation) is 19.590, with a standard error of the mean of 4.751, and the average pre-test score is 65.82 from 17 data sets. On the other hand, the data distribution (standard deviation) is 17.777 with a standard error of the mean of 4.311, and the average post-test score is 73.41 from 17 data sets.

To ascertain the mean difference between two populations or groups' independent data, the Independent Sample T-test is utilised. The following table displays the results of the pre-test's group statistics as determined by IBM SPSS V 25 for Windows:

Table 11. Group Statistics

Group Statistics					
KELAS		N	Mean	Std. Deviation	Std. Error Mean
NILAI	Posttestkelaskontrol	19	67.84	15.959	3.661
	Posttestkelaseksperimen	17	80.06	15.927	3.863

Statistical Table of both control and experimental classes. Based on the statistical results table of the post-test group, the following explanation can be seen, the average score of the control class is 67.84, N 19, Std. Deviation 15.959, Std. Error Mean 3.661 while the average score of the experimental class is 80.06, N 17, Std. Deviation 15.927, Std. Error Mean 3.863. As a result, the average learning outcomes of students in the experimental class for reading comprehension are higher than those of the control group.

Table 12. Independent Samples 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
N I L A I	Equal vari- ances as- sumed	.000	.997	-2.295	34	.028	-12.217	5.323	-23.034	-1.399	
	Equal vari- ances not as- sumed			-2.295	33.574	.028	-12.217	5.322	-23.038	-1.395	

the Beelinguapp application. The second was the Paired Sample T-test to determine whether or not there was a difference in student learning outcomes in Students' Reading Comprehension of English Texts between before and after receiving treatment using the Beelinguapp Application. The third was the independent Sample T-test to determine the significant difference between the experimental and control posttest scores.

In the calculation of N-Gain, students' English comprehension learning using the Beelinguapp application is stated to be less effective, this is proven by the results of the N-Gain test. In the experimental class, the average N-Gain was 0.54, which means it is in the less effective category, while in the control class, the average N-Gain was 0.19, which means it is in the ineffective category. Based on the research that has been done, it can be concluded that using the Beelinguapp application on students' reading comprehension skills in class VIII MTs Al-Azhar Tembungraja, Brebes is less effective.

Descriptive analysis of the data obtained is using paired sample t-test statistics. The average pre-test score as seen in the table of mean in the control class is 61.47 and the post-test is 67.84. Respondents in the control class are 19 students. In the experimental class, the average score as shown in the paired sample statistics of the pre-test is 59.65 while the post-test is 80.06 with 17 students as respondents. Based on the explanation of the two paired sample statistics tables, both classes have an average difference in pre-test scores of 20.41 in the experimental class and 6.37 in the control class. Therefore, the mean (average) of the pre-test and post-test in both classes can be assumed to have differences. This can be seen in the experimental class from 59.65 increasing by 20.41 to 80.06. While in the control class it increased by 61.47 to 67.84. This means that there is an increase in the average score for both classes and the average difference is 6.37 points. In short, the average score in the experimental class is higher than the control class.

Meanwhile, the test results in the Independent Simple T-Test showed the statistical results of the post-test group, the average value of the control class was 67.84 and the average value of the experimental class was 80.06. Thus, the average value of student learning outcomes in reading comprehension in English texts in the experimental class was higher than the control class.

Conclusion

The purpose of this study was to determine the effectiveness of the Beelinguapp Application in teaching reading comprehension to eighth grade students of MTs Al-Azhar Tembungraja, Brebes. Quantitative data showed that students obtained good results in the post-test. Data were obtained by comparing the average values of the pre-test and post-test, which were then calculated using IBM SPSS V 25 for Windows. If the results of the control class and the experimental class are compared, it can be seen that students' understanding of reading comprehension after using Beelinguapp has increased, but in terms of the effectiveness of this application it is still less effective.

In light of the findings and conversation, it can be inferred that although the Beelinguapp application is less successful, student learning achievement increases after the class is taught using it. However, it does not rule out the chance that, with proper preparation, it could be effective. This relates to the experimental class's trial results of 80.06, which indicate it has attained the minimal value, and the control class's results of just 67.84, which indicate it has not.

The results of this study can be used to provide suggestions to teachers to utilize online media when teaching English, especially reading comprehension. The benefits of using this application are that teachers

can use different media, especially to improve student learning outcomes. In addition, teachers can make the teaching and learning process more enjoyable. Another implication is that students can use the Beelinguapp Application to study other English subjects.

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