

## THE EFFECTIVENESS OF AI-BASED SUMMARIZING STRATEGY USING QUIZIZZ TO PROMOTE EFL LEARNERS' READING COMPREHENSION

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### ABSTRACT

*Reading comprehension is essential to making sense of reading. Words in a particular text are more than simply words but they convey ideas and thoughts. Reading becomes pleasurable when the reader can comprehend the content of the text s/he reads. It is also required to be mastered for one's academic success. Therefore, studies on promoting learners' success in reading comprehension particularly in EFL context is definitely crucial. There should be identified out the methods, strategies, techniques, and media which are proved increasing learners' reading comprehension. The present study aimed at investigating the effectiveness of AI-based Summarizing Strategy using Quizizz to promote reading comprehension. The study employed quasi experimental method. The subject of the study were SMA (senior high school) students in Jember regency which then were divided into one control and one experimental groups. Each group was exposed to pre-tests. The treatments were given to the groups differently, the control one was taught conventionally without AI-based strategy while the experimental one was taught by using AI-based strategy, Quizizz. Right soon after the treatments, both groups were subjected to post-tests. Then data obtained was analyzed by using t-test. Based on the result of the statistical procedure indicated that the significance was (0,000) or it was lower than (0,005). It means that the alternative hypothesis which was stated that the students' who were taught by employing AI-based summarizing strategy using Quizizz achieved better in reading comprehension than those who were in conventional way was accepted. It can be concluded that the summarizing strategy using Quizizz significantly was effective to promote the students' reading comprehension.*

**Keywords:** Summarizing Strategy, Quizizz, Reading Comprehension.

### INTRODUCTION

Reading is a skill that has an important role for students. Reading has become a part of our daily activities and is one of the skills that students must acquire when learning English as a foreign language. Moreover, through reading activities, students can improve their language ability, experience, reading, and thinking skills. They will gain information and ideas from what they read and what they need to know (Erya and Pustika 2021). Reading and understanding are inextricably linked. The capacity to convert the main ideas of sentences into one's own words is known as reading comprehension. Instruction aims to enable students to read and thoroughly grasp the content being read, even if reading proficiency is given priority in English instruction. Interesting methods may be used to accomplish this. One of the methods that can be employed is using an application or website. This teaching tool guides and supports students' comprehension of the course topics. It is believed that the method can influence the student's reactions, enhance their experience, and assist them in gaining a comprehension of the reading texts.

The purpose of reading comprehension is to improve students' ability to capture messages from text. Reading can help people learn new things and expand their vocabulary, stimulate creativity to solve problems. In reading a text there is a message found by the reader. To understand the meaning of a text, students can carry out strategies such as

summarizing. Summarizing is the process of automatically condensing and rewriting large portions of text to create a small, snappy summary. While ensuring guarantees that no information is lost, the summary method should give the reader access to the majority of the information included in the original text. Summarization systems may be used for a wide range of purposes, including assisting readers in quickly understanding texts and articles, saving analysts and researchers time while gathering information, and lowering the volume of written material that students must read and comprehend. It is possible to summarize narrative texts. A narrative text is a piece of writing that entertains the reader by telling a story.

Nowadays, the development of education in the world, especially in Indonesia, is very rapid in both science and information technology (Handoko et al. 2021). The field of education, particularly student learning and teaching activities, is greatly impacted by the advancement of information and communication technology. Applying learning strategies that are appropriate for the advancement of information and communication technologies can help us meet our learning objectives. Traditional teaching and learning methods, such as assigning homework from books, having direct class discussions, and collecting homework for instructors daily, are still used in some Indonesian institutions. This is not consistent with how technology is developing. It is anticipated that information and communication technology (ICT) will significantly alter how quickly and innovatively education is delivered. This is the reason gamification, a new approach to learning, has surfaced.

Based on this makes gamification a useful technique for evaluation and assessment. Along with planning and execution, assessment is one of an organization's functions. One of the elements in education that supports effective teaching and learning is assessment. Mathematical progress is tracked through assessment. Individual, group, midterm, and final exams are the most common ways that assessments are conducted. There are several methods for obtaining this progress data. Quizizz is one example of a gamification tool.

A lot of people can use Quizizz, an educational game-based application, to answer issues using engaging and interactive displays. As long as they have an internet connection, students can use Quizizz on their PC or smartphone. Quizizz is quite adaptable since it includes a time option for test administration and offers statistical data from the test outcomes. Students may compete with one another on Quizizz, which encourages them to study because they can check their ranks instantly on the dashboard. After taking the exam, teachers may receive data and monitor student progress to assess learning outcomes.

Previous study, According to (Samad, 2020) the objective of the research entitled “The Implementation of Summarizing Strategy Activity by Using Somebody Wanted But So (SWBS) Strategy to Improve Students’ Reading Comprehension” is to determine whether there is a significant difference between students who were taught the SWBS strategy and those who were not. The main idea, specific information, word meaning, reference, and inference are all areas in which the student's reading comprehension is improved. To classify the samples into experimental and control classes, this study used a genuine experimental design. Cluster random sampling was used to choose the classes, and each class was included. The classes were chosen by using cluster random sampling and each class consisted of 36 students. In collecting the data, pre-test and post-test were used and the data were analyzed by using SPSS version 21. The result of the study found the post-test mean score in the experimental class was 84.78, and the post-test mean score in the control class was 73.33. Furthermore, the result of the z-score between both experimental and control classes is 6.05 at the level significance of 5% (0.05). Thus, it indicates that there is a

significant difference between the students who were taught through the SWBS strategy and those who were not taught through this strategy to improve the student's reading comprehension. This research is certainly different from previous ones. There are differences in research methodology and sources. In this research, the data source was taken from class XI students at one of the Muhammadiyah high schools in Jember. Researchers added the Quizizz platform as a tool for implementing summarization strategies.

## METHODS

This research is quantitative and focuses on the significant effect of summarizing strategies using Quizizz in reading comprehension. In the present study, experimental research was used to answer the questions asked. The data collected are the results of the pre-test and post-test as a result of the treatment given to the research subjects. The variables in this research are reading comprehension as the dependent variable and Summarizing Strategy using Quizizz as the independent variable.

### Study Design

To determine how well students' reading comprehension (the dependent variable) is affected by the Summarizing Strategy utilizing Quizizz (the independent variable), The researcher employed a research methodology in this study. By gathering numerical data and applying mathematically based analysis techniques, quantitative research was able to explain phenomena. The pre-tests were given before the teacher gave them the treatment and the post-tests were given after the teacher gave them the treatment. The conceptual framework of the experimental research design by Sherwin Batilantes.

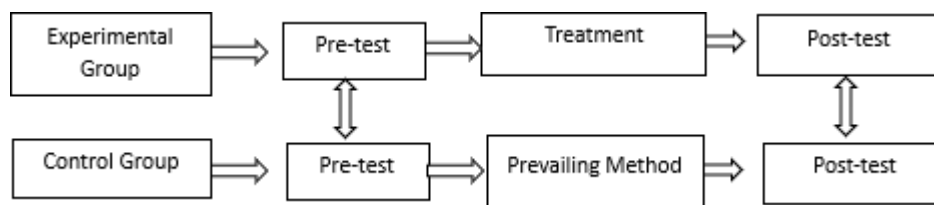


Figure 1: The Model of Experimental Classroom

### Study Participants and Sampling Procedures

The subjects of this study were Grade-11 students of Sekolah Menengah Atas Muhammadiyah (Muhammadiyah Senior High School) in Jember Regency in the academic year 2023-2024. The total number of them was 44 of which there were 22 students in each class. The students of class A used the

Summarizing strategy using Quizizz in reading comprehension. Meanwhile, the students of class B learned reading comprehension by using conventional strategy.

### Instruments

The data collection instrument is a tool researchers use to gather the data. Based on (Brown, 2004, p.3), a test, in simple terms, is a method of measuring a person's ability, knowledge, or performance in a given domain.

Based on (Brown, 2004, p. 206) In reading comprehension, there are specifications to making a test: Main idea (topic), expressions/idioms/phrases in context, inference (implied detail), grammatical features, detail (scanning for a specifically stated detail), excluding facts not written (unstated details), supporting idea(s), vocabulary in context.

#### 1. Validity

The researcher will examine the item's validity before completing the pre-test and post-test as part of this study. If an instrument is valid, it is referred to as such. Validity is compatibility to the degree of the measuring equipment that must be used. Construct,

criteria, and content validity are the three types of validity. A correlation coefficient, which is used to gauge an item's degree of validity and assess its suitability for usage, is derived from the correlation calculation's findings. A correlation coefficient significance test is often conducted at a significance level of 0.05 to assess an item's suitability for usage; if an item loses importance to the overall score, it is deemed legitimate.

**Table 1. Specification of the Test**

No	Indicator	Items Test	Total
1	Main idea (topic)	1, 11, 17, 26	4
2	Expressions/idioms/phrases in context	16, 28, 29	3
3	Inference (implied detail)	4, 9, 12, 21, 22	5
4	Grammatical features	15, 30	2
5	Detail (scanning for a specifically stated detail)	2, 5, 7, 8, 19, 20	6
6	Excluding facts not written (unstated details)	18, 24, 27	3
7	Supporting idea(s)	6, 14	2
8	Vocabulary in context	3, 10, 13, 23, 25	5
Total			30

## 2. Reliability

According to Ary et. al. (2018), Reliability was how consistently the measure of the thing that the student was trying to measure. Reliability was a measurement tool of a test that remained consistent after showing repeatedly on the subjects with the same conditions. The test was tried out to ensure the test's reliability.

The try-out results showed the reliability of the reading test that the students were given. It is shown by the Cronbach's Alpha calculations results, which showed a value of 0.726. Therefore, there were no needed revisions for the test. The detailed result can be seen below.

**Table 2. The Reliability of The Reading test  
CaseProcessing Summary**

		N	%
Cases	Valid	29	96.7
	Excluded	1	3.3
	Total	30	100.0

*Source: Data Adapted from Azizah, 2024*

- a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

Cronbach's Alpha	N of Items
.726	31

*Source: Data Adapted from Azizah, 2024*

### Reliability Statistics

Cronbach's Alpha	Part 1	Value	.829
		N of Items	16 <sup>a</sup>
	Part 2	Value	.434
		N of Items	15 <sup>b</sup>
	Total N of Items		31
Correlation Between Forms			.887
Spearman-Brown Coefficient	Equal Length		.940
	Unequal Length		.940
Guttman Split-Half Coefficient			.844

a. The items are: s1, s2, s3, s4, s5, s6, s7, s8, s9, s10, s11, s12, s13, s14, s15, s16.

b. The items are: s16, s17, s18, s19, s20, s21, s22, s23, s24, s25, s26, s27, s28, s29, s30, Total.

*Source: Data Adapted from Azizah, 2024*

### Data Analysis

The data analysis process was carried out using SPSS version 25.0 and the score of the reading test namely, narrative text from the students in SMA Muhammadiyah (Muhammadiyah Senior High School) as the source of data analysis. The researcher gave the students in SMA Muhammadiyah (Muhammadiyah Senior High School) in XI grade the objective test of narrative text. This research was conducted from August 28th, 2024, until September 04th, 2024. The data were collected from the students' post-test scores, which were given to the experimental and control groups. The scores from both groups were used as data to examine the effect of the summarizing strategy for the experimental group and use a conventional technique for the control group. This study used two classes as a subject sample. The first class was XI A as the experimental group and XI B as the control group. The researcher conducted a pre-test for both classes before giving treatment, and after giving the treatment, the researcher gave a post-test for both classes to get data on the students' reading comprehension.

### RESULTS

The study data description described all the data that the researcher found while doing the study. This study entitled "The Effectiveness of Summarizing Strategy using Quizizz in Reading Comprehension" has independent and dependent variables. The independent variable is the effect of summarizing strategy using Quizizz and the dependent variable is the students' reading comprehension. The data on students' reading comprehension was taken from the objective test through 22 students in each class at XI-grade in the 2023/2024 academic year. Therefore, the total number of respondents was 44 students.

This study used numerical data. The numerical data was collected from the objective test. The data were analyzed using SPSS software version 25.0. The results of the data will be explained below.

#### 1. Normality Test

A normality test is used to determine whether the data is normally distributed. If the sig value > 0.05, the data is normally distributed and can be continued using the T-test. If the sig value < 0.05, the data is not normally distributed and calculated using

non-parametric statistics. The purpose of the T-test is to compare the mean scores of two groups to determine the significance of the student's scores (Ary, Donald – Introduction to Research in Education, n.d).

**Table 3. Test of Normality**

		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
Kelas		Statistic	df	Sig.	Statistic	df	Sig.
Hasil Belajar Reading Comprehension	Pre-Test Eksperimental	.167	22	.113	.945	22	.247
	Post-Test Eksperimental	.095	22	.200 <sup>*</sup>	.981	22	.927
	Pre-Test Control	.200	22	.022	.926	22	.100
	Post-Test Control	.233	22	.003	.902	22	.033

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

*Source: Data Adapted from Azizah, 2024*

Based on the table Kolmogorov-Smirnov above, a sig value  $> 0,05$  means the data obtained is normally distributed. Therefore, the normality test calculation is continued with parametric statistics.

## 2. Homogeneity Test

A homogeneity test is used to know whether the data is homogenous or not. It also can be used as a requirement before the researcher does a hypothesis test. If the value of sig  $> 0,05$  the data is homogenous, but if the value of sig  $< 0,05$ , the data is not homogenous. The test was analyzed using SPSS 25th software. The result is as follows:

**Table 4. Homogeneity Test**

**Test of Homogeneity of Variance**

		Levene Statistic	df1	df2	Sig.
Hasil Belajar Reading Comprehension	Based on Mean	.007	1	42	.936
	Based on Median	.059	1	42	.809
	Based on Median and with adjusted df	.059	1	37.735	.809
	Based on trimmed mean	.001	1	42	.971

*Source: Data Adapted from Azizah, 2024*

Based on the table above, the value of sig  $0.936 > 0.05$  means that the data is homogeneous. The result of the Homogeneity test can be continued to the hypothesis test.

## 3. Hypothesis Testing

The result is normally distributed and homogenous, following the normality and homogeneity test. The researcher continued to analyze the data using the T-test (Independent sample test). The T-test aims to compare the mean scores of two groups. The hypothesis was tested as follows: If the sig (2-tailed) lower than 0.05  $H_0$  is rejected and the hypothesis is accepted. If the sig (2-tailed) is higher than 0.05,  $H_0$  is accepted and the hypothesis is rejected. To analyze the hypothesis, the researcher used SPSS 25th software to measure this test, and the result is as follows:

## 4. Independent sample T-test

The analysis of the independent sample t-test can be seen as follows:

**Table 5. 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 Reading Comprehension	Equal variances assumed	.007	.936	2.550	42	.000	13.909	5.454	2.903 24.915
	Equal variances not assumed			2.550	41.912	.000	13.909	5.454	2.902 24.916

*Source: Data Adapted from Azizah, 2024*

Based on the table above, the sig (2-tailed) value was 0.000, which was lower than 0.05. It revealed that there was significantly different reading comprehension between the experimental and control classes. This means that the summarizing strategy using Quizizz significantly affected the students' reading comprehension.

## DISCUSSION

The hypothesis in this research is "There is a significant effect between the students' reading comprehension who learn by summarizing strategy using Quizizz and those who learn by using the conventional strategy". That hypothesis needs to be proven and it has been proven through this research.

According to research done at one of the Muhammadiyah Senior High Schools (SMA Muhammadiyah) in Jember, experimental research is a quantitative research type that aids in gathering the data a researcher needs to determine the facts of a study and make better research decisions. Before moving forward with clinical trials, experimental research enables you to evaluate your concept in a controlled setting. Therefore, the purpose of this study is to find out if the Summarizing technique utilizing Quizizz has a good and substantial impact on the Narrative Text in Reading Comprehension for the eleventh-grade students at SMA Muhammadiyah. There are two classes: a control class and an experimental class.

The procedures used in this study include Observation, pre-test, treatment, and post-test. The pre-test and post-test consist of 30 multiple choices that have the same question. It was found that there is a significant effect between the students' English reading comprehension who learn by using the summarizing strategy and those who learn by using the conventional strategy. This is based on the result of the mean score from the test. The result of the data shows that the average value for the class taught using the summarizing strategy is 63.64. The result of the independent t-test has a significant difference of 0.000, which means that it is significantly less than  $<0.05$ . Meanwhile, the average value for a class taught using conventional strategy is 49.73. Therefore, it can be stated that the use of summarizing strategy has a significant difference between the students' English Reading comprehension who learn by using summarizing strategy and those who learn by using a conventional strategy.

By reviewing the background of this research many students faced difficulties during reading English, for example determining the main idea, finding detailed information, making inferences, identifying references, and there are understanding the meaning of words (Firdi Yuvirawan, Listia, and Amelia 2021). Therefore, need a strategy to make students better complete their reading, for instance, summarizing strategy. So, this research is relevant in solving the problem of the background of the research. Based on previous research summarizing strategy can assist students in solving problems and enhancing their reading comprehension Samad (2020). Thus, the statement has been proved through this research.



The result of the previous studies revealed that the effect of summarizing strategy using Quizizz in reading comprehension was effective for students in EFL learning. Therefore, based on the findings of this experimental research, the researcher found that the use of summarizing strategy to the student's reading comprehension has been proven and also the students could improve their reading comprehension.

## CONCLUSION

Based on the result, it can be concluded that there is a significant effect of summarizing strategy using Quizizz on students' reading comprehension. It was proven by the result of the score of the post-test. The score of the reading test of students' using summarizing strategy is better than students in a reading test using the conventional strategy. Then, the result of the data that was counted by software SPSS 25th version shows the mean of students who used summarizing strategy is 63.64 and the mean of students who used the conventional strategy is 49.73. This means there is a significant effect of summarizing strategy using Quizizz in reading comprehension.

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