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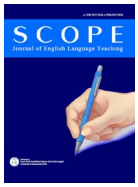

Research Article

Enhancing Reading Comprehension by Using the Strategies of Scanning and Skimming for Institute of Technology Indonesia CIE's Fourth Level Students

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KEYWORDS

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Scanning strategy;
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A B S T R A C T

The purpose of this research is to determine the students' of CIE fourth level achievement in reading skill by scanning and skimming strategies, as well as the effectiveness of scanning and skimming strategies at Institute of Technology Indonesia. The pre-experimental research technique was employed by using a one-group pretest-posttest design. The population of this research was a fourth level CIE class of 60 students, and the sample was a class of IV-A pupils of 20 students. The instrument was a 25-question of multiple-choice survey. The findings prior to utilizing the scanning and skimming method, pretest; the maximum score was 80, the lowest score was 56, the mean score was 70.6, the median score was 72; and the mode score was 72, the standard deviation was 8.13, and the variance was 66.15. The posttest findings of the scanning and skimming approach were as follows: the highest score was 100, the lowest score was 72, the mean score was 92, the median score was 96, the mode score was 96, the variance was 80.84, and the standard deviation was 8,99. Based on the findings of the research, the tcount was 4.352 with a significant threshold of 0.05 and the ttable was 2,086, and the scores were compared. As a result, tcount exceeds ttable (4.352 > 2,086). It signifies that the research hypothesis (H1) has been accepted. In conclusion, utilizing scanning and skimming strategies has a considerable influence on reading comprehension at the fourth level students of Institute of Technology Indonesia.

INTRODUCTION

The scholars of English develop four English skills. They learn them because they are highly important and connected to one another in order to communicate effectively. Listening, speaking, reading, and writing are the four talents. Then there's reading comprehension, which can be challenging and boring for certain scholars. This is supported by numerous researches that show the ability of Indonesian students in reading English texts was very low (Syatriana, 2010).

Reading is one of the essential skills that should be learned by English Scholars. Besides that, reading is a complex process in which the reader uses mental content to obtain the meaning of materials, and the understanding of skill is an ability to increase the quality of reading process (Yuliana, 2016). By reading, the reader will get some

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information and message from the passage. If the learners have a strong desire or high motivation and skill in reading the text, it would be easy. If a student encompasses a sturdy need or high motivation and talent in reading the text, it might be straightforward. Reading is additionally one thing crucial and indispensable for college students as a result of the success of their study depends on the larger half their ability to browse. If their reading talent poor, they're terribly possible to fail in their study or a minimum of they're going to have problem in creating progress. On other, if they need a decent ability in reading, they're going to have a far better likelihood to reach their study.

The basic competence of reading skill is to comprehend the meaning of written functional text and short essay. In addition, the achievement indicator that students must gain is being competent in the sub reading skill, including understanding main idea, specific information, word meaning and textual reference of the text. However, the difficulties that many students find in reading activity are to understand and to interpret the meaning of words or symbols in a text. Moreover in acquiring the meaning of a written message, many students come across several difficulties because they have to go through a certain process of puzzle-solving (Brown, 2001). Other difficulties also can be encountered by students from teachers, curriculum, government policy, textbooks, techniques, and so forth. These facts of students' problems in comprehending reading text become the problems which are encountered by CIE's fourth level students. In most cases, the reading class is boring for them.

Based on those problems, according to Anderson and Anderson (2003), to make students become active and get involved in reading activities, it is necessary to teach them the various reading strategies because reading with various strategies would make students become critical and creative (Abdelrahman et al., 2014). Teachers should provide the strategies in teaching reading to help students to understand the text. Reading strategies can be defined as "plans for solving problems encountered in constructing meaning" (Richards, 2002). A reading strategy that can be used by the teacher to make students easy to read and to answer the questions is using scanning technique. The technique is needed not only to overcome students' difficulties, but also to improve students' reading comprehension like Scanning and skimming. Scanning is quickly searching for some particular piece of information in the text (Grellet in Atik, 2011). The purpose of scanning is extract specific information without reading through the whole text (Brown, 2010). That technique is used to find the answer of the questions in the reading exercise. Scanning exercise may ask students to look for names or dates, to find definition of a key concept, or to list certain number of supporting details (Brown, 2003). Besides that, skimming is the act of hitting the answer through a text for getting a main idea or topic about that text that allows the reader to read more in less time. Through this technique, the students will be easy and quickly comprehend the text. The students will focus on the main idea and specific information that they need. It will help the students comprehend the text without consuming much time.

There are some advantages skimming and scanning building on Grellet in Atik (2011), there are as follows:

1. Skimming can help the students to go through the reading material quickly in order to get gist of the text.
2. Skimming can help the students to know the text is organized.
3. Skimming can help the students to get an idea of the tone or the intonation of the writer.
4. Scanning can help the students only trying to locate specific information.
5. Scanning can help the students to follow the linearity of the passage.
6. Scanning can help the students to use the time efficiently.

It means that, by reading using skimming the students can make reading material easier and students to know how the text is organized and the students can improve an idea of the tone or the intonation of the writer.

This research has similarities with previous research because in teaching communication in English fourth level, those materials are focused in reading skill and using scanning and skimming strategy. So, the researchers want to know the effectiveness of those strategies for reading skill. The researchers also agree with the previous research that Skimming and Scanning technique will improve reading comprehension and make students more active and attentive in the teaching learning process. The difference between this research and the previous research is this research will try to combine two techniques namely *Skimming* and *Scanning* to improve students reading comprehension, while the previous research only tried to find out whether the use of skimming or scanning can improve students' reading comprehension. The previous research and this research also used experimental research method in order to help the students solve their problem in reading comprehension.

Considering the importance of applying reading technique for students, the researchers are interested in doing further investigation about the use of scanning and skimming strategies for improving the students' reading skill. So, the objectives of the research are as follows:(1) To find out how the students' CIE's Fourth level achievement in reading skill through scanning and skimming strategy is,

(2) To find out the effectiveness of scanning and skimming strategies on the students' reading skill of CIE fourth level students at Institute of Technology Indonesia.

METHOD

Research design is a plan or program made by a researcher as the activity target that will be done (Arikunto, 2018; Margono, 2010). In this research, the researchers employed pre-experimental research design with one-group pretest-posttest design. Ary et al. (2010) stated that one- group pretest–posttest design, a pre-experimental design involving a pretest, experimental treatment, and posttest to a single group of subjects. In other words, this research design focused on one group and collected data from only that group before and after handling. This research aims to determine how using scanning and skimming affect reading skill of fourth level Communication in English scholar at Institute of Technology Indonesia.

Ary et al. (2010) stated that the one-group pretest–posttest design usually involves three steps: (1) administering a pretest measuring the dependent variable; (2) applying the experimental treatment X to the subjects; and (3) administering a posttest, again measuring the dependent variable. It means that, there is only one class for these studies. The students in the class face two tests, pretest and posttest. The pretest is given before the treatment and the posttest is given after the treatment. The score of both tests are compared to know the effect of the handling. Arikunto (2013) provided the figure of pre-experimental with one group pretest and posttest design as follows:

$$0_1 \ X \ 0_2$$

Description:

X : The symbol of the treatment where the researchers use scanning and skimming strategies.

01 : The score of the pretest or before being given the treatment and the material.

02 : The score of the posttest or after being given the treatment and the material.

In this research, the researchers used cluster random sampling. To choose the sample for the research, the researchers wrote each name of the classes in fourth level on a small piece of paper. After that, the researchers rolled up the papers that containing the name of the classes and put the rolled papers into the box which has been given a small hole on it. Then, the researchers shook the box randomly until a piece of paper came out of the hole. The sample of this research was IV-A which consist of 20 students.

The data collection was needed to complete the research. The variable in this research were Independent variable of this research was teaching reading using scanning and skimming, and Dependent variable of this research was students' reading skill. Then, to collect the data that needed in the research, the researcher collects the data from the results of pretest and posttest. In this research, to gain the data, the researcher divided the technique into two, they were pre-test and post-test.

The test as an instrument that provided has the objective to find out the students' knowledge value in the form of numbers. The type of the test was a multiple choice which consisted of 25 questions about reading comprehension. Multiple choice questions were chosen for this research because multiple choice was an objective test.

The data was obtained through a test, the next data analysis is to process the data and analyze them to test the hypothesis. The test should be scored in the scoring formula. The formula is as follows:

$$S = \frac{R}{N} \times 100$$

Description:

S : Value

R : Raw scores obtained by the students.

N : Ideal maximum score of the test.

After that, the researchers continued with descriptive analysis technique steps to process and to analyze the data to test the hypothesis. The steps are as follows:

Descriptive Analysis Technique

The formulas that used in descriptive analysis are as follows:

$$S = \frac{R}{N} \times 100$$

a. Listing the scores and calculate class range (R) of the pretest and post -test, the formula as follows:

   R = highest data − lowest data

b. Determining the number of classes of the pretest and post-test with the Sturges rule, where n is the amount of the data.

   K = 1 + 3,3 log n

c. Determining the length of the interval for the pre-test and post-test.

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$$P = \frac{\text{Class range (R)}}{\text{Number of classes (K)}}$$

d. Making a frequency distribution table for each pre-test and post-test.

e. Calculating the mean score of both tests.

f. Determining the median for the pre-test and post-test. Here, the researcher count it using excel.

g. Counting the scores that occur most often (mode) in pre-test and post-test. Here, the researcher count it using excel.

h. Calculating the variance (S2) of pre-test and post-test by using the formula as follows:

$$S^2 = \frac{n\Sigma f_i x_i^2 - (\Sigma f_i x_i)^2}{n(n-1)}$$

i. Calculating the standard deviation (S) of pretest and posttest ($S = \sqrt{S2}$)

j. Making a histogram for pretest and posttest.

Normality Test

Normality test is used to ascertain whether the data obtained is normally distributed or not normally distributed. The statistical formula used to test the normality of distribution in this research is Kolmogorov Smirnov test using Microsoft Excel.

Homogeneity Test

Homogeneity test is intended to find out whether the population variance of each group is homogeneous or not homogeneous. Homogeneity test is used to know whether the data are homogeneous or not. Based on the analysis of excel, H0 is accepted if the significance level >0.05, and H0 is rejected if the significance level < 0.05.

Hypothesis Test

Hypothesis test is used to prove the truth of the hypothesis that has been made by the researcher. The hypothesis is calculated by using T-test.

Statistical Hypothesis

The researchers formulated the statistical hypothesis that consisted of null hypothesis (H0) and alternative hypothesis (H1).The difference between skimming and scanning strategies and lecture method to teach reading at the CIE's Fourth Level students of Institute of Technology Indonesia. The hypothesis of this research is as follows:

H0 : There is no significant difference in reading skill students who are taught using skimming and scanning strategies and students who are taught using lecture method at the CIE's Fourth Level students of Institute of Technology Indonesia.

H1 : There is any significant difference between the students who are taught using skimming and scanning strategies and the student who are taught using lecture method at the the CIE's Fourth Level students of Institute of Technology Indonesia.

The data were collected by giving the respondents an instrument. Instrument is a test that has the characteristics of measuring informants with a number of questions and statements in the research which can be done by making an outline of the research objectives carried out. The instrument can be defined as a tool used by researcher to measure natural and social phenomena in accordance with the research variables (Sugiyono, 2009; Budiyono, 2003).

RESULTS AND DISCUSSION

The instrument used in this research is test of the reading comprehension. The Data collection took three stages; first, the researcher collected the data based on the result of the pre- test and post -test. Second, the data analysis is to process the data and then, analyze them to test the hypothesis.

The Data of Pretest Results

From the data, the researchers sorted the data from the smallest score to the biggest score. Hence, the researchers conducted a descriptive analysis of the data that had been obtained as follows:

a. Calculated the class range (R) of the pre-test is the highest data – lowest data. So, it is gotten 24.

b. Calculated the number of the classes (K). so, it is gotten 5.

c. Calculated the length of the interval (P) for the pretest is R /K. so, it is gotten 5.

d. Made a frequency distribution table for pretest.

e. After that, calculated the mean score of the pretest. The mean score of the pre-test is 70.6.

f. Calculated the median for the pretest using excel. After the data is calculated, the median for pretest is 72.

g. Calculated the scores that occur most often (mode score) in pretest. The mode score after the data are calculated using excel are 76.

h. After that, calculated the variance (S2) of the pretest. It is gotten 67,0394.

i. Calculated the standard deviation of the pretest: S = √S2= √67,0394 = 8,13310325.

According to the calculation for the pretest above, it can be concluded that the students' results of the pretest have an average score or mean in the amount of 70,6. The mean score that obtained can be categorized as an average score. The median or middle score of the pretest was 72. The score of the pretest that occur most often or mode score was 76. The score of variance (S2) and standard deviation (S) from the pretest were 67,0394 and 8,13310325.

The Data of Posttest Results

The data of the pretest for reading test of the respondents presented in the table as follows:

From the sorted data of the posttest above, the researcher conducted a descriptive analysis of the data as follows:

a. Calculated the class range (R) of the pre-test is the highest data – lowest data. So, it is gotten 28.

b. Calculated the number of the classes (K). so, it is gotten 5.

c. Calculated the length of the interval (P) for the pretest is R /K. so, it is gotten 6.

d. Made a frequency distribution table for posttest.

e. After that, calculated the mean score of the pretest. The mean score of the pre-test is 92.

f. Calculated the median for the pretest using excel. After the data is calculated, the median for pre test is 96.

g. Calculated the scores that occur most often (mode score) inpretest. The mode score after the data are calculated using excel are 96.

h. After that, calculated the variance (S2) of the pretest. It is gotten 86,78.

i. Calculated the standard deviation of the pretest: S = √S2= √86,78=8,991224

j. Made a histogram for the posttest:

Based on the calculation for the posttest above, it can be concluded that the students' results of the posttest have an average score or mean in the amount of 92. The mean score can be categorized asa good score. The median or middle score of the posttest was 96. The score of the posttest that occur most often or mode score was 96.The score of variance (S2) and standard deviation (S) from the post-test were 86,78 and 8,991.

Data Analysis

To analyze the data that has been obtained by the researcher inconducting the research, the normality test with Kolmogorov Smirnov test and the homogeneity test with the Fcount are used. In the following explanation below,the researcher presents the data analysis of the two research variables.

1. Normality Test

Kolmogorov Smirnov test is used to test the normality of the research data so that the researcher knows whether the research data is normally distributed or not normally distributed. The explanation is as follows:

a. Normality test of the pre-test

In making the normality test table for the pretest, the researcher calculates the value of the standard Z number with thefollowing conditions:

1) Calculate the mean score. The mean score of the pretest thatobtained from the

2) data description is **x**= 70,6.

3) Calculate the standard deviation. The standard deviation (S)of the pretest that obtained from the data description is **S** =8,133.

4) Calculate the score of Z, Fi, Fs, and Ft

5) Calculate the difference score between Ft and Fs with Kolmogorov- Smirnov formula.

Based on the pretest normality test table above, the Dcount = 0,1238 was obtained. After that, the researcher obtained Ktable with α = 0,05 and n = 20 in the amount of Ktable = 0,294. Because the Dcount < Ktable (D(0,123888)< K (0,29407)), so the pre-test data was stated having the Normal Distribution.

b. Normality test of the post-test

In making the normality test table for the posttest, the researcher calculates the value of the standard Z number with the following conditions:

1) Calculate the mean score. The mean score of the posttest that obtained from the data description is $\bar{\mathbf{x}}$ = 92.

2) Calculate the standard deviation. The standard deviation (S) of the posttest that obtained from the data description is **S** =8,99122379.

3) Calculate the score of Z, Fi, Fs, and Ft.

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4) Calculate the difference score between F(s)and F(t) with Kolmogorov-Smirnov formula.

D= Max|Ft – Fs|

The normality test for the posttest is presented and described in the tabular form as follows:

Based on the post-test normality test table above, the Dcount = 0,2 was obtained. After that, the researcher obtained Ktable with α = 0,05 and n = 20 in the amount of Ktable = 0,294. Because the Dcount < Ktable (D(0,2)< K (0,29407)), so the post-test data was stated having the Normal Distribution.

2. Homogeneity Test

In calculating the homogeneity test from the pretest and posttest,the researcher used Microsoft Excel. From the result of computation was Ftable = 1,504251 and Fcount= 1,222151. So, Fcount < Ftable. It can be concluded that both f groups were stated Homogeneous.

3. Hypothesis Test

After calculating the results of the mean, median, mode and standarddeviation of the pretest and posttest of students' reading comprehension, the researcher conducted research hypothesis test. Hypothesis test in this researchwas conducted by using t-test. T-test basically shows how far the influence ofone independent variable individually in explaining the variation of the dependent variable.

In drawing the conclusion about the research hypothesis test, it can be done with the following criteria:

If tcount > ttable then H0 is not accepted and H1 is accepted. If tcount < ttable then H0 is accepted and H1 is not accepted.

After the calculation above, the tcount that obtained was 4,352 and the ttable with α = 0,05 was 2,086. It can be seen that tcount > ttable, 4,352 > 2,086 where H0 is not accepted and H1 is accepted. In other words, it can be concluded that there is a significant effect of using scanning and skimming strategy on Reading Comprehension skill of CIE's fourth Students at Institute of Technology Indonesia Tangerang.

In analyzing the data, the researcher found that the results of reading comprehension test of CIE's fourth Students at Institute of Technology Indonesia Tangerang by using scanning and skimming strategy had showed a very good ability in the reading comprehension. This can be seen in the results of data analysiscalculations that English language lessons in mastering reading comprehension of CIE's fourth Students at Institute of Technology Indonesia Tangerang before and after being taught by using scanning and skimming strategy. Before being taught by using scanning and skimming strategy, the researcher gave a pretest to measure students' ability in reading comprehension. After being taught by using scanning and skimming strategy, the researcher gave a posttest to measure students' ability in mastering reading comprehension. The comparison of the results is presented in the form of a table as follows:

Table 1. Comparison of Pretest and Posttest Results

Score	Pretest	Posttest
Mean	70,6	92
Median	72	96
Mode	76	96
Variance	66,15	80,84
Standard	8,13	8,99

The table above shows the summary of the statistic scores of reading pretest and posttest. The score of IV-A CIE' students before being taught by using scanning and skimming strategy has a mean score of 70,6 a median score of 72, the most frequently occurring value (mode) of 76, a variance of 66,15 and the standard deviation of 8,13. It means, IV-A CIE' students' scores before being taught by using scanning and skimming strategy are not showing a good reading mastery and the scores was in the average category of the grading scale. The score of IV-A CIE' students after being taught by using scanning and skimming strategy has a mean score of 92, a median score of 96, the most frequently occurring value (mode) of 96, a variance of 80,84 and the standard deviation of 80,84. It means that IV-A CIE' students after being taught by using scanning and skimming strategy have increased from the pretest and included in the very satisfactory category of the grading scale.

From the difference scores between pretest and posttest, it is certain that there is a significant effect in teaching reading comprehension by using scanning and skimming strategy. The increased scores that occur in the posttest shows that the students' ability has increased in mastering reading comprehension by using scanning and skimming. The t-test is obtained to test the hypothesis with tcount is higher than ttable, 4,352 > 2,086. In other words, the post-test given after using scanning and skimming in mastering reading comprehension increases the students' ability in enhancing their knowledge of reading comprehension and vocabulary

CONCLUSION

Based on the results of the discussion about effect of using scanning and skimming on Reading Comprehension skill of CIE's the fourth Students at Institute of Technology Indonesia Tangerang with a population of the fourth level CIE class which consist of 60 students and a sample class

of IV-A class which consist of 20 students, the conclusions can be drawn as stated below:

The mastery of reading comprehension before using scanning and skimming strategy for CIE's the fourth CIE's Students at Institute of Technology Indonesia Tangerang can be categorized as an average score in the grading scale. This can be seen from the results of the pretest which obtained the mean score of 70,6; median score of 72, the most frequently occurring value (mode) of 76, variance of 66,15 and standard deviation of 8,13. In contrast with the pretest scores, after using scanning and skimming on Reading Comprehension skill of CIE's the fourth students' scores increased and categorized in the very satisfactory score of the grading scale. This can be seen from the results of the posttest which obtained a mean score of 92; median score of 96; the most frequently occurring value (mode) of 96; variance of 80,84 and standard deviation of 8,99 and included in the very good category of the grading scale. In summary, the difference scores of pretest and posttest can show the effect of scanning and skimming strategy in its use for English especially reading skill.

According to the comparative analysis, it shows that there is an effect between the scanning and skimming on Reading Comprehension skill of CIE's the fourth students of Institute of Technology Indonesia. This is indicated by the t-test calculation, the tcount which is 4,352 is higher than the ttable which is 2,086 at a significance level of 5% or $\alpha = 0,05$. Thus, the hypothesis can be accepted that there is a significant effect of using scanning and skimming strategy on reading mastery of the fourth CIE's students at Institut Teknology Indonesia. In other words, it can be concluded that the optimal use of scanning and skimming in teaching English can improve students' ability to master reading comprehension and vocabulary.

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