



# RIELT JOURNAL

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## THE USE OF DUAL CODING THEORY (DCT) TO ENHANCE STUDENTS' READING ABILITY IN DESCRIPTIVE TEXT

### Abstract

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Reading is an activity of readers to read a text and get information from what they read to share each other. Reading is a pleasant way to success of learning English, because reading makes the student find many words used memorably. Reading is very important for students, because there are many advantages from learning reading. By reading, the students are able to increase their knowledge. This research is aimed to find out whether there was a significant influence of using Dual Coding Theory in Reading Descriptive Text at The Tenth Grade of MAN 1 Tanggamus in the Academic Year of 2022/2023. The research methodology was experimental research design. The students of the tenth grade of MAN 1 Tanggamus as a population with the sample group class determined X MIA 1 and X MIA 2. It was selected using the cluster random sampling technique. Hence, the researcher used multiple-choice reading test as instruments to collect the data. The test was for pre-test and post-test. After collecting the data, the researcher used SPSS to analyze the data. From the data analysis, the result from the Mann-Whitney U Asymp of sig. (2-tailed) was 0.011, it was lower than  $\alpha = 0.05$  and it means  $(H_0)$  was rejected and  $(H_a)$  was accepted. It proved that there was a significant influence of using Dual Coding Theory in reading descriptive text at the tenth grade of MAN 1 Tanggamus in the academic year of 2022/2023.

### Keywords

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*Descriptive Text, Dual Coding Theory, Reading*

## A. INTRODUCTION

Reading is an activity of readers to read a text and get information from what they read to share each other. Reading is a pleasant way to success of learning English, because reading make the student find many words used memorably. Reading is very important for students, because there are many advantages from learning reading. By reading, the students will be able to increase their knowledge. Therefore, Reading skill is important to be mastered by students, because the student must be able to read and understand an English text. From reading, the students can get the information. The students also can get knowledge by reading. According to Patel and Jain, reading skill is an important tool for academic success. The students have to know the process of reading to explain and understand what they read by identifying the meaning of words.

In reading, the readers try to understand what the writer means by interpreting what they read. Candlin says that "Reading is the ability to draw meaning from the printed page and interpret this information appropriately". In another word, reading is beneficial activity because students not only get information from the text but also can increase their English ability indirectly. Although reading is one of the ways to increase knowledge and to practice language, many students who still did not understand the English text are affected by the way of teaching reading. Reading also has a positive effect on students' vocabulary knowledge, their spelling, and on their reading. In other words, reading is a useful activity because students do not only get the information from the text but also can increase their English ability indirectly.

It can be known that reading is the third language skill that must be learned in the language learning process. Burns and Siegel said that reading is the social process of transfer information through text among the author and the reader. It means that everybody who wants to get the information from the text, it depends on their ability to read. Moreover, to acquire information from the text, it needs the ability in comprehension. Besides, Mikulecky and Jeffries point out that reading is the process of creating, remembering, and connecting meaning what you have got from the text. From the statement above, it is clear that reading comprehension does not only to understand what is described in the text but also to know and keep in mind the message from the passage. Klingner claimed there are three points that interfere in reading such as decoding, fluency, and vocabulary. In short, for reading comprehension, the learner needs to prepare their background knowledge such as decoding, fluency, and vocabulary. According to Harmer, reading is useful for language acquisition. Provided that students more or less understand what they read, more they read, the better they get at it. So when people read, they must understand what purpose they read. When they read and do not get something their activity is not beneficial.

Comprehension is the goal of reading activity. Reading text in English is not an easy thing if students need to define the meaning of the text. In order to understanding the point of the text, students should have reading comprehension. Students find some troubles, such as vocabulary problems and difficult to find the main idea of the text, those things will influence students comprehending of text. Reading comprehension can be used to help students in the reading section. In this research, the researcher found some problems in teaching and learning English. Among the four language skill of learning English such as

writing, speaking, listening and reading. However, teaching reading comprehension is very difficult in the real situation. The students find difficulties in English learning process especially in reading, the students need a new technique in English learning process, the students cannot comprehend the text and the students felt bored to learn English reading.

Besides that, English is not the students' first language. They many get difficulties in comprehending reading text because teaching reading is very difficult in the real situation. Based on the preliminary research on 26th July 2022 at MAN 1 Tanggamus by interviewing the teacher and giving a questionnaire to the students. Mrs. Ellynda, as the English teacher said that there are many problems in teaching reading process, there are : The students very difficult to understand the reading material especially in text, Most of the students got difficulties to find the main idea of the passage, they have a poor vocabulary and the students were not interested.

There are some factors of students' problem in reading, especially in reading descriptive text. The students' problems are most of them do not like study English. They still have difficulties mastering all of the English skill, especially in reading skills. Some of student don't know the meaning of the text and they have difficulties pronouncing words on the text. That problem appears because they have lack vocabulary, they got difficulties finding of main idea of reading descriptive text and teaching strategy that teacher used is less interesting. Therefore, researchers use dual coding theory to support reading learning in order to increase students' scores to reach the KKM. The strategy used to use this theory is to teach students to combine pictures and words by visualizing while they read the text the pictures they imagine in their minds connect with more linguistic or verbal input from the book and help them to remember the story and what is being said. Based on the explain before, this research took a descriptive text describes a particular object like a place, thing, animals or person use Dual Coding Theory in reading descriptive text because it is appropriate based on material in the syllabus for Senior High School.

The researcher found several related research such as : The first is the research of Dian Kusumawati and Yeni Rachmawati about "Optimizing Storytelling Through Dual Coding Theory" this paper explores about Combining storytelling with mental imagery strategy in the Dual Coding Theory, will help opening up the capacity of imagination in a more profound way, not only for the sake of academic interest. And the second research by Evi Khoirun Nisa, Sri Andreani, Utari Praba Astuti about "Student Perceptions on The Use of Dual Coding Theory (DCT) in Reading Descriptive Text". The research indicates that students' perception on the use of DCT in reading descriptive text is positive. This study used qualitative method and the design of this research is a survey. The writer concluded that Dual coding theory helps students to imagine what is written in the descriptive texts. DCT can make student feel interested and also display a structured relation of the important ideas in the text and give a clear explanation of difficult parts of the text.

The research that was conducted by the researcher has a difference with the researcher before. The first different is object, that the researcher was carried out the tenth grade of MA Al-Ma'ruf Margodadi. The second differences is the previous research used qualitative method and the design of this research is a survey, meanwhile this research was used quantitative research based on experimental research design. And the third difference from previous research is the previous research about Optimizing Storytelling Through

Dual Coding Theory, meanwhile this research about Reading Descriptive Text use Dual Coding Theory.

## B. RESEARCH METHOD

The research approach used in this study is a quantitative research based on experimental research design because to know the influence of using Dual coding teory in teaching reading descriptive text. The design utilized a control group pre-test and post-test design, with one experimental class receiving the Dual Coding Theory (DCT), and the control class receiving no treatment. The population of this research was the students from the Tenth grade of MAN 1 Tanggamus the total is 202 students including six classes, there are 3 classes of the MIA program and 3 classes of the IIS program. The sample of the research were two classes of Tenth grade, one class as the experimental class and another as the control class. Experimental class was X MIA 1 and Control class was X MIA 2. This research took the sample from the population by using cluster random sampling. the researcher used formulation Independent sample T-test. The researcher used SPSS 25 (Statistical Package for the Social Sciences).

## C. FINDING AND DISCUSSION

### Findings

#### *The Result of Experimental and Control Class*

This research used two classes as the sample. The first, class X MIA 1 was the experimental class, which was given treatment three times using Dual Coding Theory (DCT). The second, class X MIA 2 was the control class, in this class the treatment use Reading Alouds.. However, the results showed that there were difference between the scores of the pre-test and post-test in both classes. The results of the two classes were presented in detail in the following table:

Table 1. the Score of Pre-test and Post-test

Class	N	Score of Pre-test			Score of Post-test		
		Mean	Max	Min	Mean	Max	Min
Experimental	34	63,68	35	100	81,03	95	65
Control	33	67,88	35	100	74,24	95	45

The result indicated that the students had relatively low adjective abilities, with a mean pre-test score of 63,68 in the experimental class and 67,88 in the control class. The means of both classes were slightly different, so it can be said that they have the same level of knowledge in adjective mastery. After the treatment was given, the score was higher. The results of students' ability to master adjectives can be seen from the mean post-test scores of both classes. In the experimental class, the mean post-test score was 81,03, while in the control class, the mean post-test score was 74,24.

### *The Result of Validity and Realibility Test*

To determine whether or not the test had good validity, this research conducted a validity test by analyzing the test's construct validity and content validity. The content validity test was done using a checklist by English teacher in the class, namely Mrs. Ukhti Kholifatul Awaliyah, S.Pd. as the validator. Based on her, the instrument of the research's test questions was declared valid, and there were no suggestions for improvement.

The research used IBM SPSS 25 to test the construct validity of the test. Based on the results of trials that had been carried out on students outside the sample, namely X IIS1 36 students of class. A reliability test was conducted after the test was declared valid. It was used to determine whether the instrument used was consistent and stable or not. To calculate the reliability test of the pre-test and post-test used, this research used IBM SPSS 25.

### *Fulfillment of the Assumption*

After the pre-test, treatment, and post-test were carried out, the next procedure was to calculate the post-test results of the two classes and conduct a test of normality and homogeneity as fulfillment of the assumption. The results of students' ability to master adjectives can be seen from the mean post-test scores of both classes. In the experimental class, the mean post-test score was 81,03 while in the control class, the mean post-test score was 74,24. Next, to find out whether the data used met the assumptions or not, normality and homogeneity tests were conducted. In calculating the normality test, this research used the Kolmogorov-Smirnov test on SPSS 25 and obtained results from both pre-test and post-test data of both classes having a significance value  $> 0.05$ , which means the data was normally distributed. As for the homogeneity test, it used Levene's test with the help of SPSS 25, and the result was that the research data proved to be homogeneous, with the data based on the means of both classes having a significance value of  $> 0.05$ , which was 0.032. The results of the normality and homogeneity test that were done are presented in the following table:

Table 2. the Normality of Pre-test and Post-test

<b>Tests of Normality</b>		
Class	Sig.	Inference
Pre-test Experimental Class	.247	Normal
Post-test Experimental Class	.051	Normal
Pre-test Control Class	.189	Normal
Post-test Control Class	.064	Normal

Table 3. the Homogeneity of Pre-test and Post-test

<b>Test of Homogeneity of Variance</b>				
	Levene Statistic	df1	df2	Sig.
Based on Mean	4.809	1	65	.032

### Result of a Hypothetical Test

To find out whether there were differences in student learning results on adjective mastery between the experimental class, which had the treatment using the Dual Coding Theory, and the control class, which was not treated with the application, it was calculated with the help of IBM SPSS 25 with a significance level (2-tailed) of 0.05 and obtained hypothesis test data in the following table:

Table 4. the Hypothesis of the Test

Mann-Whitney U	363.000
Wilcoxon W	924.000
Z	-2.528
Asymp. Sig. (2-tailed)	.011
a. Grouping Variable: Class	

Based on the result obtained in the table above, the Mann-Whitney U result was 363.000 and the Asymp. Sig. (2-tailed) = 0.011 <  $\alpha$  = 0.05. So,  $H_0$  was rejected and  $H_a$  was accepted. It could be concluded that there is a significant influence of using Dual Coding Theory.

### Discussion

Based on the research findings, it was discovered that with the Dual Coding Theory (DCT), students in Experimental Class got references and motivation to learn English in Reading skill especially in descriptive text. As explained in the previous chapter, Dual Coding Theory (DCT) is a theory that can be used for learning English especially reading skill. Based on the findings, it can be concluded that DCT helps students to imagine what is reading in the descriptive text. This is reflected by students' positive reaction towards statements such as "picture can help to imagine a certain object specifically or in more detail". It shows that pictures are helpful in painting a picture in students' minds. This theory could help the students in the experimental class more easily understand about descriptive text and the control class also had improvement as well, but not more than the experimental class.

According to the result of the pre-test before treatment using Dual Coding Theory (DCT) learning English application was implemented, students' reading skill was lower than after it was implemented. The mean of pre-test score in the experimental class was 63.68, and the mean of post-test score was 81.03. After receiving the treatments and administering the post-test, it was discovered that there were significant differences between the experimental class and control class, which the experimental class had a higher post-test score. As can be seen from the mean of pre-test score in the control class was 67.88 and the mean of post-test score was 74.24. It means that a significant

improvement occurred in the experimental class. From that explanation, we knew that the students who received treatment with Dual Coding Theory (DCT) got a higher score than the students who didn't receive treatment with Dual Coding Theory (DCT) in teaching reading materials descriptive text. As a result, it could be argued that using Dual Coding Theory (DCT) in reading descriptive text, especially for the tenth grade students at MAN1 Tanggamus was effective.

There were several previous research of using Dual Coding Theory in teaching English. The first previous research was conducted by Dian Kusumawati and Yeni Rachmawati about "Optimizing Storytelling Through Dual Coding Theory". Based on the data analysis, research findings and discussion in this research, the researcher concluded that this paper explores about Combining storytelling with mental imagery strategy in the Dual Coding Theory, will help opening up the capacity of imagination in a more profound way, not only for the sake of academic interest. And the second previous research by Evi Khoirun Nisa, Sri Andreani, Utari Praba Astuti about "Student Perceptions on The Use of Dual Coding Theory (DCT) in Reading Descriptive Text". The research indicates that students' perception on the use of DCT in reading descriptive text is positive.

From the discussion above, by using Dual Coding Theory (DCT) to teach reading, students got better score and more active in learning listening activity. It's related to Erya and Pustika (2021) found that the students are more interested and get the motivation to improve their reading comprehension skill by using DCT. In addition, DCT can make students feel interested, interested, and happy. DCT also displays a structured relation of the important ideas in the text and gives a clear explanation of difficult parts of the text and picture helps students' imagination and assists them in learning new vocabulary items.

However, in this research the researcher found several obstacles. Based on the rules of the school, the researcher only allowed to conduct the research for a month, therefore the researcher divided the time into 1 meeting for pre-test combining treatments, 2 meetings for treatments, and 1 meeting for post-test combining treatments in each class, namely Experimental Class and Control Class. Before using Dual Coding Theory (DCT) to learn, the researcher explained to the students what Dual Coding Theory (DCT) was and how the theory procedure worked. In the use this theory, the researcher found some issues such as the students who did not understanding about this theory because it the first time learn use this theory. So, the researcher guide and explain about procedure or how its Dual Coding Theory. Because of the lack of vocabulary, so that students also find it difficult to understand or capture what it means by the imagine applied using Dual Coding Theory.

Based on the analysis of the data and the testing of the hypothesis, the result of the calculation by Mann-Whitney found that the hypothesis null ( $H_0$ ) was rejected and the hypothesis alternative ( $H_1$ ) was accepted. From the analysis, the researcher concluded that students who used Dual Coding Theory (DCT) frequently received better score. This means that using Dual Coding Theory (DCT) could help students improve reading skill. Based on the explanation above, it was answered the formulation of the problem which "is there any significant influence of using Dual Coding Theory in reading descriptive text at the Tenth grade of MAN 1 Tanggamus Tanggamus?". In general, the teaching and learning process ran well. The students enjoyed following the steps. The researcher concluded that

using Dual Coding Theory (DCT) had a significant effect on reading descriptive text in the tenth grade of the second semester of MAN 1 Tanggamus in the academic year 2022/2023.

#### **D. CONCLUSION**

##### Conclusion

Based on the research that was conducted at MAN 1 Tanggamus Tanggamus at the second semester in the academic year 2022/2023, it can be concluded as follows : in the previous chapter, statistical analysis of the data has been carried out. Based on the result of the statistical analysis, it shows that there is a significant effect of using Dual Coding Theory in reading descriptive text at the tenth grade of MAN 1 Tanggamus Tanggamus in the academic year 2022/2023. It is because of the result of the data calculation in the previous chapter, the null hypothesis ( $H_0$ ) was rejected and the alternative hypothesis ( $H_a$ ) was accepted. It was supported by the score achieved by the students, they got a higher score after the researcher gave the treatment by using Dual Coding Theory (DCT) in teaching reading. The significant influence could be seen from the Mann-Whitney U result of the Asymp. Sig. (2-tailed) which it was 0.011, it was lower than  $\alpha = 0.05$  and it means ( $H_0$ ) was rejected and ( $H_a$ ) was accepted.

##### Suggestion

For English Teacher The researcher found that using Dual Coding Theory (DCT) was effective to teaching English especially in Reading. Therefore, the researcher suggests the English teachers to try this theory as the technique in teaching reading, because it can increase students' reading skill. For Students The students should improve their reading skill because reading is one of the skills that have to be mastered by the students and The students can use Dual Coding Theory (DCT) to improve their reading skill independently outside the classroom without the help of the teacher. For the Next Researcher In this research, the researcher focused on the influence of using Dual Coding Theory (DCT) in reading descriptive text to teaching material about Place, People and Animals, for the next researcher suggested to investigate the other skill in English such as Listening, Speaking and or Writing and teach the other material by using the other technique.

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