

THE EFFECT OF TEACHING STRATEGIES AND LEARNING STYLE ON STUDENTS' ACHIEVEMENT IN READING COMPREHENSION

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ABSTRACT

The objectives of this experimental research were to investigate whether: 1) students' achievement in reading comprehension taught by using advance organizer strategy was higher than taught by using reciprocal strategy. 2) students' achievement in reading comprehension with visual style was higher than that students with verbal style, and 3) there was interaction between teaching strategies and learning styles on students' achievement in reading comprehension. The population of this research was the students in grade X of private senior high school named SMA Kartika I-1 Medan in 2012/2013 school year. The total number of population was five classes containing 200 students. There were two classes containing 83 students chosen as sample of this research by applying cluster random sampling technique. In further, there was cluster random assignment done in both two classes in order to know the position of the class whether as experimental group 1 or experimental group 2. The experimental group 1 was treated by using advance organizer strategy and the experimental group 2 was treated by using reciprocal strategy. Then, the research design was experiment by using factorial design 2×2 because there is two independent variables (teaching strategies) and two attributives (learning styles). The questionnaire was conducted for classifying the students' learning style upon the visual and verbal. Next, students' achievement in reading comprehension text was measured by using reading comprehension test. The data were analyzed by applying two- way analysis of variance (ANOVA) at the level of significance $= 0,05$. The result reveals that (1) students' achievement in reading comprehension taught by using advance organizer was higher than that taught by using reciprocal strategy, with $F_{obs} = 9,1 > F_{tab} = 3,96$, (2) students' achievement in reading comprehension with visual learning style was higher than that with verbal learning style, with $F_{obs} = 11,7 > F_{tab} = 3,96$, (3) there is interaction between teaching strategies and learning styles on students' achievement in reading comprehension with $F_{obs} = 47,4 > F_{tab} = 3,96$. Moreover, Tuckey-Test result also showed that visual style students got higher achievement if they were taught by using advance organizer strategy while verbal style students got higher achievement if they were taught by using reciprocal strategy.

INTRODUCTION

Reading is one of the four language skills in language learning. Its role is realized as very substantial not only for the language competency mastery but also for the knowledge mastery. By giving reading activity in the language learning, teacher actually has opened students' schemata or horizon. In further condition, the knowledge they got from reading will give big impact for other language skills such as writing and speaking. If the students have limited knowledge, they automatically will not be able to write something or speak something even though they had mastered the structure of English well.

Thus, knowledge is actually the product of doing reading in the language learning which does not come suddenly without any processes at the previous. The processes are started by the interaction between the readers and the text such as looking the print, deciphering in some sense the marks on page. Then, the readers try to think what they are reading. Next, they think what is meant to them, how it relates to other things they have read, and how they connect it with their prior knowledge so that they are able to gather the new knowledge from the text.

Table 1. Students' achievement in reading comprehension in SMA Kartika I-1 Medan

Semester	Means of students' achievement in language learning			
	Reading	Speaking	Listening	Writing
I	55	74	70	72
II	58	76	80	78

In fact, the knowledge will not be reached by students if they lack of comprehending a text. It is because the reading is not only as the process of communication between the reader and the writer through written symbol in the text but also as an activity which must enable the students as the readers to grasp the information implied in the text by activating their thinking process so that the reading comprehension is earned.

In contrast, The reality shows that there are so many students who are able to read out loud some texts in the class with the appropriate pronunciation but they do not know what they are reading about. It is because they do not apply the way they use when reading in their native language to reading in foreign language they are learning. They just spent their time to earn the meaning word by word, then consult the unknown vocabularies, continue with the meaning of each sentences. Actually, what it is done by them just touch the linguistic knowledge. This is actually the phenomenon teacher faced in the class included in SMA Kartika I-1 Medan. The phenomenon is seen in the table 1.1.

However, not all teaching strategies are applicable for reading comprehension. The teaching strategies needed are those are able to connect the students' prior knowledge with the new information in given text. Here, there are two simple strategies which are selected in this study. They are advance organizer and reciprocal strategy.

The advance organizer is chosen as the strategy used in this research because it is so challenging and meaningful in learning by touching some concern in reading a text such as how knowledge is organized, how the mind works to process new material with the previous one. Research findings have provided evidence of the superior effects of various types of advance organizers used to facilitate reading comprehension (Lin and Chen, 2007). The findings also prove that reading is not passive activity because there are some processes happened when one is reading a text. While, the reciprocal involves explicit instruction by the teacher in the students' use of the strategies, such as predicting, clarifying,

questioning and summarizing, to develop their reading comprehension. As the students become more familiar with the use of the strategies, the teacher plays a less prominent role and the students develop the ability to work co-operatively with their peers (Wisaijorn, 2010).

However, finding the worthy strategies in teaching reading is not enough. There is another point which is also important to be known by teacher when teaching reading in classroom. Some experts related with cognitive theory such as Bruner and David Ausable uttered that learning style is also important point which should be identified by the teacher after considering the purpose of the study. By knowing the learning styles which the students have, teacher easily will find the appropriate way to teach them so that the students will also enjoy the teaching- learning process.

Therefore, this research was conducted to answer these following questions:

1. Is the students' achievement in reading comprehension taught by using advance organizer strategy significantly higher than taught by using reciprocal strategy?
2. Is the students' achievement in reading comprehension for those students with visual learning style is

higher than those students with verbal learning style?

3. Is there any significant effect between teaching strategies of reading and learning styles?

Methodology

Quantitative experimental was applied in this research because this research would like to establish the comparison (different effect of teaching strategies on learning styles) required by the hypothesis in this experiment so that a meaningful interpretation of the results in this research would be obtained.

In more detail, the designed used was factorial design 2x2 in order to compare the two teaching strategies (namely advance organizer and reciprocal strategy) and the two learning styles of students (namely visual and verbal style). So, there were some variables found in this research design namely independent variables, moderator, and dependent variable. The independent variables were the teaching strategies, advance organizer and reciprocal strategy while the moderators were the learning styles of students whether visual or verbal style. Then, the students' achievement in reading comprehension was the dependent variable. The research design from those variables is presented through table 5.

Table 5. Research design

Teaching Strategies (A)	Advance Organizer	Reciprocal
Learning Style (B)	(A1)	(A2)
Visual (B1)	A1B1	A2B1
Verbal (B2)	A1B2	A2B2

Remark:

A1 B1 = Students whose learning style is visual and taught by advance organizer strategy

A2 B1 = Students whose learning style is visual and taught by reciprocal strategy

A1 B2 = Students whose learning style is verbal and taught by advance organizer strategy

A2 B2 = Students whose learning style is verbal and taught by reciprocal strategy

In further, the relationship among the independent variables, moderator variable, and dependent variable was known by using Winer's model (1971) in table 6 as the following:

Table 6. The relationship among the independent variables, moderator variable, and dependent variable is known by using Winer's model

Measured Skill		Students' Achievement in Reading (P)	
Teaching Strategies		Advance Organizer	Reciprocal
		(A1)	(A2)
Learning Style	Visual (B1)	PA1B1	PA2B1 PB1
	Verbal (B2)	PA1B2	PA2B2 PB2
		PA1	PA2

Example: PA1B1: Students' achievement in reading comprehension with visual learning style taught by advance organizer.

The population of this study was the whole five classes (containing 200 students) of private senior high school in Medan, SMA Kartika I-1 Medan.

Cluster random sampling and assignment were the techniques used in this research in taking the sample. Cluster random sampling was the technique of taking sample group of subjects that were selected by chance, without bias. It would be used only to consider two classes in the Grade X selected as the representative of the population.

Result of the research

The hypothesis of this research is verified by two way analysis of variance (ANOVA) with factorial design.

Based on the data analysis, it was known that the mean of students' score in reading comprehension taught by advance organizer strategy is 82,5 while students' score in reading comprehension taught by reciprocal strategy is 76,1.

In addition, the result of ANOVA test shown that $F_{observed} > F_{table}$ in which the F observed is 9,1 and F table is 3,96. Therefore, the null hypothesis had been successfully

rejected. As a result, the first hypothesis of this research formulated that the students' achievement in reading comprehension taught by advance organizer strategy is higher than taught by reciprocal strategy is really true.

Secondly, the mean of students' score with visual style is 80,9 while students' score with verbal style is 80,2. In addition, the ANOVA test shown that $F_{observed} > F_{table}$ in which the F observed is 11,7 and F table is 3,96. Automatically, the null hypothesis had been successfully rejected so that the second hypothesis formulated that students' achievement in reading comprehension with visual style is higher than the students' achievement in reading comprehension with verbal style is really true.

Furthermore, from the result of ANOVA calculation in interaction, it is known that the F observed = 47,41 is higher than F table = 3,96. In addition it shows that there is a rejection of the null hypothesis successfully. Thus, there is interaction between the teaching strategies and the learning styles. The interaction between the teaching strategies and learning styles is seen from this following figure:

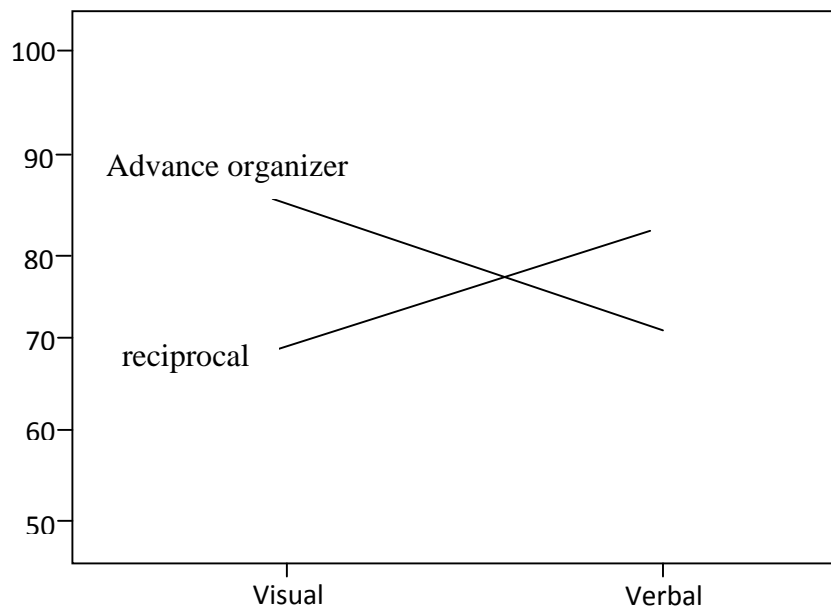


Figure 16.The interaction between teaching strategies and learning styles

Discussion

From the research findings and the hypothesis testing, it is known that there is significant interaction between teaching strategies and students' learning styles. The fact proves that teaching strategies and learning styles are two important points which significantly influence the students' achievement.

In addition, the Tuckey-test is calculated in order to know which sample interaction has better achievement in reading comprehension among the cells. The result indicates that students with visual style is worthy if it is matched with advance strategy while students with verbal style is worthy if it is matched with reciprocal strategy.

Advance organizer strategy focuses on the increasing students' likelihood in understanding new material by organizing the new information into hierarchies and organizing information so that the relationships between isolated bits of information can be detected. Faw and Waller (1976) uttered that advance organizers are "a kind of conceptual bridge between new

material and students' current knowledge," making them an excellent technique for linking prior knowledge to new learning, as well as for organizing learning.

In further, the advance organizer strategy is suitable for the students with visual learning style because this strategy lets the students to see relationships among key concepts, terms, concept illustrations, and details which then will be paraphrased into organizer based on their own words so that the advance organizer becomes meaningful understanding of the new material. Actually, that is the reason why the advance organizer is suitable for the students with visual style.

In addition, the advance organizer strategy has higher achievement in reading comprehension because it is combined with the students having visual style. It is eligible combination because advance organizer strategy enabling students to be independent learners in organizing the information after reading a text while the visual style is the natural style of students in learning something easily if it is emerged through structure or organizer. Naturally, they will be more curious

when they are asked to find out the key words of the idea in order to recall it easily, build up organization of idea implied in a text so that the information becomes one unity.

Moreover, in advance organizer the students also present their organized idea in front of the class. Actually, it challenges their ability in defending their idea. If they do not have a good comprehension, they automatically will not be able to defend their idea in the class. As the result, when the students with visual style is taught by using advance organizer strategy, they get a good achievement which is 86,7.

Meanwhile, the reciprocal strategy is one of teaching strategy focused on four phases namely predicting, clarifying, questioning, and summarizing in order to understand the information in a text. In this case, the students guide only to catch the information about 5W+1H (What, Who, Why, When, Where, Who + How) without relating the information into certain structure. That is why this strategy is suitable for students with verbal style proven by the average score, 83,5.

Those facts proofs that teaching strategies and learning styles influence students' achievement in reading comprehension. From the Tuckey-test, it is known which samples interactions have better achievement in reading comprehension among the cells. It indicates that students with visual style taught by using advance organizer strategy and students with verbal style taught by using reciprocal strategy have the most significant difference among others. The students with visual learning style taught by advance organizer strategy have better achievement in reading comprehension than students with visual learning style taught by reciprocal strategy. In other words, students with visual learning style have better achievement in reading comprehension if they are taught by using advance organizer strategy while students with verbal style have better achievement if they are taught by using reciprocal strategy.

Conclusions

Based on the data analysis and research findings at the previous chapter, it is concluded that:

- 1) students' achievement in reading comprehension text by using advance organizer strategy is higher than that taught by using reciprocal strategy;
- 2) in reading comprehension, the achievement of students with visual learning style is higher than students with verbal learning style;
- 3) there is significant interaction between teaching strategies and learning styles on students' achievement in reading comprehension. On the other words, it can be said that the students' achievement in reading comprehension is influenced by teaching strategy and students' learning style.

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