

THE EFFECT OF USING MIND MAPPING TECHNIQUE ON THE STUDENTS' GRAMMAR ACHIEVEMENT

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Abstract: An understanding of how teachers are drawing on grammar to design teaching activities can be beneficial for the education field as to best practices. A new technique, mind map, is believed to be useful in teaching language. Therefore, the current research aimed at investigating the significant effect of using mind mapping on the students' grammar achievement. The research design was quasi-experimental research, that was, Non-equivalent Groups Posttest Only Design, and the population was all of the seventh grade students of SMP 06 Diponegoro Wuluhan Jember in the 2012/2013 academic year. The data of this research were gained from the results of the grammar posttest conducted after the treatment was given. The treatment for the experimental group was teaching grammar by using mind mapping, while the control group was taught grammar by using conventional technique, memorization. The data obtained were analyzed by using SPSS 17 with the significant level of 5%. The result of this research revealed that mind mapping technique had a positively significant effect on the students' grammar achievement.

Keywords: *mind mapping, grammar achievement*

The effective way of how to teach grammar has become a crucial attention in the language teaching and learning history. Many practitioners have been considering the issue of what the best way of teaching grammar to the students especially in the context of EFL is. Then, it has been a hot topic of debate since the beginning of language teaching (Ellis, 2006; Brown, 2007; Nassaji & Fotos, 2011).

English grammar, as one of the English components, is very important in learning a language. When the students master the English structure well, they will be able to construct correct sentences and to communicate effectively. Moreover, without adequate grammar knowledge, learners' language development will be severely constrained. Harley (2001) states that grammar is a formal instrument which uses a finite number of rules enabling us to construct sentences of a language. In line with this, Greenbaum and Nelson (2002) state that grammar is the center component of language, and it contains the set of rules which enables us to combine words into larger units. It means that with a good knowledge of grammar, the students will be able to construct grammatically acceptable English sentences creatively. Furthermore, a good knowledge of English grammar can allow the students to comprehend English written or spoken texts with ease. It cannot be ignored that grammar plays a central role in the four language skills and vocabulary to establish communicative tasks (Widodo, 2006).

As aforementioned, many researchers now believe that grammar teaching should not be ignored in second language classrooms. Language teaching professionals have also become increasingly aware that grammar instruction plays an important role in language teaching and learning. Teaching approaches that focus primarily on meaning with no focus on grammar are inadequate. Greenbaum and Nelson (2002:6) state that knowledge of grammar can enable us to use the language more effectively. In line with this idea, Murcia (2001) states that the students have to focus on structure when it is related to their communicative needs since making mistakes in sentence structure may cause misunderstanding between the speaker and the hearer. Based on those statements, the understanding of English structure or English grammar is very important in order to gain comprehension and to avoid misunderstanding between English speakers and listeners. In addition, it seems that having a good knowledge of grammar system accelerates language learning.

Even though grammar is a fundamental material that must be mastered by the students, in fact, there are still many students who do not like learning grammar. Grammar often triggers a negative reaction in both teachers and students (Dykes, 2007). Moreover, Decapua (2008) states that the term grammar often brings our mind into unpleasant memories. Meanwhile, many students face difficulties to understand and apply the English grammar, especially in learning tenses (Payne, 2011). This confusion might happen because every language has its own grammar systems. For instance, in English, there is an auxiliary verb "be" which has a function as a

requirement to complete some English tenses. Meanwhile, in Indonesian, there is no such verb which has the same function as 'be'.

Realizing the obstacles of learning grammar, many researchers proposed interesting ways to teach English grammar to the students. Commonly, the use of media or the use of certain techniques is commonly used by practitioners as variation of teaching to help students' learning. In the EFL context, practically in grammar teaching the students are taught rules of language using grammar translation method, in which the learners are provided with the grammar rules and the examples and are told to memorize them, and then are asked to apply the rules to the other examples (Widodo, 2006). The learners mostly take notes on the new grammar rules in their notebook. They usually write in a linear manner. However, according to Buzan and Buzan (1993), the problem is that the natural way of the mind works does not come up with ideas linearly. The human brain works sporadically, jumping from topic to topic. Thus a better technique than a linear outline is to use a multi dimensional outline which allows us to put down our ideas in the form of free diagrams. This form is called mind mapping (Buzan & Buzan, 1993).

Mind mapping was first introduced by Tony Buzan, a British popular psychologist, in 1970 based on his research of how brain works. It is a thinking tool or a concept which illustrates how the human brain processes various thoughts and information that are related to each other (Buzan, 2005; Davies, 2011). It is a diagram used to visually portray the relationship between ideas, words, or other items around a central idea or keyword. It has structure that radiates from the center, using curved lines, symbols, words, color, and images. It starts with a central key idea drawn in the center of paper. Other thoughts related to the key idea are arranged around the center with lines branching out from the main idea to the subtopics to show that they are linked to one another. By focusing on key ideas written down by the students' own words, and then looking for connections related to the key ideas, in which colors, images, symbols, and curved lines are used, the students are able to map their knowledge in a manner which can help them understand and remember new information. Hence, teachers could use mind mapping in a number of practical ways to make teaching and learning easier and more enjoyable.

Mind mapping has been used in a variety of language teaching. Yen (2010) implemented mind map in his teaching learning process as a visual media that allowed the student to brainstorm, arrange, memorize new information and helped the students stimulate their logic of thinking practices. He further said that mind mapping could help the students alleviate their language anxiety. Another research by Riswanto and Putra (2012) investigated the use of mind mapping on the students' writing achievement at SMAN 3 Bengkulu, Indonesia. The result reported that the use of mind mapping significantly improved the students' writing achievement. Furthermore, Al-Jarf (2011), in his research, explained how mind mapping software could be integrated in EFL courses in order to help the students improve their pronunciation skills. Another research aimed at investigating the effectiveness of mind mapping on vocabularies learning and exploring the students' attitude towards the use of mind mapping was carried out by Munsakorn (2012). The result from this research revealed that mind mapping had a significant effect on vocabulary learning, and it also encouraged the students to learn English language.

However, although there are a number of researches concerning the use of mind mapping in language teaching, it seems that the investigation of mind mapping in English grammar achievement still lacks of empirical studies. Therefore, conducting an experimental study in order to see the significant effect of mind mapping on students' grammar achievement seems to be worth doing. The current study explored the effect of mind mapping technique on the seventh grade students' grammar achievement at SMP 06 Diponegoro Wuluhan Jember, Indonesia. The research question of the current study was formulated as: "Do the students taught by using mind mapping technique have better grammar achievement than those taught by using conventional technique?"

Method

This research used a Nonequivalent-Groups Posttest-Only Design, involving two groups. The two groups were taken randomly from five seventh-grade classes in SMP 06 Diponegoro Wuluhan Jember. Before randomly taken, the five available classes were given a pretest to see if their English grammar proficiency was equivalent. McMillan (1992:176) states that Nonequivalent-Groups Posttest-Only Design is best employed when groups of subjects are comparable and can be assumed to be about the same on the trait being measured before the treatment is given to the subjects. The two selected classes were class VII-E and class VII-B. The two classes were then randomly taken as the experimental and the control group. Class VII-E, as the experimental group, was then taught English grammar by using mind mapping, while class VII-B, as the control group, was taught English grammar by using conventional technique, that was, memorization with linear note taking. After receiving different treatments, both groups were given an English grammar posttest to measure the significant effect of mind mapping on students' English grammar achievement.

The subjects of this research were the students of the two seventh-grade classes of SMP 06 Diponegoro Wuluhan Jember. There were 40 students in the experimental group (class VII-E) and 37 students in the control

group (Class VII-B). Based on the documentation at the school, the students' age ranged from 13 to 15 years old, with the average of 14, and there were 41 male and 36 female students in the sample. For these students, English was the third language that they learned since their first language was the regional language, either Javanese or Madurese, and their second language was the national language, Indonesian.

The research instruments used were test, observation, documentation, and interview. The test in this research was conducted after the treatments given to obtain the primary data to see the significant difference between the experimental and control groups. The test was a grammar posttest in the form of multiple choice (10 items), short-answer items (8 items), sentence alteration (6 items), and sentence construction (6 items). It was divided equally for two tenses (simple present tense 15 items and present continuous tense 15 items) and administered for 70 minutes. Each correct item for the multiple choice test, short-answer item, sentence alteration and sentence construction was scored 2 points, 2.5 points, 3 points, and 4 points respectively.

After the end of the research, an interview was conducted to the research subjects to know their opinion and perspectives about the mind mapping they already experienced. Besides, observation and documentation technique also provided the supporting data about the students' past English proficiency. The primer data obtained from the posttest were analyzed by using SPSS 17 for windows with the significant level of 5%.

Findings and Discussion

The subjects of this research were 77 from two intact groups of SMP 06 Diponegoro Wuluhan Jember, 40 from the experimental group and 37 from the control group. However, there were only 75 students who completed the treatments and posttest. Therefore, the data from the two students, both were from the experimental group, were discarded.

As aforementioned, this research aimed at investigating the effectiveness of mind mapping on students' grammar achievement using Nonequivalent-Groups Posttest-Only Design. Therefore after the experimental group was given the treatment, that was, teaching grammar by using mind mapping, both the experimental and the control groups were given a posttest. The posttest score of both groups were analyzed by using One way Anova SPSS to see if there was a significant difference between the two groups. It was revealed that the mean posttest score of the experimental group was 75.63158, while the mean posttest score of the control group was 70. The result of One Way Anova analysis showed that there was a significant difference between the experimental and the control group. It can be seen from the level of significance which is lower than 0.05. The level of the significance was 0.007, which can be seen from the following table.

ANOVA

SCORE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	594.545	1	594.545	7.611	.007
Within Groups	5702.842	73	78.121		
Total	6297.387	74			

Thus, the result of the findings answer the research question that mind mapping has a positively significant effect on students' grammar achievement. This research finding supported Buzan and Buzan (1993) that mind mapping can be used specifically for the teaching of grammar. Though there were only few numbers of research investigating mind mapping and grammar, other research findings also showed the effectiveness of mind mapping. A research by Riswanto and Putra (2012) investigating the use of mind mapping on the students' writing achievement at SMAN 3 Bengkulu, Indonesia reported that the use of mind mapping significantly improved the students' writing achievement. Furthermore, another research by Munsakorn (2012) aimed at investigating the effectiveness of mind mapping on vocabularies learning and exploring the students' attitude towards the use of mind mapping was also revealed that mind mapping had a significant effect on vocabulary learning, and it also encouraged the students to learn English language.

An interview conducted at the end of this research to the research subjects gave supporting details that mind mapping made the students remember and recall easily about the grammar rules. Besides, an observation conducted when the research subjects taking the posttest seemed to indicate that the students did indeed use mind mapping when they did the test. It was observed that some students draw a mind map on a paper during the test.

Conclusions and Suggestions

To conclude, the study showed that there was a positively significant effect of using mind mapping technique on the seventh grade students' grammar achievement at SMP 06 Diponegoro Wuluhan Jember in the

2012/2013 academic year. Since the application of mind mapping technique in teaching grammar gave a significant effect on the students' grammar achievement, the researchers propose some suggestions to the following people.

Firstly, it is suggested that the English teachers of SMP (Junior high School) use mind mapping technique as an alternative technique of teaching grammar. This technique affects the students' grammar achievement significantly and makes the students understand the materials taught more easily. Secondly, concerning the demands of the recent curriculum, it is also suggested that the students continuously use mind mapping technique for learning language, especially grammar. Therefore, they will be able to use mind mapping technique in learning English grammar such as simple past tense, past continuous tense, and so forth.

Finally, with regard to the research findings that indicate mind mapping technique had significantly positive effects on students' grammar achievement, further researches dealing with the use of mind mapping technique are further investigated, by using research subjects with various English proficiency or age, or using different research design on various grammatical points or language skills.

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