THE USE OF MIND-MAPPING TO IMPROVE STUDENT'S READING COMPREHENSION AT SMAN 1 GRATI PASURUAN

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Abstract: Indonesian government considers English as one of the foreign languages to be taught in school from the elementary level up to the university level. While the teaching and learning activities should be oriented toward the mastery of four language skills: listening, speaking, reading and writing, comprehending a text is considered as one of difficulties in reading. Therefore, the teacher should use the appropriate technique in teaching reading to overcome this problem.

The purpose of the research is to know whether mind-mapping technique improves students' reading comprehension of the second year at SMAN 1 Grati, Pasuruan, Pasuruan or not. The research design was quasi experimental. The population of this study was science program of second year students at SMAN 1 Grati, Pasuruan, and the sample of this study was the students of XI-IPA 3 and XI-IA 4 class. XI-IA 4 class has the role as experimental class which was treated using mind-mapping technique and XI-IA 3 as a control group which was treated using conventional teaching technique. The instrument used was an independent sample test supporting the analysis of the researcher towards the data.

Based on the result of data analysis, it was found that mind-mapping technique is effective to improve students' reading comprehension of the second year at SMAN 1 Grati, Pasuruan. There is significant different between means scores of both class. In a fact, the mean score of the post-test of experimental class is higher than the mean score of post-test of control class. The result of this study implies that English teachers should consider using mind-mapping in teaching reading, because mind mapping can help students to understand each paragraph of text more clearly.

Key words: mind-mapping, technique, reading, reading comprehension

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Introduction

According to Algeo (2010), language is a conventional system of vocal sign which has a meaning and as tools to communicate with others. One of the languages which is used in communication is English and turned it into one of the most dominant languages around the world as most people use English in daily life.

As one of the communicative elements of English language, reading is learned by the students on how to comprehend the text, find the new words and practice it in speaking or writing. Reading is also an interactive process that connects the reader and the text, resulting in comprehension. The text presents letters, words, sentences, and paragraphs, encoding meanings that the reader uses knowledge, skills, and strategies to determine what the meaning is. Understanding the meaning enables the students in applying the knowledge of the information.

In order to well comprehend the text, Buzan as an expert on brain development, creativity and revolution education from England, creates a technique called "mind-mapping" (as cited in Windura, 2013). In mind-mapping, students can describe their ideas by giving a text, picture or diagram in order to get more comprehension about the information that is beneficial to understand the text.

According to Swadarma (2013), mind-mapping works by mixing and developing the potential of brain hemisphere's work in learning to make it easier to set and remember all of the information form. Based on the statement, the researcher is interested in studying the effectiveness of mind-mapping in improving student's reading comprehension at SMAN 1 Grati, Pasuruan. The school is chosen as the object of the study because the students in this school are considered to have low achievement in English skills, especially in comprehending the reading text. Based on the result of the student's score, from students in science program, only 24% of all the students are able to reach the KKM (Minimum Students Score), in which the standard of KKM score is 75 points. Based on the explanation of the study, this research is trying to analyze to what extent that mind-mapping as a teaching technique can improve the student's reading comprehension at SMAN 1 Grati, Pasuruan.

Principle of Language Teaching
Cognitive Principles

Cognitive is related to mental and intellectual function on the learning process when an individual gets information and analyses the information. The principles are defined in four categories of how they are acquired such as: (a) Automaticity, a principle of cognitive in which the students usually acquire the language from the environment and a result of interacting elements between the external and internal cause of language acquisition. (b) Meaningful learning, defined as a learning

situation that can be meaningful when the learners have meaningful learning device, namely a tendency to associate new learning activities with what they already know, and the learning activities have significant possibility for the learner, which can be linked to the learner's knowledge structure. (c) Intrinsic motivation, as an internal motivation of an individual to gain individual's needs, wants or purposes in cognitive ability. (d) Strategic investment, as a method used by students in their efforts to understand and show how language is as important as the methods used by the teachers in teaching the language itself.

Affective Principles

Affection refers to emotion or feeling that are influenced by several factors of personality, feelings about themselves and about other people associated with the person. The affective principles can be defined in four area according to each traits. The first area is language ego, according to this principle, when the students learn to use a second language, they also developed a second identity in their ways of thinking, feeling, and acting associated with the second language that they learned. Then second area is self-confidence, this principle is very important for the self-developed language learners since the students' achievements may depend on the principle of self-confidence to comprehend the lessons. The third area is risk-taking where this principle is useful to encourage students to not be afraid to use the target language. The last area is language-culture connection with the function of this principle focuses on the complex relationship between language and culture.

Linguistic Principles

As the last category of principle language teaching centers on language and how the students deal with these complex linguistic system, the linguistics principles is focused on three main area. The first area to be focused in this principles is (a) Mother-tongue influence discussing the importance of mother tongue in efforts to learn a second language since the mother tongue gives strong influence in the acquisition of the new language. (b) Inter-language, a principle of language learning emphasizes the influence of language forms to the other language. And the last is (c) communicative competence focused on giving a communicative competence as the goal of a language classroom.

Concept of Reading Comprehension and Mind-Mapping

Reading is an activity with purposes, such as; comprehending the text in order to gain information from the text, for enjoyment, or to enhance knowledge of the language being read. In short, reading is a conversation between a writer and reader. Moreover, the reading text presents letters, words, sentences, and paragraphs generating meaning and engaging the reader

to use their knowledge, skill, ability, and strategy to comprehend the meaning. As comprehension is the goal of reading, the ability to read, understand and remember the information of the text. In order to comprehend the text, the readers should have a background knowledge which is related with the text. According to Brassel and Rasinski (2008), comprehension is the goal of reading. Effective comprehension makes students beyond literal comprehension to make deep inferences about texts, to think critically about what they read by using certain methods.

Mind-mapping is created by Tony Buzan from England as a memory expert in 1970's as one of the aforementioned certain methods in comprehending a reading passage. This technique is used to take note effectively, efficiently, creatively, and interestingly by categorizing the ideas based on individual's way of thinking. Swadarma (2013) stated that mind-mapping is a technique which provides a key to maximize the brain works by using picture, line, number, symbol, colour and words. Accordingly, the students are able to make mind-mapping based on their own comprehension of the ideas. In other words, the procedures of teaching reading using a mind-mapping are started with the organization of groups as the teacher gives a text related to the material, the teacher then asks the students to read and to find difficult words, each group makes notes about the keywords of the text and the important information, each group is asked to make a mind-mapping of the text.

Research Method

In this research, the researcher used an experimental research design. The population was the students of second-grade of Science Program in SMAN 1 Grati, Pasuruan. There were four classes labeled Class XI-IA 1, XI-IA 2, XI-IA 3 and XI-IA 4. Class XI-IA 1 consists of 36 students, Class XI-IA 2 consists of 33 students, Class XI-IA 3 consists of 35 students, and Class XI-IA 4 consists of 36 students. In this study, the researcher used purposive sampling based on the certain purpose to support the research. In practice, Class XI-IA4 was chosen as the experimental group while Class XI-IA3 was chosen as the control group. Both classes were chosen as the sample since they are being taughtby the same English teacher to be correlated together. The procedures of collecting the data can be defined as follows: first, the researcher is giving a pre-test as the first set of the data to find out the first score to be further analyzed. Secondly, the experimental group is given the treatment in a certain period of time as well as the control group with its ordinary teaching method as a part of the analysis. The last is giving a post-test to all of the group as the last set of data to be analyzed together with the first set of data.

The next step of the analysis is the researcher used t-test for independent

sample since there were two groups to compare, that was experimental and control group, in which there was a different method of both group (experimental group using mind mapping and control group without using mind mapping). The mean score of pre-test and post-test of both groups were calculated to know whether there was significant difference on the achievement in reading comprehension between experimental group and control group before and after they got any treatment. The researcher uses SPSS 21 versions of Windows to ease the calculation of the data.

Findings

It was found that the mean score of pre-test of the experimental group was 52.16 points out of 100 points while the control group was 46.85 out of 100 points, the result means that the mean score of experimental group is higher than the control group. Furthermore, it was also found that among 36 students in experimental class, 32 students or 88.89% students is below the minimum students' score which are 75, with only 4 students or 11.11% of all students got the score above the minimum students' score. In the other set of data, among 35 students in the control group, 31 students or 88.57% students got scores below minimum students' score, with 4 students or 11.43% of all students got scores above minimum students' score.

For the next analysis, it was found that the mean score of post-test of the experimental group was 74.38 from 100 points and the control group was 59.31 from 100 points. This data means that the mean score of the experimental group is higher than the control group. Furthermore, it was found that among 36 students of experimental group, 12 students or 33.33% students got below score of minimum students' score which is 75 and 24 students or 66.67% of all students got score above the minimum students' score. Meanwhile, among 35 students of the control group, 29 students or 82.86% of all students got the score below the average minimum students' score with 6 students or 17.14% got score above the average of minimum students' score.

The table showed that the means of pre-test of the experimental group was 52.16 and the control group was 46.85 with std. deviation of the experimental group was 16.07 and the control group was 17.15, the std. error mean of the experimental group was 2.67 and the control group was 2.90. Meanwhile, the mean score of post-test of the experimental group was 74.38 and the control group was 59.31 with std. deviation of the experimental group was 13.74 and the control group was 16.68, the std. error mean of the experimental group was 2.29 and the control group was 2.82.

Discussion

Based on the finding in the previous analysis, it was found that mind mapping is improving students' reading

comprehension. This is proven by the average scores of pre-test and post-test of the experimental group and the control group which has significant differences. The mean score of pre-test of the experimental group was 52.16 and the control group was 46.85. Meanwhile, the score of post-test of the experimental group was 74.38 and the control group was 59.31. Furthermore, the students who got above average score of post-test in the experimental group was 24 students or 66.67% from 36 students in the class. Meanwhile, the students who got above average score of post-test in the control group were 6 students or 17.14% from 35 students in the class. This means that mind mapping is effective to improve students' comprehension in reading especially hortatory text.

Conclusion

To sum up, the hypothesis stated that the students who are taught by using the mind mapping technique have better comprehending achievement than those who are taught by using the traditional technique at SMAN 1 Grati, Pasuruan. This means that the implementation of mind mapping technique significantly increasing the students' reading comprehension.

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