Mind Mapping Model in Increasing Students' Creativity and Learning Outcomes

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Abstract
This study was conducted in order to determine that the application of Mind Mapping learning model toward students' creativity and student learning outcomes in economics subject. This paper applied in class X IPS 2 Brawijaya Smart School in Malang. This matters addressed to overcome the problem in the classroom related to students' creativity and learning achievement. The study followed a classroom action research with qualitative descriptive analysis. The study was conducted in two cycles where each cycle consisted of four steps consisting of planning; Implementation, observation, and reflection. Therefore, the presence and role of researchers in the field are indispensable. The data were collected from observation sheets, documentation, field notes, test questions. Based on the research that has been conducted in Brawijaya Smart School in Malang, It can be known that the implementation of Mind Mapping learning model can improve student's creativity on economic subjects. In addition, Mind Mapping learning also promotes better learning outcomes on economic subjects.

How to Cite

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INTRODUCTION

Learning is a process to develop the students' ability and interest. In developing the students' interests and talents, teachers could design lesson plans appropriately. The lesson plan includes a variety of things related to how the scenario should be done during teaching and learning. In more detail, it addresses to involve in several crucial things such as identity, core competencies, basic competencies, learning objective, learning Material, learning resources, approaches and methods of learning, media and tools, learning steps and assessment.

From the preliminary study, it is known that teacher in economics is more likely to use powerpoint as a learning medium. This matter addressed to provide the orientation of the teachers who teach mastery of the material without regard to mastery of the material towards the subject matter. In addition, teachers tend to apply a teacher-centered approach. Consequently, students are more passive in receiving materials by listening and taking notes. This condition leads to the difficulties in constructing, developing, and expressing his own ideas to a certain subject in economics. As a result, students are more likely less understanding of the concept in economics.

Dealing with these problems, teachers can promote various learning model Mind Mapping. This is reasonable because of the subject in social science, particularly in economics subject. Due to the fact that this matter, Mind Mapping is an appropriate method because it makes a noted creatively in a map. The main concepts studied are all identified and crocheted properly, then narrated with the style of each language and familiarize the students to think quickly in developing his own ideas through the concepts in the brain. Furthermore, Mind Map developed by a student who will appear in many ways of mapping different depending on the memory and level of knowledge.

Mind mapping is an alternative thinking the entire brain to thinking linearly (Buzzan, 2013). It reaches out in all directions and catches thoughts from any angle. Moreover, mind mapping is a technique to summarize the material need to be studied and projecting the problems faced in the form of a map or graph techniques so that it is easy to understand. It leads to a creative exploration that is required by individuals about a concept as a whole, unfurled a subtopic and ideas associated with the concept in a presentation of the whole on a piece of paper, through the depiction of symbols, words, lines, and arrows.

In addition, mind mapping has many benefits which can help someone to increase their skills (Nurlaila 2013; Darusman, 2014). First, mind mapping can help solve problems which students face in understanding and thinking skills. Furthermore, it provides the idea to cope with the problem to identify clearly (Concenciao, 2017). Mind mapping also makes students more concentrate on the problem that is faced. In economics learning, with use mind mapping model, is expected on critical thinking skills and understanding of students memory on economic learning can increase therefore students study not only listen and teacher explain in front of the class. However, it needs student activity to expand the subject matter of students on the learning process.

Creativity is one of the human ability to integrate broad stimulus with memory which has before become new thing creativity. However, it commonly results that learning can measure how far the learning result can get by students.

Dimyati & Mudjiono (2006) mentioned that learning process reached top on student learning result. Therefore, the learning process will stop for a while and there was an assessment determined until something look valuable, quality and important. Teacher compiles learning design and value learning result. Besides the process learning result, it also can use to measure the process of learning to teach.

Studies related mind mapping on students activities especially in writing had conducted by many researchers (Bukhori, 2016; Nurlaila, 2013; Khoiriyah, 2014). However, in fact, few studies have conducted on the implementation of mind mapping and its impact on students' activities and creativity. especially in the social sciences. Therefore, this study intended to whether the implementation learning model mind mapping can improve students' creativity on economic subjects. In addition, this study aims to understand the implementation learning model mind mapping and student learning outcomes in economics subject.

METHOD

This research applied a classroom action research using qualitative descriptive analysis. This research addressed to cope with the existing learning problems related to students creativity, students activity and learning achievement in economics in SMA Brawijaya smart school Malang, Indonesia. This study involved two observers to provide some evidence during the lesson. The study was conducted in two cycles where each cycle consisted of four steps consisting of, action plan, implementation, observation, and reflection. The research is conducted by examining one class on the subjects of the economy in class X in Brawijaya Smart School Malang. Students in this research class amounted to 25 people, consisting of 16 female students, and 9 male students. This class is chosen based on the previous observation by the researcher. Sources of data in this study are primary and secondary data. Primary data sources include students and teachers, in students of class X, while secondary data sources are school documents that include student name data, test questions, and observation sheets.

RESULTS AND DISCUSSION

In this study, the learning process by applying the mind mapping model to improve learning outcomes carried out with two replications of the cycle. The first cycle was held three times while the second cycle was carried out two times and followed by a test. Based on the collected data, it is evaluated to improve the action. Then proceed with the second cycle which was also held three times.

To understand the success or failure of the action, the data obtained is processed in accordance with the data analysis technique specified. Based on the observations of student activities at the first meeting, it has not been fully implemented as planned, because students are not familiar with the concept of the mind map learning model. Meanwhile, in the next meeting, students' activities began to approach the better according to the lesson plan. This increase indicates the success of each meeting. In more detail, the observation data from the implementation mind mapping can be seen in Table 1.

Table 1. The Comparison Completeness of Student's Learning Results

Learning Results	Learning Completeness		Explanation
	Average	Completeness	
1st Cycle	75.08 %	76 %	increased
2nd Cycle	76.48 %	96 %	

Source: Author (2017)

Table 1 provides the result of the assessment of mastery of the material measured by test questions after being given an action. It shows that there is an increase from the action I to action II by approximately 20 percent. Such circumstances show that there is an increase after giving action on the first cycle and second cycle. The comparison seen from the value of the test question indicates how much improvement the achievement of an action performed. In addition, constraints faced by the author in improving student learning results lies in the readiness, the motivation of students to learn.

Table 2. The Percentage of Comparison of Learning Creativity

No	The Indicator of Students' Creativity	Percentage		Explanation
		1st Cycle	2nd Cycle	
1.	Problem Sensitivity	82.67 %	94.67 %	Increased
2.	Fluency Idea	77.33 %	90.67 %	Increased
3.	Flexibility Idea	74.67 %	92 %	Increased
4.	Originality	64 %	78.67 %	Increased
	Percentage	74.67 %	89.00 %	14.33%

Source: Author (2017)

Table 2 shows the comparison of students' creativity during lesson plan. In general, it experienced an upward trend during cycles for all indicators. The indicator related to problem sensitivity, for instance, rose more than 10 percent during the cycle. Meanwhile, fluency idea was about 77.33 percent in the first cycle and inclined to the level slightly higher than 90 percent. This movement was also experienced by the other two variables which is flexibility idea and originality. Therefore, it can be concluded that the implementation of mind mapping model successfully in enhancing students' creativity.

By implementing the mind mapping, physical, motivation, feeling, and imagination can be integrated into a new idea that will lead to scientific creation. Dunlosky et al. (2013) remarked that creation is varied according to the ability of each student to get knowledge. The human creativity is the ability to make something new, like an opinion or real creation, with characteristic aptitude or not aptitude. With a new creation or combination with things that already exist all, will provide new different knowledge. Creativity also contributes to the learning result of students (Yekti, 2008).

On the learning process, creativity is used to thinking in many ways and produced many alternative compensations with convergence thinking process. Opinion and creation result in which creative not only showed easy, to can make something important must need preparation. Besides the meaning of evaluation result can know the first purpose to understand the level of success that student reach after following learning, level of success made by a score an alphabet, word

or symbol. If the first purpose evaluation learning result is realized the result can functionalize and addressed to share needed.

Students who are given learning using mind mapping have evidenced greater learning results. This finding is in line with the previous research by Ginting (2017) which states that learning by using mind map can improve students' understanding through achieving the limits of the success indicators of learning test results. This result also supports the prior study by Fatmawati (2016) which mentioned that the use of mind mapping as learning strategies is used to improve the mastery aspects of student concepts because concept maps as evaluation tools can be effectively used in assessing student mastery of concepts and creativity.

CONCLUSION

Based on the results of data analysis and discussion, it can be concluded that the implementation of Mind Mapping Model successfully in improving students' creativity in the form of recalling and understanding on the material performer of economic activity and role of economic activity perpetrator. This is can be known from the test in the first cycle and second cycle the achievement of learning creativity is increasing. In addition, the implementation of Mind Mapping Learning Model can improve student learning outcomes on economic subjects.

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