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Influence of Guided Inquiry-Based Outdoor Learning on the Concept Mastery of Thematic Learning by Fourth-Grade Students at Primary School

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Abstract

This research aims to know the effect of Guided Inquiry-Based Outdoor Learning on the concept mastery of thematic learning by fourth-grade students at Primary School. This research type is a quasi-experimental research. This research was conducted by categorizing experimental groups through Guided Inquiry-Based Outdoor Learning model and control groups through conventional learning model. In this research, the population was all the fourth-grade students (40 students) at Public Primary School Bratan I No. 72 Surakarta in academic year of 2017/2018. The sample determination was done through cluster random sampling. The techniques of data collection were tests and observations. The techniques of data analysis were descriptive statistics and t-test. The calculation result shows that t result is 4.144 with the significance level at less than 0.05 i.e., 0.000. Thus, it can be concluded that the learning with Guided Inquiry-Based Outdoor Learning model influences the concept mastery of thematic learning by fourth-grade students.

Keywords: Outdoor Learning; Guided Inquiry; Fourth Grade at Primary School; Thematic Learning

Introduction

Education in Indonesia is currently starting to innovate in a rapid pace to respond to the globalization era. Various innovations are carried out so that education in Indonesia has a progress. Education is conscious and planned efforts to realize the learning atmosphere needed by a person to develop his potential. One of the efforts undertaken by the country of Indonesia is by applying the 2013 Curriculum. The curriculum provides new innovations in education, as expressed by Hasan (2013) stating that "Innovation in the curriculum ideas of the 2013 Curriculum is related with philosophy of the curriculum, the aims of the curriculum, theoretical model of competency-based curriculum, content design, process, assessment of students outcomes". The purpose of the change in the 2013 Curriculum is the mindset change of students and management of education units so that the quality of national education can increase. According to Hasan (2013) in his international journal, he states that:

> The aim of 2013 Curriculum is to prepare Indonesia young generation to have life skills as a personal and citizen who are productive, creative, innovative, affective (religious and social

attitudes) and competent to contribute for the betterment of social, national, and political lives, and humanity.

Regulation of the Minister of Education and Culture (Permendikbud) No. 24 of 2016 on Core Competencies and Basic Competencies of subjects in the 2013 Curriculum explaining that the implementation of learning at Primary School/*Madrasah Ibtidaiyah* is conducted with the use of thematic approach, except for the subjects of Mathematics and Physical Education and Health (PJOK). This approach is undertaken to integrate Basic Competencies from the various existing subjects at the level of Primary School. Okoro & Okoro (2016) in their international journal state that "Thematic approach is the way of teaching and learning where many areas of the curriculum are connected together and integrated within a theme". John (2015) suggests that a thematic unit is the organization of a curriculum around a central theme. Therefore, in the 2013 Curriculum especially the thematic learning at the level of primary school, students' learning is based on theme, no longer based on separate subjects, so that learning becomes more meaningful. It is in line with the opinion of Daryanto (2014: 3) revealing that thematic learning is a lesson using themes to link some subjects so as to provide meaningful experiences for students. Thematic learning can help students to focus their attention on a particular theme so that they can understand the learned material holistically, from various points of view, and not separate from one subject to another. The results of the research conducted by Liu and Wang (2010) mention that:

> The thematic learning system has positive effect on learners' concept learning, the thematic learning first providing learners with a framework from which develops the related concepts, is a more stable learning mode, thematic learning system is suitable for students with different abilities.

Thematic learning at Primary School should prioritize the learning experience directly through a scientific process. Taşkın-Can (2013) in his journal states that the scientific process skills should be used in the acquisition of knowledge processes. According to Daryanto (2014: 51), scientific learning process is designed in such a way that students actively construct concepts, laws and principles. Scientific learning emphasizes the scientific processes undertaken by students through identification or finding problems, formulating problems, proposing or formulating hypotheses, collecting data with various techniques, analyzing data, drawing conclusions, and ending by communicating the concepts that have been discovered. The scientific process will be more maximum if students do research or observation directly in the vicinity or outdoors to get the studied concept. Such a thematic learning process will provide meaningfulness for students because students get a direct learning experience that will add insight to students while the learning materials can last long in students' long-term memory. As revealed by Samatowa (2011: 5), direct experience provides an important role as a stimulus of the pace of children' cognitive development while the learning model that is suitable for Indonesian children is learning through direct experiences (Learning by doing).

A prominent characteristic of thematic learning in the 2013 curriculum is student-centered learning and students are the major concern in the learning implementation. Based on that fact, creativity is needed by teachers to implement the learning. Teachers should prepare all the varied learning components and tailored to the needs and levels of students' thinking. In addition, thematic learning should also provide a framework to facilitate students in following the learning by using the theme. "The thematic learning first providing learners with a framework from which develop the related concepts is a more stable learning mode". With such thematic learning, the students' concept mastery will increase and the students' learning achievement will be high. However, the phenomenon occurring in the class, which is in the fourth grade at Public Primary School Bratan I No. 72 Surakarta shows that the students' concept mastery of thematic learning is still low. It is proved by the presence of some students who lack the concept mastery of thematic learning. Based on the observation result of the document of learning outcomes, only 19 or 47.5% students of 40 students in total get the score higher than the Minimum Mastery Criteria (KKM). The results of such learning show that the students' concept mastery is still

relatively low. Besides, the results of the observation indicate that the thematic learning is rarely used in innovative learning models. Learning is conducted in the classroom where the teacher gives the materials and concepts while the students just listen, record, and memorize the concepts. In addition, minimal media learning is used. It is reinforced by the results of interviews with teachers and students saying that the teachers find it difficult to choose learning media in line with the studied theme and subtheme. Some students claim that the teachers tend to use lecture and question as well as answer methods based on the problems that have been presented on the students' book.

Based on the results of preliminary observations, the use of innovative learning model that can directly provide experience to students and involve concrete media is considered necessary. The learning model is Guided Inquiry-Based Outdoor Learning. Therefore, the researcher would like to see the effect of Guided Inquiry-Based Outdoor Learning model on the concept mastery of thematic learning by fourth-grade students at Public Primary School Bratan I No. 72 Surakarta in academic year of 2017/2018.

According to Syawiji (2009) in his journal, Outdoor Learning is a model of outdoor learning that facilitating students to develop their potential. Meanwhile according to Gulo (2004: 84), Inquiry is a series of learning activities that maximally involve all the abilities of students to search and investigate systematically, critically, logically, analytically, so that students can formulate their own findings. According to Trna, Trnova, and Sibor (2012), Inquiry-Based education has been successful as an appropriate educational method that greatly motivates students. This research uses Guided Inquiry because the primary school children can not be released directly to implement learning and thus, they require guidance and direction from their teacher. However, guidance and direction in question is just a provision of stimulus so that students' thoughts do not deviate from the given learning materials. Furthermore, Guided Inquiry-Based Outdoor Learning can be interpreted as a learning model that prioritizes the use of land (vicinity or nature) or even other learning resources outside the classroom, enables students to directly study natural phenomena based on their own observations to discover concepts about materials which are independently studied. The independent state here does not mean that the students are released freely but still with the guidance of teachers with the provision of a stimulus so as not to deviate from the learning materials.

The research through Guided Inquiry-Based Outdoor Learning model is based on the field facts that the model and learning media of thematic learning should be considered and treated as the main focus. Moreover, the Guided Inquiry-Based Outdoor Learning model can provide students with experience to directly act on the ideas, principles, and concepts of learning through out-of-class learning. Guided Inquiry-Based Outdoor Learning bridges students to link learning concepts in the form of theory to real circumstances in the field (nature). Thus, students can conclude and form a deep understanding of the studied materials.

This research is based on the research conducted by Kamza (2015) entitled "The Development of Local History Learning Model Based on Problem Solving Outdoor Learning to Improve Creativity and Learning Achievement of History Education Students of Syiah Kuala University". The research concludes that the model is effective in improving the students' achievement. Furthermore, the results of the research conducted by Fatmawati (2013) entitled "Developing Inquiry Model to Teach (A Research and Development Study at the Fifth Semester Student of UNISKA Kediri in Academic Year of 2012/2013." The results conclude that the development of Inquiry is effective to be applied as a sociolinguistic teaching model because it provides an improvement to cover the weaknesses of existing teaching models in exploratory studies. In addition, the results of Tatar and Bağriyanik (2012) research have found that most of the teachers think that outdoor activities are more effective for the students' learning. Based on the above research, the researcher would like to see the effect of Guided Inquiry-Based Outdoor Learning model on the concept mastery of thematic learning by fourth-grade students at Public Primary School Bratan I No. 72 Surakarta in academic year of 2017/2018.

Methodology

The type of this research is a quasi-experimental research. The purpose of this research is to determine the effect of the use of Guided Inquiry-Based Outdoor Learning model on the concept mastery of thematic learning by fourth-grade students at Primary School. In this research, the sample determination was done by using random sampling technique. The population was all the fourth-grade students (40 students) at Public Primary School Bratan I No.72 Surakarta in academic year 2017/2018. The population was then divided into two classes, resulting in 20 students in the experimental class and 20 students in the control class. The techniques of data collection were tests and observations. The used tests were pretest and post test. The techniques of data analysis were descriptive statistics and t-test. To conduct t-test uses a prerequisite test, which is normality and homogeneity tests.

Results and Discussion

The results of students' concept mastery of thematic learning through the provision of pretest and post test with 30 items of multiple-choice questions are as follows:

Table 1 Results of Students' Concept Mastery

No.	Experimental Class			No.	Control Class		
	Students	Pretest	Post Test		Students	Pretest	Post Test
1		35	85	1		45	80
2		40	95	2		55	80
3		35	80	3		35	75
4		25	75	4		30	75
5		20	80	5		45	85
6		60	90	6		40	70
7		20	70	7		40	75
8		25	80	8		20	70
9		45	90	9		50	85
10		35	80	10		60	80
11		40	85	11		20	70
12		55	95	12		25	70
13		45	90	13		40	70
14		25	75	14		45	75
15		35	70	15		25	75
16		55	95	16		25	70
17		45	85	17		20	65
18		20	80	18		20	70
19		25	75	19		20	65
20		35	80	20		30	75
The Average		37.25	83.25	The Average		34.5	74

Based on Table 1 above, the average pretest score of students in the experimental class is 37.25 and the average post test score (after receiving treatment of Guided Inquiry-Based Outdoor Learning model) is 83.25. Meanwhile, the average pretest score of students in the control class is 34.5 and the average post test score with the use of conventional learning model is 74.

Before performing the hypothesis test, the data of students' concept mastery of thematic learning that have been obtained are firstly tested to know the data normality and homogeneity. Based on the normality test, the significance value of the experimental class that has received treatment of the Guided Inquiry-Based Outdoor Learning model is 0.132 and the control class is 0.070. Both the experimental class and the control class have significance value of > 0.05. Thus, it can be considered that the distribution value of the student's concept mastery by using the Guided Inquiry-Based Outdoor Learning model and the conventional learning model is normally distributed. Based on the calculation result of homogeneity test, the students' concept mastery of thematic learning at the level of mean significance is 0.105 (0.105> 0.05). Meanwhile, the median data measurement is at the significance level of 0.149 (0.149> 0.05). Thus, it can be concluded that the data come from a population that has homogeneous variance.

The data presented above show that the experimental class treated with Guided Inquiry-Based Outdoor Learning model has higher concept mastery when compared to conventional learning model. The data show that the learning model of Guided Inquiry-Based Outdoor Learning has a positive effect on the concept mastery of thematic learning by fourth-grade students at Public Primary School Bratan I No. 72. In line with the results of this research, a research conducted by Matthew and Kenneth (2013) finds out that the guided inquiry teaching method was significantly better than the conventional teaching method in enhancing students overall cognitive achievement in logic. It is in line with the opinion of Tawil, Abdullah, Surat, and Usman (2011) stating that the design of outdoor learning engaging with nature is an important role to promote students' abilities such as academic achievement. It is reinforced by the research that has been done by Karmila (2016) stating that the Model of Outdoor Learning can improve students' learning outcomes at Primary School. The use of outdoor learning model can increase the students' knowledge and understanding in following the learning. It is reinforced by the opinion of Rickinson, et al (2004) stating that the intended outcomes of outdoor learning, meanwhile, can include: knowledge and understanding of, attitudes towards, values and feelings about, skills such as orienteering or communication, behaviours such as group interactions or personal coping strategies, personal development, such as self-confidence or personal effectiveness. Furthermore, the research conducted by Olibie and Ezeoba (2014) suggests that the guided inquiry method is more effective in raising students' achievement in selected concepts of Social Studies curriculum more than the lecture method. Guided Inquiry provides an opportunity for students to observe their learning environment by using a scientific method to obtain facts and concepts of the studied materials. In addition, MacDonald (2016: 13) states that Inquiry-Based learning specifically involves the open-ended investigation into students' intuitive queries with teachers serving as provocateurs in moving students forward in their own inquiries. Inquiry bridges students to answer questions arising from students' curiosity through a discovery. By searching their own answers about learning materials through a scientific process, students' understanding can develop well. It is based on the results of the research conducted by Yeşildağ-Hasançebi & Günel (2013) explaining that the inquiry process not only develops the skills of scientific inquiry but also broadens students' understanding of the investigated concept.

Conclusion

Based on the results of the research and hypothesis testing, it can be concluded that the learning model of Guided Inquiry-Based Outdoor Learning influences the concept mastery of thematic learning by fourth-grade students at Public Primary School Bratan I No. 72 Surakarta in academic year of 2017/2018. Based on the results of hypothesis testing by using Independent Sample Test, it is proved that the learning model of Guided Inquiry-Based Outdoor Learning influences the concept mastery of thematic learning by students with the significance result of 0.000<0,05. Thus, it can be considered that the concept mastery of the experimental class is higher than the control class.

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