The Influence of Wedoro Village's Local Wisdom Based Learning on Elementary Students' Creative Thinking Abilities

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***Abstract* :** This study aims to determine the effect of learning by using a scientific wisdom-based local approach to making sponge slippers in Wedoro village towards creative thinking skills in 4 elementary schools . Subjects of this study was Grade 4 MINU Tropodo Waru Sidoarjo as many as 28 students to design *one group pretest-posttest* . Methods of collecting data using observation sheets of student activities during the learning process and thinking skills test . Data analysis techniques use if quantitative descriptive . The result showed that the method of scientific approach using local wisdom in the form of the manufacture of slippers in the village Wedoro District of Waru Sidoarjo to increase creative thinking skills showed high category and students activity give positive response with good category to learning. The results of the study found that learning using a scientific wisdom-based approach to making Wedoro village sandals on material of various styles and their benefits is appropriate to be used to improve students' creative thinking skills.

Index Terms *- Local Wisdom , Creative Skills , Scientific Approach .*

I. INTRODUCTION

Learning with a scientific approach is learning that emphasizes the discovery of something with the process through scientific steps. The 2013 curriculum that emphasizes the learning system must contain substantive learning experiences, such as: observing, asking questions, gathering information, associating, and communicating (BSNP, 2013). The science learning model is a learning model using stages such as: (A) Obtaining information through empirical methods, (B) Information obtained by investigations has been arranged logically and systematically and (C) Is a combination unit in the process of critical thinking that can trusted and valid (Kemdikbud, 2014)

The scientific approach or also called the scientific approach is a learning approach that emphasizes the activities of students through observing, asking, reasoning, trying and networking in learning activities in schools (Rusman, 2015). The scientific approach includes observing, asking, reasoning, trying and processing (Sudarwan, 2013). These steps are not always followed sequentially, especially in integrated thematic learning for elementary schools whose learning uses themes as a unifying of some lesson content. The scientific approach, beginning with the observation process that can be done using media images, audio, audio visual and other media such as problems. Next, ask. Students who are still sitting in elementary school are not easy to ask questions if they are not faced with interesting media. Effective teachers should be able to inspire students to improve and develop the realm of attitudes, skills and knowledge.

Basically science learning is emphasized to provide experience directly to students, to develop their competencies so that students are able to understand the natural environment. Science education is intended to investigate and take action so that it can help students get a deeper understanding of the universe. The method for studying science varies greatly, but in a wrong perspective, for example, the viewpoint of the context of students is more appropriate if it can optimize local wisdom (Azizahwati, *et al* ., 2005). The procedure for teaching science can be developed through the uniqueness and superiority of an area (Kartono, 2010). The integration of scientific material with local wisdom based on the science learning process has the opportunity for students to be able to express their thoughts, accommodate their concepts, foster creativity, create effective learning, which has implications for a more conducive learning atmosphere (Warpala, *et al* ., 2010)

Efforts to strengthen local resources as a foundation for enriching the educational space are considered important because they are based on the conclusion that the condition of the modern world and all accompanying devices are not sufficient to deliver the inhabitants of the earth to live a more valuable life. The idea in the development of education based on local resources rests on the conclusion that each group has certain ways and techniques that are developed to play a role in life in accordance with the context. Value-based education is needed to develop moral quality, personality, and togetherness that are increasingly eroded by the progress of the age (Aspin, *et al.* , 2007). As an effort to develop the value of local wisdom in education needed creative thinking skills as a provision of valuable experience for students in facing the challenges of the advancement of science and technology that continues to grow rapidly.

Education based on local power or local wisdom is education by utilizing local excellence as a source of development of student competence in aspects of culture, economy, information technology, communication, language, ecology and others that support the learning process in Asmani elementary school (2012). While the local power of an area can be in the form of crops, artistic creations, traditions, culture, services, human resources, natural resources and various other types. The advantages of local power possessed by an area can be utilized by educators to foster learning skills in schools so that they can increase knowledge about the potential of the region .

Creativity as a demand for the 21st century will continue to be increased for various jobs, many even believe that our current age of knowledge is rapidly giving way to the age of innovation, where the ability to solve new ways such as energy use, to create technology or make existing technology applications such as electric cars and efficient solar panels, or even find new knowledge and discoveries that are entirely new industries (Bernie Trilling ,2009). Lack of attention to developing creativity and innovation skills is based in part on a number of common misconceptions that creativity is only for geniuses, or only for young people, or cannot be studied or measured. In fact, creativity is based on something virtually every person's imagination has.

The ability to think creatively is part of the basic capital that must be possessed in looking at the progress of this era. This thinking habit includes skills in exploring and formulating information, processing it, making decisions and solving problems creatively (Wulandari, *et al* ., 2011). One of the reasons for the low creativity of students in Indonesia is the result of a less supportive environment for expressing their creativity, especially in the family and school environment. Creative thinking skills is a way of thinking that contain characteristics: fluency, flexibility , originality and elaboration (Filsaime, 2008).

Wedoro Subdistrict Waru Sidoarjo is a center for making sponge slippers that has been around since the 1980s. According to the information obtained from the Wedoro village government, there are currently around 150 manufacture of slippers which are spread throughout the village. The large number of small industries that have developed there makes it very easy to find the industry. Departing from that, the researcher will utilize local wisdom in making sliper in force material for fourth grade students to foster students' creative thinking skills. Learning with creative thinking skills is expected to bring up creative solutions and ideas in the process of making sponge sliper.

Force material in class IV is new knowledge for students so it needs to be recognized directly through teacher explanations as well as seeing and practicing directly. The concept of various styles can be embedded by choosing the right media especially by giving examples by linking it to real life that is often encountered by students. The activities of the students developed by the researcher are made in such a way that students are able to build their own knowledge about material of various styles by linking local wisdom to the local area in the form of making sliper.

Observation results at MINU Tropodo Waru Sidoarjo as a preliminary study in November 2018 stated that educators had not conducted learning by teaching about local cultural values in the local area. This condition has resulted in the students' lack of understanding of the culture that contains the value of local wisdom in the local area. Learning by using the scientific approach that has been taught without being integrated with the value of existing local wisdom. Scientific approach activities have not been able to foster creativity in giving arguments to answer questions.

Based on the results of interview with educators at MINU Tropodo Waru Sidoarjo on theme 4 Various Jobs. The result, the value of class IV A students in science subjects as much as 60% of the results are below the standard set so it can be concluded that the student learning outcomes are still below the average. According to observations on the activities of the students in the class, educators have explained that the students are fairly active. However, educators should provide stimulation to students to be able to improve their creative thinking skills. Because, so it is necessary to do the learning process by using a scientific approach based on local wisdom to foster the creative thinking skills of students in the school.

II.RESEARCH METHODS

This study used the One-group Pretest-posttes design because the tests were carried out in one group without a comparison group. The design of this study was used to obtain results about pretest scores and post test scores on students' creative thinking skills in material styles and benefits.

Subject and location of the study

The research subject was 4th grade student at MINU Tropodo Waru Sidoarjo consisting of 12 boy and 16 girl. This research was conducted at the MINU Tropodo school which took place at Tropodo 1 No. 1 Street. 241 Waru Sidoarjo.

Data collection technique

1. Observation

Observation as a data collection technique is carried out to obtain research data in the implementation of the learning process based on the learning plan that has been made. Observations to get the desired phenomenon must be carried out by two observers to find out the implementation of the activities of teachers and students, and the obstacles that occur. Observation of the implementation of the lesson plan is done to see the steps of learning. Observations for students by observing the activities contained in learning when it takes place.

2. Creative thinking skills test

To measure the learning outcomes of students using the pretest and posttest in the form of a description that is adapted to the indicators of creative thinking, namely flexibility, detail, fluency and authenticity. Test of creative thinking skills in the form of descriptions are 8 questions used to determine students' creative thinking abilities.

3. Data validity and data analysis

1. Student activities

Observation of the results of student activities is measured by the following formula

$$P = \frac{\Sigma R}{\Sigma N} x\ 100\%$$

P : percentage of student activity
ΣR : Amount of frequency of student activity
ΣN : number of frequencies of all student activities

2. Test of creative thinking skills.

To measure creative thinking skills students use the following formula:

$$M = \frac{\Sigma f}{N} x\ 100\%$$

Information
M: The ability to think creatively

f : Scores obtained by students

N : Maximum score

Table 1.
Value Range of Creative Thinking Skills

No.	Value	Predicate	Information	Category
1	> 92-100	A	Very skilled	Complete
2	> 83-92	B	Skilled	Complete
3	≥ 75-83	C	Fairly Skilled	Complete
4	<75	D	Less skilled	Not completed

III.RESEARCH RESULT

A. Student activities

The activity of students in this study is by making observations during the learning process related to the material presented. From the results of the study during the learning process activities with the average student was very interested in the material taught. The use of media and textbooks that are interesting has made students happy about the activity, as evidenced by 100% of students observing the video or picture that was delivered. The use of teaching books is also a concern for children where an average of 98% of students are also interested in existing textbooks. In addition 98% of students were also very enthusiastic about conducting experiments in accordance with the instructions on the worksheet.

Table 2
Observation results of student activities

No.	Student activities	The first meeting	Second meeting	Third meeting
1	Observe the pictures / videos shown by the teacher	100%	97 %	97%
2	Listen to the explanation	97%	94%	97%
3	Asking question	89%	97%	94%
4	Read textbooks to find important information	97 %	97%	100 %
5	Discuss with friends in groups	97%	94%	86%
6	Students work in groups according to the teacher's instructions	92%	92%	92%
7	Students carry out experiments / observations according to the worksheet instructions	92 %	97%	100 %
8	Students present group work in front of the class	84%	86%	84%
9	Students evaluate the results of other group presentations	86%	89%	86%
10	Students show deviant behavior	89%	94%	94%

B. Test results of students' creative thinking skills

The creative thinking skills test is given twice before and after learning using a device developed at the first meeting. The results of the test of creative thinking skills are used to determine the level of thinking of students. Scores obtained during posttest showed that 92%

of students scored with less skilled categories. After treatment of 28 students using the local wisdom-based santific approach as much as three times 85% of students scored highly skilled and the remaining 15% were skilled.

Table.3 Value of pretest and posttes of creative thinking skills

No.	Student initials	Pretest	Posttest
1	A A	67	92
2	AW	69	90
3	BD	65	95
4	BS	65	93
5	DF	69	92
6	DT	69	89
7	EA	67	91
8	ER	74	93
9	EG	75	94
10	FS	80	92
11	GU	79	90
12	GK	82	97
13	HT	81	95
14	IJ	69	90
15	LT	67	89
16	MA	82	90
17	MD	74	92
18	MJ	70	94
19	MR	75	94
20	NA	70	89
21	PU	68	90
22	PT	76	93
23	Hospital	75	90
24	IT	77	93
25	TU	69	89
26	VE	70	89
27	ZJ	70	90
28	ZM	67	90

IV. Conclusions and Recommendations

Based on data analysis and discussion of research results, then linked to the formulation of the problem and research objectives, it was concluded that local wisdom-based learning of Wedoro village sandals can improve the creative thinking skills of MINU grade 4th students at Tropodo Waru Sidoarjo on the material styles and benefits in life daily.

Based on the results of the study, there are several suggestions including:

1. Students' creative thinking skills developed using learning tools with a local wisdom-based scientific approach provide positive results for the learning process so that it needs to be broadly developed in other science materials.
2. Learning using learning tools with a scientific approach requires good time management, so that all stages can run optimally.
3. The development of learning devices with a local wisdom-based scientific approach to teach creative thinking skills can be used as a reference in the implementation of the 2013 curriculum.

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