The Effect of the Utilization of the Neighborhood by Using Mind Mapping Techniques on Learning Outcomes of Primary School Students

*Imam Fajar, **Muhammad Turhan Yani, ***Waspodo Tjipto Subroto
Continuing Program Development State University Of Surabaya
Corresponding Author: Imam Fajar

Abstract: This study aims to determine the effect of the use of the surrounding environment by using mind mapping techniques for elementary school students. This research was conducted in the District Islamic Elementary School Hasanah Fiddaroin Waru Sidoarjo Regency in the school year 2018/2019. This study uses a quantitative approach. This type of research is experimental research with non equivalent (pretest and posttest) control group design. This study uses two classes namely the experimental class (IV C) and the control class (IV A). The research instrument used was a sheet of student learning outcomes test instruments. Data analysis techniques used include normality test, homogeneity test, and independent samples t-test.

The research data shows: the results of the analysis of normality in the experimental class are 0.164 and in the control class 0.149. Both groups have significance > 0.05 or 0.5%. So, it can be concluded that the data for each group is normally distributed. The homogeneity test results obtained by the value of homogeneity of critical thinking resulted in a significant value of 0.661. Amount of significance > 0.05. So, it can be concluded that the sample variants are homogeneous. The average value of the experimental class is 84.00 and the control class is 59.75. Then by looking at the test results of the independent sample T-test it was found that (t-count) is 7.248 and (t-table) 1.686. If we do a t-count ratio of 7.248 > t-table 1.686 and the results of sig. 2 is 0,000 > 0.05 so Ho denies that means there is a significant difference. The results showed that there were differences in learning outcomes between the control class and the experimental class.

The conclusions of this study are: 1) the use of the surrounding environment affects the learning outcomes of elementary school students; 2) mind mapping techniques affect the learning outcomes of elementary school students, and; 3) the use of the surrounding environment by using mind mapping techniques affecting the learning outcomes of elementary school students.

Keywords: environment, mindmapping, learning outcome

Date of Submission: 10-06-2019
Date of acceptance: 26-06-2019

I. Preliminary

The learning process is a process that involves many things. In the history of its development has gradually found new things related to learning activities relating to learning theory. Likewise, the development of approaches, methods, models, and learning techniques that are more referring to the Competency Standards of Graduates at the National Education Standards Agency on how students should obtain factual, procedural, conceptual, and metacognitive learning experiences.

In Indonesia itself, the implementation of education in its teaching system has actually been arranged at the National Education Standards Agency to uphold the activities and active learning of students. Because basically inviting active students to find a knowledge will be a good impact on students in living their lives in the future. As stated in the law of the Republic of Indonesia Number 20 Year 2003 article 1 angkai 1 about National Education, education is a conscious and planned element to create a learning atmosphere and learning process so that it effectively develops its potential to have spiritual, religious, self-control, personality, intelligence, noble character, accompanied by skills needed by him, society, nation and state.

And as we know, the potential that students have is not only obtained when in the classroom, but it is very possible if knowledge is obtained outside the classroom, because basically the knowledge comes from the social environment of society and nature. To be able to reach / increase the potential of students, will be greatly influenced by how teachers teach. In general, the notion of teaching is not only limited in the classroom, but also outside the classroom, which is essentially the purpose of prosess transferring knowledge (science) to others. Meanwhile, understanding teaching outside the classroom specifically is a teacher and student learning activity, but is not done in the classroom, but is done outside the classroom or outdoors, as a student activity.
According to Adelia Vera (2012) The method of teaching conducted outside the classroom is an effort to bring closer to the real learning resources, namely nature and society. On the other hand, teaching outside the classroom leads to activities that can lead to changes in behavior towards the surrounding environment.

With the implementation of the latest curriculum in Indonesia, the approach is echoed, namely the scientific approach. An approach which in the process is based on inductive reasoning and deductive reasoning. So what is expected in the process is the activity of students in learning activities. In accordance with regulation of the minister of education and culture Number 81 A Year 2013 attachment IV, it is explained in it that the learning process consists of 5 main learning experiences, namely: (1) observing, (2) asking questions, (3) gathering information / experiments, (4) associating / processing information, and (5) communicating.

Of the five points, it is expected that more activities can be carried out by students which are balanced by teacher guidance, so that learning activities are not only carried out in the classroom, but also use the surrounding environment. No exception in social studies subjects, which incidentally these subjects have characteristics of closeness to the surrounding environment.

Social science is a stand-alone subject as an integration of a number of concepts in social science, humanities, science and even social issues and problems in life (Supriya, 2009). Social science is a lesson that learns about the interaction of human beings and all aspects of society must have the knowledge and skills in interacting with other humans. Humans are aware of their rights and obligations, mutual respect and can live in harmony and harmony.

Supriya (2009) states that social studies aims to prepare students to become citizens who are able to master knowledge, skills (attitudes), attitudes and values (attitudes and values). So that it is necessary for learning activities in which not only how the teacher conveys the material, but how students should learn.

According to Suyono and Hartiyanto (2011) The process of learning is an activity or a process to obtain knowledge, improve skills, improve behavior, attitudes, and strengthen personality.

When an environment-based learning approach develops, the definition of learning also adjusts. Learning in general can be interpreted as a process of behavior change due to the interaction of individuals with their environment. Driver and Bell (1986) in Leo Sutrisno (1994) defines learning as an active process of arranging meaning through every interaction with the environment, by building relationships between conceptions that have been possessed and the phenomena being studied.

In essence, ideal learning is an activity that cannot be separated from various components of learning that support each other. These components include the selection of models, strategies, methods, and learning techniques with the aim of realizing an effective and meaningful learning for students. However, this cannot be achieved perfectly if learning in the classroom is still teacher-centered.

This is evident from the research findings related to the problems in the learning process and learning outcomes in Islamic Elementary School Hasanah Fiddaroin Waru-Sidoarjo on social studies subjects 8 (Regions Live I live) data obtained by researchers, among others:

Most of the grade IV A students at Islamic Elementary School Hasanah Fiddaroin have not achieved the minimum completeness criteria set at 77. Of the 20 students only 8 students (40%) scored above the standard of minimum, while the remaining 12 students (60%) were not completed.

While in the learning process (1) the teacher tends to develop the ability to memorize learning material through lecture and question and answer methods, (2) the teacher does not use various approaches, methods, and learning techniques (3) Because the teacher's goal is only learning, students demanded to be passive and receptive (4) because students are only learning objects, the activities carried out only hear, take notes, and answer questions from the teacher. So that there is no cooperative / social nature between students.

Based on these problems, it is necessary to find a solution to improve student learning outcomes on social studies subjects themes 8 (My Place of Rest). According to Amri (2013: 3), the teacher centered approach has been considered traditional and needs to be changed because this education is centered on educators by emphasizing coverage and dissemination of material, while students are less active, it is inadequate for the demands of this knowledge era. The era of knowledge which in the millenial era currently has new breakthroughs in the fields of knowledge and technology. Students need an approach, method and learning technique that can provide the results of competency, knowledge, and a set of thinking skills, interpersonal skills, and adaptability skills.

Efforts to improve student learning outcomes, namely by utilizing the surrounding environment, and the right approach related to the subject, and techniques that are relevant to the material. One of the right approaches and leads to students' ability to find knowledge is by inductive and deductive approaches using Mind Mapping techniques.

Environment is something natural phenomenon that is around us, where there is an interaction between biotic factors (life) and abiotic factors (not living) where the environment provides stimulus (stimulus) to individuals and vice versa individuals respond to the environment (Muhammad Efendi (2013), this environment
is effectively applied in learning, its advantages include; (1) information obtained by students is not abstract; (2) students have the ability to interact well; (3) have sensitivity in socializing in society.

According to Hilda Taba, the learning process is a complex activity. The learning process includes many variables, namely variable objectives, teachers, students, learning processes, and the arrangement of learning. To develop learning strategies, the important variables mentioned above need to be considered. Therefore, the learning strategy according to Hilda Taba is the pattern and sequence of teacher behavior to accommodate all learning variables consciously and systematically, (Suprihadi, 1993)

So, before determining the relevant strategy, it must determine the effective and efficient approach to the material that will be studied by students. The right approach of theme 8 (My Place of Rest) is an social science subject which is in accordance with the basis of a scientific approach based on inductive reasoning and deductive reasoning.

According to Doni (2013 ) Mapping is a technique of utilizing the whole brain by using visual images and other graphic infrastructure to form an impression. In applying this mapping uses cortical-word skills, images, numbers, logic, rhythm, color, and space of consciousness in one powerful way.

According to IM João and JM Silva (2014) in his journal entitled "Concept Mapping and Mind Mapping to Lift the Thinking Skills of Chemical Engineering Students", suggested that the activity of ideas generation, a very important step in product and process design procedure, and explores the role of concept maps and mind maps, idea generation activities, very important steps in the product and procedure design process, and explore the role of concept maps and maps mind with a discussion of the main features of the method used for maps and the structure of ideas. Students can create their own Mind Mapping by linking new knowledge concepts. Mind Mapping is also a learning technique to develop students' knowledge in a simple, fast, and fun way.

Based on this background, researchers are interested in conducting research in the hope that the use of the surrounding environment by using mind mapping techniques can affect the learning outcomes of elementary school students.

II. Research Methods

The approach used in this study is a quantitative approach . Based on the formulation of the problem, this research is categorized into the researcher's experiment, where researchers want to manipulate variable freely or provide treatment (treatment).

There is a main characteristic of experimental research is the grant (treatment) imposed on the subject or object of research. In this case the researcher wants to know the effects of the treatment. The treatment intended in this study was on social studies economics subjects by using the surrounding environment through deductive inductive using mind mapping techniques in the experimental group. The form of experimental research used in this study is the quasi-experimental Nonequivalent Control Group Design.

The procedure of the research was carried out in three stages, namely: a) the preparation stage which consisted of observation, determining the sample, determining the experimental class and control, determining the material; b) the implementation stage by carrying out the pretest, applying learning to the experimental class by utilizing the surrounding environment using mind mapping techniques, while in the control class using conventional learning, doing the posttest in the experimental class and the control class; c) stage of data analysis by collecting and analyzing data, concluding the results of data analysis.

The data collection technique in this study is by using observation and test methods. Data collection of this study uses learning outcomes after the pre test and post test. Data is taken using instruments in the form of written questions. The instrument or test questions used in this study were tested before students outside the sample. After being tested, the test questions themselves were tested to determine the feasibility of the instrument. Tests on questions include validity test, reliability test, difficulty level test and distinguishing test. Data analysis to measure student learning outcomes by using the achievement values of each individual, class average values, and classical learning completeness values. Students 'initial abilities were measured using a pretest while students' final abilities were measured using posttest. Than measured test was used Independent Sample t-test (t test), which aims to determine the effect of the use of the surrounding environment by using mind mapping techniques to elementary school students' learning outcomes. To help the analysis used analysis package SPSS for Windows version 22.00.

III. Results

1. Simple Regression

Litian Pene using simple regression to determine and analyze the effect of variable X (Use of the Neighborhood and Mechanical Mind Mapping) in the variable Y (Learning Outcomes). Data is processed statistically using SPSS version 22.

The results of simple regression analysis on research variables can be seen in the following table:
Table 4.24: Simple Regression Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>38.074</td>
<td>4.783</td>
<td>7.960</td>
<td>.000</td>
</tr>
<tr>
<td>Pemf. Ling. Around</td>
<td>.403</td>
<td>.149</td>
<td>.378</td>
<td>2.710</td>
</tr>
<tr>
<td>Tec. Mind Mapping</td>
<td>.961</td>
<td>.102</td>
<td>1.317</td>
<td>9.439</td>
</tr>
</tbody>
</table>

Decision Making Simple Regression Test
a. If the Sig value is > 0.05, then the variable X does not affect the variable Y
b. If the Sig value is < 0.05, then the variable X has an effect on the variable Y

The results of several regression tests in table 4.24 are explained as follows:
a. For the Effect of X1 (Utilization of the Neighborhood) on Y (Learning Outcomes) of 0.011 > 0.05 so it is concluded that there is an effect of X1 (Utilization of the Neighborhood) on Y (Learning Outcomes)
b. For the Effect of X2 (Mind Mapping Technique) on Y (Learning Outcomes) of 0.000 > 0.05 so it can be concluded that there is an effect of X2 (Mind Mapping Technique) on Y (Learning Outcomes)

2. Test F (Simultaneous)
The implementation of F or the simultaneous test is to find out whether the variables X1 (Utilization of the Neighborhood) and X2 (Technique of Mind Mapping) simultaneously or individually affect the variable Y (Learning Outcomes).
The results of the F or simultaneous tests on the research variables are in the following table:

Table 4.25: F Test Results (Simultaneous)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1884.821</td>
<td>2</td>
<td>942.410</td>
<td>219.202</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>124.679</td>
<td>29</td>
<td>4,299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2009.500</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test Decision Making F
a. If the Sig value is > 0.05, then the variables X1 and X2 simultaneously do not affect the variable Y
b. If the Sig value is < 0.05, then the variables X1 and X2 simultaneously affect the variable Y

Table 4.28T Test Results

<table>
<thead>
<tr>
<th>F</th>
<th>Sig.</th>
<th>T</th>
<th>Df</th>
<th>Sig.(2-tailed)</th>
<th>Mean Difference</th>
<th>Std.Difference</th>
<th>Error</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>Equal variances assumed</td>
<td>.000</td>
<td>.994</td>
<td>.787</td>
<td>62</td>
<td>.434</td>
<td>2.125</td>
<td>2.700</td>
<td>-3.273</td>
<td>7.525</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.787</td>
<td>61.472</td>
<td>.434</td>
<td>2.125</td>
<td>2.700</td>
<td>-3.274</td>
<td>7.524</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>4.808</td>
<td>60.970</td>
<td>.000</td>
<td>10.375</td>
<td>2.158</td>
<td>6.060</td>
<td>14.690</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.28 shows the results of the analysis with the Independent T-test sample at the pretest obtained t count 0.787. The value of table at (df.62) and the real level of 0.05 is 1.670, if a comparison is made then t
count <t table with the results of sig. 2 with a tail of 0.434> 0.05 and said to accept Ho which means there is no significant difference. Which means there is no difference in student learning outcomes between the control class and the experimental class at the time of the pretest. Whereas in Posttest there are tcount 4.808. Value t table on (df.62) and the real level 0.05 is 1.670, if the comparison is made then t count> t table with the results of sig. 2 is tailed at 0.000 <0.05 and is said to accept Ha which means there is a significant difference. Which means that there are differences in student learning outcomes between the control class and the experimental class at the posttest.

IV. Discussion
Based on the results of a simple regression analysis, the test shows that the Sig value on the surrounding environment utilization variable (X1) gets 0.011 <0.05. From these results, it can be concluded that there is an influence of the environment utilization variable (X1) on the learning outcome variable (Y). The results of the analysis of this study are in line with Vygotsky’s theory, at the social constructivist stage. Which is the development of knowledge will be easier if you meet directly something concrete, and it will be easily found in the surrounding environment, both social science and natural sciences.

Based on the results of the normality test analysis, the mind mapping technique variable obtained a significant value of 0.087> 0.05 or> 5%. It can be concluded that the mind mapping technique data is normally distributed.

Based on the results of research that has been analyzed in chapter IV, to find out and analyze the influence of variables X1 and X2 (Utilization of the Neighborhood by using Mind Mapping Techniques) on the variable Y (Learning Outcomes) using the F test. Based on the results of SPSS data analysis, the F test results obtained Significant values for the effect of X1 (Utilization of the Neighborhood) and X2 (Mind Mapping Technique) simultaneously (simultaneous) against Y (Learning Outcomes) are 0.000 <0.05 so it is concluded that there is an influence of X1 (Utilization of the Neighborhood) and X2 (Mind Mapping Technique) together (together) against Y (Learning Outcomes). The magnitude of the influence of the two variables using the Test Termination Coefficient obtained by R Square value of 0.938, can be interpreted that the effect of X1 (Utilization of the Neighborhood) and X2 (Mind Mapping Technique) simultaneously (together) on Y (Learning Outcomes) is 93.8%.

V. Conclusion
The conclusion of this study can be taken after all variables meet the requirements for normality test, homogeneity test, multicollinearity test and heterocedasticity test. The results of the normality and homogeneity test for all variables are normally distributed and homogeneous. The conclusions that can be taken are based on the description of the research discussion namely:

1. The use of the surrounding environment has a positive effect on student learning outcomes at Islamic Elementary School Hasanah Fiddaroin. The data used is the post test results after the use of the surrounding environment. The results of simple regression test analysis show that the Sig value on the media use variable (X1) gets 0.011 <0.05. From these results it can be concluded that there is an influence of the media use variable (X1) on the learning outcomes variable (Y).

2. Mind mapping techniques have a positive effect on student outcomes at Islamic Elementary School Hasanah Fiddaroin. The data used is the result of the assessment of the use of mind mapping techniques. The results of the simple regression test analysis show that the Sig value on the creativity variable (X2) gets 0.000 <0.05. From these results it can be concluded that there is an effect of the Mind Mapping Technique variable (X2) on the learning outcome variable (Y).

3. The use of the surrounding environment by using mind mapping techniques simultaneously (simultaneous) has a positive effect on the learning outcomes of Islamic Elementary School Hasanah Fiddaroin students. The F test results obtained significant values for the effect of X1 (Utilization of the Neighborhood) and X2 (Mind Mapping Technique) simultaneously (together) against Y (Learning Outcomes) of 0.000 <0.05 so that it was concluded that there was influence of X1 (Utilization of the Neighborhood) and X2 (Mind Mapping Technique) simultaneously (simultaneously) to Y (Learning Outcomes). The magnitude of the influence of the two variables using the Coefficient of Termination Test which obtained the value of R Square of 0.938, it can be interpreted that the effect of X1 (Utilization of the Neighborhood) and X2 (Mind Mapping Technique) simultaneously (Y) is 93.8%.