

THE EFFECTIVENESS OF THE USE OF BOARD GAME TOWARDS THE COMPREHENSION OF THE CONCEPT OF SOCIAL SCIENCE SUBJECTS

(A Quasi Experimental Study in Eighth Grade of SMP Negeri 19 Bandung)

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Abstract-This research was inspired by the learning activity in Social Science subjects in SMPN 19 Bandung which was still teacher-centered. The Social Science subject itself is a subject which compact with the content starting from the real one to the one which requires abstract thinking, it makes the Social Science a subject which needs to be student centered, so that the students can be more active during the learning process and be able to arrange their own concept in their cognitive structure. This research was aimed to examine the effectiveness of the use of board game media towards student's comprehension in the concept of social science subjects, using the quantitative approach. As for the research design used was a quasi experiment with the type of non-equivalent, pretest-posttest. The samples of this research were VIII-A class as the experimental class, was received treatment with the implementation of board game and VIII-B class as the control class, the one who did not receive the treatment. The data collection was carried out by using the objective tests and interviews which conducted to teachers and students in the experiment class. After the data was collected, the next step was

progression. It is because the science and technology progression is influencing all humans' aspect individually and in the society. The demand causes the increasing of citizen expectation to the output of Indonesia educational system. It causes the government making lots of breakthrough in educational programs.

Besides, the breakthrough is implemented as an effort to reach the national education purpose. To make it real, the success of an educational process in every educational institution is having important role. The success is supported by many factors, these are curriculum, the teacher, the students, lesson plans, model and learning method, learning sources, environment, and learning media that are used and influencing learning process.

Learning media becomes one of the big factors that influences the success of learning.

process. Gagne gives definition about media as the variety of component in students' environment that stimulates them to learn (Susilana, 2009, p. 6). Further, Smaldino (2008, p. 7) mentions that medias' purpose is to make communication and learning process become easier. Based on media definition, media is important in the learning process.

situation because it is packaged in a game.

analyzing the data quantitatively using hypothesis test (t-test) to investigate the difference between the two classes. The research result shows that there was a significant difference on students' comprehension toward the Social Science concept between the experimental class which received the implementation of board game media, and the control class which did not. It is proved by the N-gain of pretest-posttest in the experimental class was higher than the control class. From this result, it can be concluded that the use of board game media towards the comprehension of Social Science subject concept was proven to be effective. Moreover, the use of board game media is applicable to be an alternative media in Social Science learning activity.

Keyword: Board game media, concept comprehension.

INTRODUCTION

In this sophisticated of science and technology era, human is demanded to have skills to follow the

Dhey and Branch stated the media that is used by the teacher to create a good quality in learning is influencing students' academic performance directly (Qondias, 2016, p. 884). One of learning media that can be used by the teacher is board game. Nusantara dan Irawan defines the board game as a game that can encourage the players to detect the pattern, making a plan, predict the result for movement alternative, and also learning from the experiences or media as the model alternative (2012, p. 23). Relating to the board game media, Huang dan Levinson (in Ratmaningsih, and friends, 2016, p. 141) stated that board game is not only facilitating the students with enjoyable learning situation, but also making them easy to understand the material and concept that relates to the certain topics that is given by the teacher.

The board game media makes the teacher delivers a lot material easier. Therefore, this media can make the teacher arranges many materials in one theme. Then, it can be learned in integrated way. The integrated material that is learned can make the students easier in comprehend lots of materials. The students is not processing lots of materials in the long time anymore, but they can comprehend the material in the short time and in enjoyable

Social Science learning is a learning way with lots of materials and it has both simple and complex concepts. The

concept comprehension becomes the foundation in a learning to take the next process in cognitive, psychomotor, and affective aspect. Bloom, (in Winkle, 2014, p. 24-60) stated that

Comprehension covers the skill to gain the meaning from the learned elements. The skill is stated in analyzing the content of a text, changing the data that is presented from a certain form to the others form, such as mathematics formula into words, making prediction about tendency showed in certain data, such as graphic.

In the other hand, the definition of concept according to Sagala (2013, p. 70) mentions that

A concept is a result of someone's idea or a group of people that is stated in definition, so it results the knowledge products including principal, law, and theory. It means that the results of humans' idea based on what he sees and stated in a definition.

Murizal (in Tipa, D.S.R., and friends. 2016, p.92) conceptual understanding is to combine and generalize concepts, explaining concepts by not just memorizing but being able to apply them in problem solving. Furthermore Hasan (1995, pp. 109) explains that in studying the social sciences one is expected to have knowledge of the various fundamental concepts in a discipline. Based on these statements it is known that the concept of understanding in learning IPS becomes one of the results to be achieved.

The process of learning in schools with the application of technology-laden media such as power point slides, or traditional less emphasize on student activeness. The learning process is in teacher-centered way, so that students' comprehension of the concept of social science lessons is limited to what is explained by the teacher. These conditions relate to the use of game board media that requires students to play an active role in the learning process and hone the students' ability to be better in understanding the material.

Based on the presentation of the theory about the media and the importance of conceptual understanding in social studies and learning conditions in the class, the researchers interested in improving students' understanding of the concept of IPS through the board game media. The problem formulation in this research is first, is there any significant difference of pretest result with posttest in experiment class using game board media on IPS learning? Secondly, are there any significant differences in pre test results with posttest on control classes that do not use game board media on IPS learning? Thirdly, is there a significant ability to understand students' concepts between experimental and control classes?

METHOD

The design used in the study was quasi-experimental with the type of the non-equivalent, pretest-posttest. Sugiyono (2013, p.342) describes the quasi experimental design as "this design has a group control, but it can not function fully to control the outside variables that influences the experimental execution".

Research Design *Non Equivalent, Pretest-Posttest*

Experiment	O ₁	X	O ₂
Control	O ₃		O ₄

(Source: Sugiyono, 2013, p. 345)

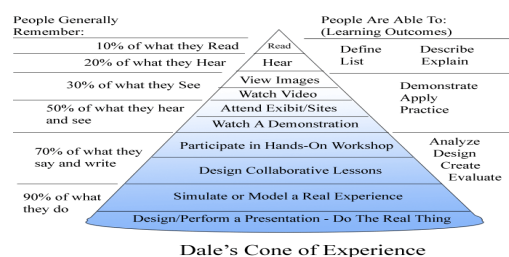
The subjects in the study are class VIII-A as an experimental class with the number of students 33 people and class VIII-B as a control class with the number of students 32 people. While the instrument used is an objective test, interview guide and documentation. Data analysis of test instrument is done by using validity test with Pearson product moment formula, reliability test with split half method, and different power test and difficulty test. For analysis of data result, done by process of statistical analysis, first calculate every student score either from experiment class or control class. Next, determining the normalized gain value, then perform the normality test. If the data is normally distributed then proceed for homogeneity test and hypothesis test by doing t-test. Then the next test of this hypothesis is used to answer any formulation of the problem and as a material withdrawal conclusion.

FINDINGS AND DISCUSSIONS

The results of this study is to answer each problem formulation. *First*, it was found that there were differences in pretest and posttest results in the experimental class (VIII-A) treated by using game board media during two meetings. The result difference is a significant difference with the sig value. (2-tailed) $0.000 < 0,05$ means that H_0 is rejected.

So it can be said that the experimental class in the learning process requires the activeness and ability of students in learning can increase the acquisition of test results. Treatment conducted in the experimental class is by using game board game media, the students get hands-on experience with a game loaded with the concept of the material learned can improve students' memory and understanding the material. As the cone of Dale's experience that classifies the benefits of media as a learning aid starts from the most concrete level to the most abstract (Komalasari, 2011, p.28). Here is a cone of Dale's experience.

Dale's Cone Experience



Picture Source:

[\(https://civitas.uns.ac.id/aprinnikmah/2017/05/15/kerucut-pengalaman-edgar-dale/\)](https://civitas.uns.ac.id/aprinnikmah/2017/05/15/kerucut-pengalaman-edgar-dale/)

Based on the cone of Dale's experience, when it is playing, the students can be said to experience directly that can affect learning outcomes because they can be more remember by 90%. Based on interviews conducted on some students, they

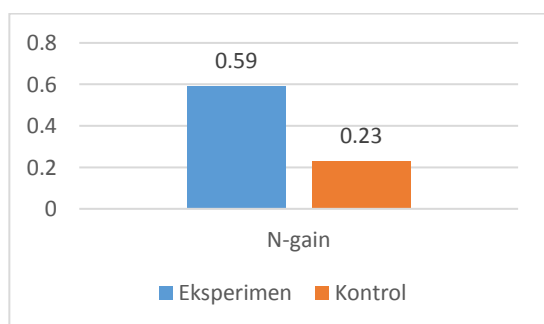
revealed that learning with the game board media can make it easier in understanding a concept. This is because of the strong desire to get out of the championship and pay attention to each friend's explanation repeatedly. Besides listening, they are also do not feel saturated because the board game display themed roaming ASEAN can increase knowledge insight. The findings reinforce the opinion of Ruseffendi (1980, p31) who mentions that the benefits of the game are (1) developing concepts, (2) skills training, (3) strengthening,(4) cultivating understanding skills, (5) problem solving, and (6) filling spare time (entertainment).

Second, based on t-test result on control class (VIII-B) obtained by sig value. (2-taile) $0.000 < 0.05$, which means there is a significant difference between the pretest result and the posttest result. The existence of significant differences can be understood as the effect of the learning process after being given treatment even without using media. In line with the opinion of Rowntree (in Suhana, 2009, p.62) which states the medium of human interaction by verbal communication is affecting the cognitive development of learners.

The findings in the field, teaching and learning process in control class with conventional methods that only use the verbal lecture media is less cultivating student activeness, so that the class atmosphere makes students saturated. Learning without using media makes teachers as learning resources and children tend to be passive. Based on the data and findings in the field will the process of learning in the control class in line with the opinion Sudjana (2009, p. 39-40) explains that learning by using conventional methods gives the following effects:

- a. Very boring because it reduces the motivation and creativity of learners
- b. It changes learners' attitude and behavior
- c. The quality of learning achievement goals has been set relatively low because educators often pursue the target time only to spend learning materials.

N-gain Experiment and Control Class



Source : data obtained by researchers 2017

Third, the normalized gain test results to find out the significant differences in students' understanding of the IPS lesson concept between the experimental class and the control class. The learning process by using game board media and learning process without using media has many advantages and disadvantages in the implementation. The result of n-gain data

analysis in the experimental class and control class shows that there is a significant difference with score sig (2-tailed) $0.000 < 0,05$ which means H_0 is rejected. It implies that there is a significant difference in students' understanding of the concept of social studies.

Based on the graph above, there are differences in experiment and control class. The n-gain in the experimental class is 0.59 including the moderate category, and the control group's n-gain of 0.23 is in the low category. Based on these data, it is known that experimental class treated with game board media gain higher n-gain than control class that does not use media during learning process. So it can be concluded that the game board media effectively improve students' understanding of the IPS concept through active learning and fun. Where through the media board game learning process is not centered on the teacher but centered on the students (student centered).

This opinion is supported by a statement by Paul (in Ratmaningsih, et al, 2016, p. 140) that games are one of the best ways to get children deeply involved in learning. Furthermore, Paul added that games play an important role in children-centered learning and allow children to become fully involved in learning.

The use of game board media in IPS learning can be an alternative for the teacher in teaching IPS materials. Based on interviews with IPS teachers stated that the effective gaming board media used for increasing the comprehension in IPS concept, foster student learning motivation seen from student enthusiasm when the game is played. Besides effective to increase understanding of concept through game board media, the students also able to be more socialize with their friends.

The teacher interview data reinforces Sadiman's statement (2006, p.7) which states that in general the educational media has such uses

- (1) clarify the not too verbal presentation with the real object that changes abstract to the concrete concept
- (2) overcoming obstacles related to time, distance and sense power,
- (3) can improve quality in learning,
- (4) can stimulate the development of student learning motivation,
- (5) students can understand the subject matter systematically.

A significant difference between the experimental class and the control class also indicates learning that requires student activeness can affect the students' thinking process. The dialogue between students in groups in the experimental class when using board game media can improve students' understanding of a concept. In contrast, learning in the control class where students only listen and record the material submitted by the teacher. The explanation of the findings of the learning process is in accordance with Sagala's opinion (2013, pp. 63) that learning has two characteristics;

"First, in the learning process involves the mental process of students maximally, not only demanding students to hear, record, but also requires student activity in the process of thinking. Secondly, learning builds a dialogical atmosphere and an ongoing question and answer process that is directed towards

improving students' thinking ability the can help students acquiring knowledge of their own construction"

CONCLUSION

The conclusions obtained from the research conducted at SMPN 19 Bandung to determine the effectiveness of board game media on understanding the concept of IPS subjects are: First, there is a significant difference in students' understanding of the concept in IPS materials before and after being treated by using game board media during the learning process in the experimental class. This is evidenced based on the acceptance of alternative hypothesis in t test which means there is the difference between pretest and posttest result in the experimental class.

Secondly, there is a significant difference in students' understanding of the concept of IPS materials between before and after learning by not using game board media in the control class. This is evidenced by the acceptance of an alternative hypothesis on t test which means that there is a difference between the pretest and posttest results in the control class.

Third, the use of board game media is effective and significant is enhancing students' understanding of the concept of Social Studies subjects in the experimental class. It is based on the results of the analysis that there is a significant difference in students' understanding of the concept of IPS materials in the experimental class using board game media with control classes that do not use game board media. The difference is evidenced by the acceptance of an alternative hypothesis on t-test which

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means that the difference with the N-gain of the experimental class is greater than in the control class.

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