

## **IMPLEMENTATION OF SOCIAL STUDIES LEARNING ABOUT NATURAL DISASTER MITIGATION THROUGH BROCHURES MEDIA**

Zevy Theta GitaHareen<sup>1</sup>, Agus Wahyudi<sup>2</sup>

State University of Surabaya, Nahdlatul Ulama University of Surabaya

E-mail : [16071315003\\_zevy@mhs.unesa.ac.id](mailto:16071315003_zevy@mhs.unesa.ac.id)<sup>1</sup>, [masaguslumos@gmail.com](mailto:masaguslumos@gmail.com)<sup>2</sup>

### **ABSTRAK :**

Penelitian ini bertujuan mengetahui efektifitas penggunaan brosur terhadap kemampuan analisis geografi berdasarkan hasil belajar di kelas XI IPS SMAN Wonoayu, respon siswa terhadap penggunaan bahan ajar brosur di kelas XI IPS SMAN Wonoayu, dan mengetahui aktivitas belajar siswa dengan menggunakan media pembelajaran berupa brosur di kelas XI IPS SMAN Wonoayu. Variabel dalam penelitian ini adalah bahan ajar brosur, respon siswa dan aktivitas belajar siswa. Data yang berhasil di himpun dalam penelitian ini adalah sebagai berikut: Hasil belajar siswa pada ranah kognitif siswa kelas kontrol mengalami kenaikan sebesar 33,48% dimana rata-rata hasil posttest sebesar 76,67 lebih besar dari hasil pretest yaitu 57,44. Sedangkan pada kelas eksperimen mengalami kenaikan sebesar 38,79% dimana hasil posttest 84,66 lebih besar dari hasil pretest 61,00. Pada saat melakukan analisis nilai pretest antara kelas kontrol dan kelas eksperimen dapat diketahui bahwa nilai rata-rata pretest kelas kontrol sebesar 57,44 dan nilai rata-rata pretest kelas eksperimen sebesar 61,00. Respon siswa terhadap bahan ajar brosur didapatkan berdasarkan kriteria kejelasan bahan ajar sebesar 83,9%, ketertarikan siswa 83%, kemenarikan 85,2% dan semangat belajar siswa 86,5% dan semuanya masuk dalam kategori Sangat Baik. Aktivitas belajar siswa menggunakan bahan ajar brosur di kelas eksperimen mendapatkan persentase sebesar 88% dan pembelajaran konvensional sebesar 75%. Berdasarkan hasil analisis data, dapat disimpulkan bahwa penggunaan brosur materi Mitigasi Bencana Alam pada kelas XI IPS SMAN Wonoayu sangat efektif untuk meningkatkan hasil belajarsiswa kelas XI IPS SMAN Wonoayu.

Kata kunci: *pembelajaran IPS, brosur, bencana alam*

## **ABSTRACT :**

This study aims to determine the effectiveness of the use of brochures on the ability to analyze geography based on learning outcomes in class XI Social Science Senior high school 1 Wonoayu student responses to the use of brochures in class XI Social Science Senior high school 1 Wonoayu; and identify student learning activities by using brochures in class XI Social Science Senior high school 1 Wonoayu. The variables in this study are brochure teaching materials, student responses, and student learning activities. Data collected in this study are as follows: student learning outcomes in the cognitive realm of control class increased by 33.48% where the average posttest results of 76.67 is greater than the pretest results of 57.44. Meanwhile in the experimental class, it increased by 38.79% where the 84.66 posttest results were greater than the 61.00 pretest results. When analyzing the pretest value between the control class and the experimental class, it can be seen that the average value of the control class pretest is 57.44 and the average pretest value of the experimental class is 61.00. Student responses to the brochure teaching materials were obtained based on the criteria of teaching material clarity of 83.9%, student interest 83%, attractiveness 85.2%, and student enthusiasm for learning 86.5%, and all are included in the category of Very Good. Student learning activities using brochure teaching materials in the experimental class get a percentage of 88% and conventional learning by 75%. Based on the results of data analysis, it can be concluded that the use of the Natural Disaster Mitigation brochure material in class XI Social Science Senior high school 1 Wonoayu is which effective to improve learning outcomes of class XI Social Science Senior high school 1 Wonoayu

*Keywords: social studies learning, brochures, natural disasters*

## **INTRODUCTION**

The risk of future disasters will be even greater. The problem of disaster management today is not only through disaster management based on planning alone, but is related to the community for disaster management. School is one of place that more easy to give some lesson about natural disaster. Teachers are agents of change who transfer knowledge and information to students and even society. Learning resources are one of the important factors in teaching and learning activities in the classroom.

Jasmadi, 2008 said that to overcome the problems of the learning process in Indonesia required effective, effective, and interesting teaching materials. Novelty of learning in the 2013 revised edition of the Natural Disaster material curriculum is included in special geography subjects in class XI. The

researchers have conducted interviews with Geography teachers at Public Senior High School 1 Wonoayu, with the result that the problem faced by teachers is the lack of development of students' knowledge about Geography subjects. This conclusion was obtained by the researcher through student teaching materials in the form of textbooks and student worksheets (LKS) which were less attractive to students in teaching and learning activities due to full of reading text. Thus, students are less able to explore the capabilities possessed if the learning materials only in the form of reading text.

Basic competence 3.7 IPS class XI discusses material on natural disasters with a geographic review. According to data from the National Board for disaster management Sidoarjo regency, this relates to natural, non-natural, and social disasters. Natural disasters have become one of the phenomena should be carefull especially in Sidoarjo Regency. Based on data from the National Board for disaster management Sidoarjo Regency,natural disaster increased an increase of 50%, from 2015 to 2016 especially the natural disasters of floods and whirlwinds. In this case, the researcher wants to focus on natural disasters. Researchers will ask for alternative teaching materials in the form of brochures.

Machfoedz and Suryani 2007 the brochure contained material or a complete message on the subject that was used as discussion material. The contents of the brochure itself contain informative, persuasive, and factual information. This study aims to determine the effectiveness of the use of brochures on the students' ability to analyze geography based on learning outcomes in grade XI Social Sciences of Public Senior High School 1 Wonoayu, student's response on the use of brochure in the teaching material, and to determine the students learning activities using teaching material of brochure-based in grade XI Social Sciences of Public Senior High School 1 Wonoayu.

## **RESEARCH METHOD**

The method used in this research is experimental quantitative. This quantitative experimental approach used *quasi-experimental design*. The quasi-experimental design in the study was Nonequivalent Control Group Design (both the experimental group and the control group were not chosen randomly). The variables in this study are: Brochure learning materials which include (1) format of teaching materials, (2) display quality of teaching materials, and (3) conformity of teaching; student response which includes (1) feasibility of contents / material, (2) graphic and; Student Learning Activities which include (1) activeness (2) skills.

The research instruments in this study were. Brochure learning validation sheets), learning outcomes test sheets, student response sheets,

and learning activities sheets. The number of population is class XI Social Science students of Senior high school 1 Wonoayu-Sidoarjo, amounting to three classes. This material in KD 3.7 given in even semester, so this material has been passed, so that the researchers formed a special class to conduct research. The research sample consisted of two, there are experimental classes and a control class of Natural Disaster Mitigation Material which was carried out in the even semester, so the researcher was assisted by a special class for research. The researcher used special class because this material has been passed.

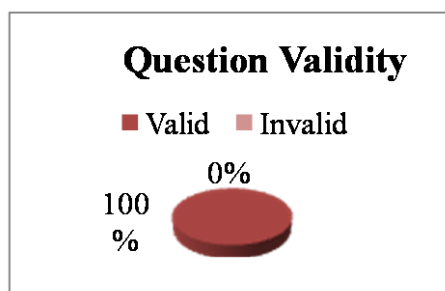
The collection in this study was carried out with pre-research and research. Pre-research includes unstructured interviews, and instrument validation by experts. The validation of the instruments by experts includes the analysis of items carried out with validity test, homogeneity test, and reliability test. The calculation of the feasibility analysis of teaching materials uses the Likert scale criteria. The study was conducted in two meetings with the learning process in accordance with the lesson plan.

The application of brochure teaching materials in this study uses the discussion method. According to (Prasetya, 2002) he discussion was an exchange of ideas and opinions among students or between students and teachers. This can be used at every stage of learning or the learning process in small groups or large groups. The influence of brochure that have been made by researchers can be known through statistical analysis through tests of normality, homogeneity, and finally the independent sample t test is analyzed using the SPSS18 program The comparative assessments of students' responses to brochures-based teaching material were analyzed using a percentage. The observation assessment of students learning activities was analyzed using a percentage.

## **RESULT AND DISCUSSION**

This research was conducted at Senior High School 1 Wonoayu using 2 classes, namely class XI Social Science 1 as a control class and class XI Social Science 2 as an experimental class. This research uses material KD 3.7 Natural Disaster Mitigation with sub-material types and characteristics of natural disasters. Indicators of achieving competence in this material are: 1) explaining the definition of natural disasters; 2) identifying the types of natural disasters; and 3) analyzing the characteristics of natural disasters. The aim is to determine the effect of the use of brochures as learning material on students learning outcome in Grade XI Social Sciences. The first step taken is

to prepare a brochure then analyze the validity of the questions. The following are the results of the validity analysis of the questions:



**Figure 1: The results of the validity of the questions**

The results show that 5 essay questions are valid. Next is the reliability test, the reliability of the questions tested using SPSS 18 obtained r count of 0.501 at a significance level of 5% or 0.05. This shows that from the 5 items of the essay are included in the reliable category.

#### 1. Validation results of learning tools

Validation on this learning tool was conducted by lecturer validators with a syllabus result of 93%, and Lesson Plan (RPP) of 93%. Syllabus subject teacher validators with a syllabus result of 89%, Lesson Plan (RPP) of 100%.

#### 2. Teaching Material Validation Results

The validation was carried out by the validator, namely the material expert and design expert validator conducted by geography lecturers at Surabaya State University. The results of material validation conducted by the geography lecturers obtained an average value of 75% (feasible). The results of design validation conducted by geography lecturers obtained an average value of 84%. This value is in the very feasible category.

#### 3. Student Cognitive Learning Outcomes

In this reearch used MCC (Minimum Completion Criteria) for geography. Minimum Completion Criteria for XI Social Science is 78. This MCCused for experiment and control class.

##### A. Pretest Results

The following are the results of the pretest values of the experimental class and the control class

**Table 1. Pretest value of the experimental class and the control class**

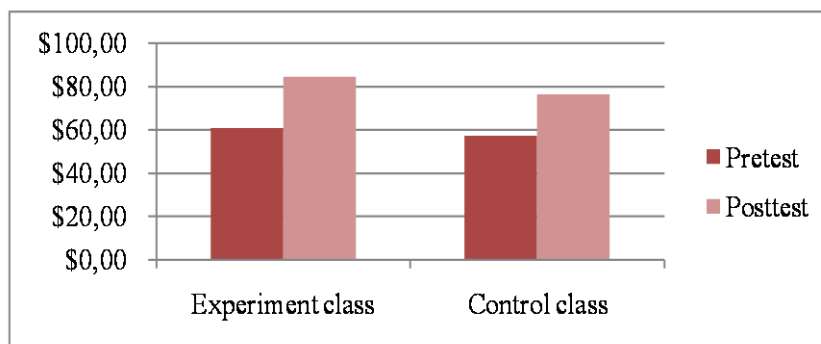
	XI Social Science 1	XI Social Science 2
<b>Average</b>	<b>57,44</b>	<b>61,00</b>
<b>Number of complete</b>	<b>2</b>	<b>7</b>
<b>Number of incomplete</b>	<b>37</b>	<b>31</b>
<b>Percentage</b>	<b>5,13%</b>	<b>18,42%</b>

**B. Posttest results**

Here are the results of the posttest values from the experimental class and the control class:

**Table 2. The posttest value of the experimental class and the control class**

	XI Social Science 1	XI Social Science 2
<b>Average</b>	<b>76,67</b>	<b>84,62</b>
<b>Number of complete</b>	<b>20</b>	<b>29</b>
<b>Number of incomplete</b>	<b>19</b>	<b>9</b>
<b>Percentage</b>	<b>48,72%</b>	<b>76,32%</b>



**Figure 2. The pretest posttest value of the experimental class and the control class**

Based on the chart above it can be concluded that the learning outcomes of the control class and the experimental class have increased mastery learning outcomes. In the control class that did not use the brochure as teaching materials, student learning outcomes that are not passed becomes passed as well as the experimental class that used brochure teaching materials. However, in increasing the number of students who passed will become more, if the students are given brochures as teaching materials rather than not using these teaching materials. It can be seen in the percentage of the experimental class the pretest score of 5.13% to 48.72% in

the posttest score while the percentage of the control class pretest score was only 18.42% and increased by 76.32%.

#### C. Discussion and Analysis of Posttest and Pretest Data

Analysis of the results of the pretest and posttest in the experimental class and the control class was done using SPSS 18 for windows. Based on the calculation, the posttest value obtained t value of -4.102 with a significance level of 0,000. T table is sought with the distribution of t at the 95% confidence level ( $\alpha = 5\%$ , because the t test is two-sided) and the degree (df) is 75. So that the t table (0.05; 75) = -2.287. From the results of the t test it is known that the significance value  $<0.05$  is 0.000 and t arithmetic (-4.102)  $<$  t table (-2.287); therefore, it can be said that there are differences in the results of the posttest of XI IS 1 and XI IS 2 on the ability of geographic analysis. This is because the two classes have different learning; class XI IS 1 used conventional learning while class XI IS 2 used brochure teaching materials. In addition, it can be seen based on the average posttest scores between XI IS 1 and XI IS 2 classes, which is 76.67 for XI IPS 1 and 84.66 for XI IPS class 2. The posttest value of class XI IS 2 is higher compared to XI IS 1. This shows that the use of brochure teaching materials is more effective compared to conventional learning.

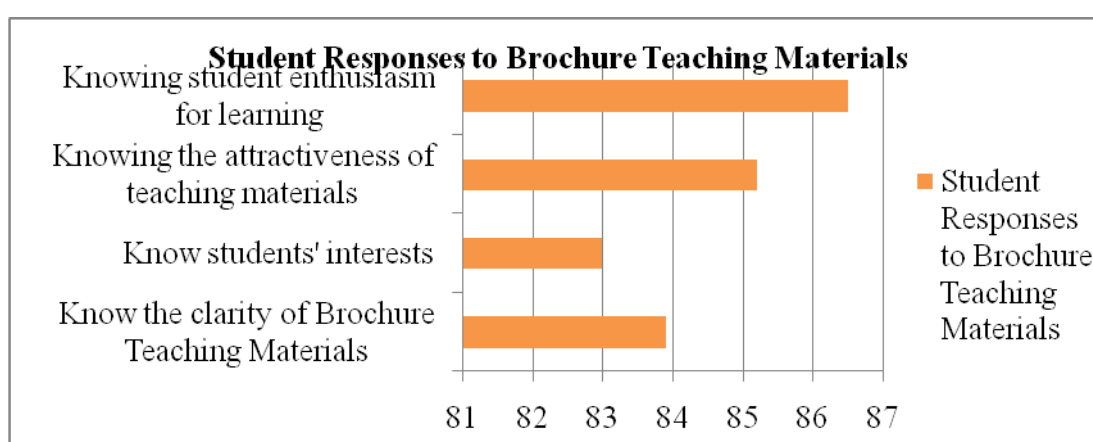
Based on the average score that the students obtained, the material that is easily absorbed by the student is material about natural disasters especially flood natural disaster as many as 55% of students in the experimental class get almost the maximum value on questions no. 1 and 2. Next to the analysis questions no. 4 and 5, on average if students can work on question no. 4, they can definitely work on problem no. 5, due to different types of disasters. However, for question no. 3 regarding the characteristics of natural occurrence of cyclones, a few students who can answer correctly. Meanwhile in the brochure section, there are already pictures and explanations regarding the characteristics of a tornado natural disaster.

Agreeing with (Majid, 2013) the brochure is an interesting and practical teaching material especially for high school students. Attractive layouts and drawings that are used can increase student interest in understanding and studying the material provided. Explanations used briefly and concisely in the brochure can facilitate students in understanding the material. If students can understand the material provided so that it will improve learning outcomes.

#### D. Results and Data Analysis Student responses to learning materials brochures

Based on the recapitulation of student response data results on the brochure teaching material, an assessment is made based on a Likert scale (Ridwan, 2012). Assessment of the clarity of brochure learning material

obtained the average percentage of 83.9%; the value is in the category of Very Good. The assessment of students' interests was an average of 83%; the score was in the Very Good category. The assessment on the attractiveness of teaching materials had an average percentage of 85.2; the value is in the Very Good category. Assessment of student enthusiasm was on the average of 86.5%; the value is in the category of Very Good.



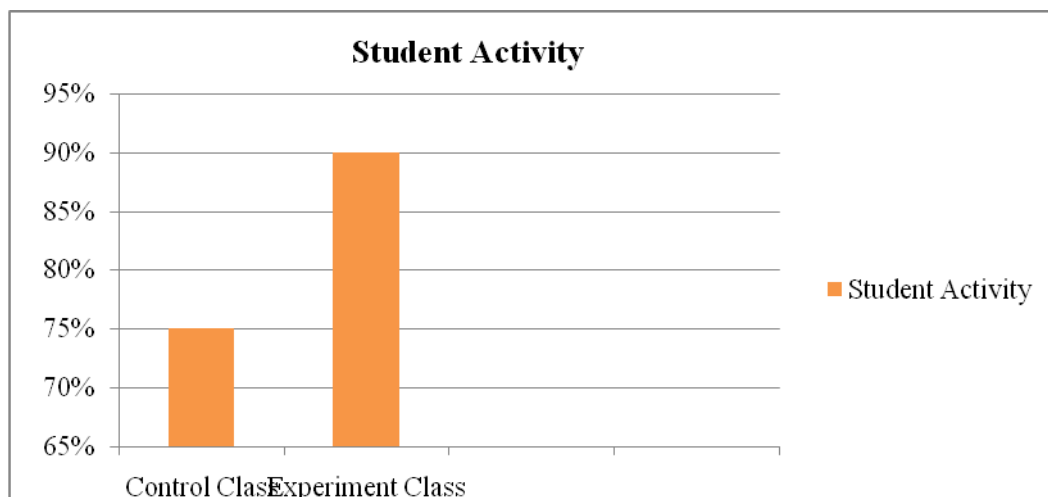
**Figure 3. Student responses to learning materials brochures**

If it is classified overall the assessment of students' responses gets Very Good criteria. This is because students can explore their geographical abilities in the material for deeper natural disaster mitigation using brochures, and they tend to be active and responsive to using brochures because natural disasters occur in their respective regions.

**E. Results and Data Analysis Student activities in the learning process**

This is the result of recapitulation student learning activities in control class, conventional learning, or learning as usual. Obtain an average of 75%, according to the Likert scale (Riduwan, 2012) has Active criteria. Observation of student learning activities in experimental class by using brochure teaching materials. Obtain an average of 90%, according to the Likert scale (Riduwan, 2012) has the criteria of Very Active





**Figure 4. Student activities in the learning process**

## CONCLUSION

Based on these learning outcomes, it can be concluded that the use of brochures has effectiveness on the ability of geographic analysis. The novelty of this study that can be distinguished with the previous study is by applying it directly to students. The material used in this research is natural disaster mitigation material which the mitigation has occurred in the area where the students live. So, the students not only imagine how that natural disaster occurs. However, some students also experienced the disaster directly.

The student responses to brochure as teaching materials can be seen when students fill in the instruments given by the observer. To find out the clarity of brochure as teaching materials, the average percentage was 83.9%, the score was in the category of *Very Good*. The assessment of students' interests was an average of 83%, the score was in the category *Very Good*. The assessment on the attractiveness of teaching materials has an average percentage of 85.2, the score was in the category of *Very Good*. Assessment of student enthusiasm in average 86.5% presentation, the score was in the category of *Very Good*.

Student learning activities using brochure as teaching materials in grade XI Social Sciences Public Senior High School 1 Wonoayu in the experimental class average of 88%, have *Very Active* criteria. In the control class using conventional learning the average percentage of 75% has *Active* criteria. The difference in the results of this learning activity is due to the use of different teaching materials.

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