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Earthquake Disaster Mitigation Explanation to Prepare a Disaster Response Generation for Students in 3th-Grade of Elementary School

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ABSTRACTS

Empowerment of children aged from early to understand the mitigation of disasters is a step early build community aware of disaster so that when it happens a disaster then participants Extension is that teachers and children ages early in Community learning activity centre Baitul Muttaqin that is in place is no longer confusion and panic because it has understood how to how to overcome and reduce the risk of disaster. The purpose of knowledge that is acquired during the extension quake earth is transmitted to the environment around in order to reduce the risk of disaster, then the method of observation participant and pre-test post-test used in the extension of this. Results achievement and conclusions in the activity is as follows: a) Have their knowledge and understanding of the mitigation of disaster so that every action aims to increase self-awareness them about the disaster that potentially occur, and b) it has knowledge of preparedness will mitigate the disaster which aims to tackle and reduce the impact of disasters or long - term risks to property and human life.

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1. INTRODUCTION

Disaster is simple defined as a disturbance serious to the functioning of a society that led to the loss which extends the life of man on the terms of the materials, the economy or the environment and which exceed the ability of the people of the (Atmojo, 2020). Between so many types of disasters natural, earthquakes earth including the most powerful. The earthquake could occur at any throughout the year, lunch and dinner, with the impact of the bad that happens suddenly and just give a little cue danger.

Children is the one of the groups most vulnerable to the risk exposed to the impact of the disaster. The vulnerability of children to disasters triggered by factors limited understanding of the risks on around them, the result is not their preparedness in the face of disaster. Therefore disaster mitigation is an activity carried out before the disaster and the focus on impact reduction, and preparedness and efforts to reduce the impact of disasters long term according to (Maryani, 2002).

Based on data on disaster events in several areas, many victims of the disaster are school-age children. Victims of children aged school is good at the hour of the school and in outside hours school. It is demonstrated that the importance of knowledge about disasters and the reduction of the risk of disasters since the early to provide understanding and direction of steps that must be done when the case of a threat that exist in the surrounding areas to reduce the risk of disaster (Nirmalawati, 2012). Losses on elements of the school, such as teachers and students, the process of learning, and the provision of equipment as a result of the disaster resulted in millions of future next generations of youth threatened.

Mitigation activities aims to increase readiness community and risk reduction disaster for the long term, reduce the number of victims, and implemented as much as possible to minimize impact (Rahma, 2018). Students' response disaster is one of the ways to prepare preparedness readiness of children who live in the area of risk disaster. So also, with the Department of Health and BPBDs locals have programs related to improving the degree of health, but the efforts associated with preventive and rehabilitative at every phase of the disaster is still not optimal. From that, the activities of Student Response Disaster are expected to assist in the program of mitigation and reduction of the impact of the disaster on the group vulnerable, especially children (Lesmana & Purobrini, 2019).

2. THEORETICAL FRAMEWORK

2.1. Disaster mitigation

Mitigation activities aim to increase community preparedness and reduce disasters in the long term, reduce the number of victims, and as much as possible to minimize impacts. If there is already a discourse on mitigation, there needs to be disaster education that can be carried out in schools. the occurrence of unexpected natural disasters to minimize any impacts that will occur. Thus, it can lead to the ability to think and act effectively in the event of a disaster. So that with education it is also expected to develop the character of empathy and willingness to help others carefully (Subagja, 2015).

3. METHODS

Research is using the method of observation participant and pre-test post-test, observation of participants is a process of observation were carried out by the observers to take part take part in the life of the people who will be observed, methods of practice directly is a method that is done by the teacher by the way do practice in direct accordance with

material to be delivered to children. The population in this study were Community learning activity centre Baitul Muttaqin students.

This study uses an instrument in the form of a questionnaire sheet. Measurement of preparedness of students was measured by using a questionnaire with a scale of ordinal consisting of 10 questions, number 1 - 5 stars on knowledge of the disaster, the number 6 - 8 knowledge attitude when disasters, and 9-10 on the understanding mitigation of disasters. by weigh, if highly agree given the value 5, if agreed by the value of 4, if hesitant given the value 3, if not agree given the value of 2, and very not agree given the value 1. The determination of the preparedness category is determined by the assessment criteria, if:

- (i) Total respondents' answers are in the interval 20 - 39 categorized as less ready;
- (ii) The total respondents' answers are in the interval of 40 - 59 categorized as almost ready;
- (iii) The total respondents' answers are in the 60 - 79 interval categorized as ready;
- (iv) The total respondents' answers are in the 80 - 100 interval categorized as very ready;

After passing through the stage of the end of this, the research can be declared finished. Processing of the data obtained from the results of the research have processed it manually by grouping the results of sheet questionnaires were distributed. This is because the level of student understanding increases when researchers are given insight and exposure to earthquake disaster mitigation. To reduce the risk of a disaster, increasing understanding through knowledge has an important urgency. One way to increase awareness is to change one's knowledge of something. **Figure 1** below are the stages or descriptions of real work lecture activities at Community learning activity centre Baitul Muttaqin to students for disaster mitigation earth quake.

4. RESULTS AND DISCUSSION

4.1. Demography

The implementation of disaster counselling activities took place at Community learning activity centre Baitul Muttaqin, Antapani District, Bandung City. Community learning activity centre Baitul Muttaqin has 20 students in grade 3 of elementary school. Previously Community learning activity centre Baitul Muttaqin had never held an earthquake disaster mitigation program so that an understanding of disaster had not been achieved. Therefore, this research helps Community learning activity centre Baitul Muttaqin to become students who are responsive and alert when a disaster occurs. This activity is carried out in the form of lectures starting with a pre-test that shows students' knowledge of disasters, followed by material exposure and simulations regarding earthquake disasters.

4.2. Phenomena in the learning

In this case, the researcher argues, that being given earthquake disaster counselling can increase students' knowledge about disaster-prone areas in the area, along with increasing students' knowledge of earthquake disasters, student preparedness will increase. The implementation of disaster counselling activities took place at Community learning activity centre Baitul Muttaqin, Antapani District, Bandung City. Activities carried out are:

- (i) First, starting with a pre-test which shows students' knowledge of disasters,
- (ii) Continued with the presentation of materials and simulations about the earthquake disaster,
- (iii) The latter did a post-test to determine knowledge after being given teaching and learning related to disasters, so that from the results of the pre-post-test the

researchers could determine the level of preparedness of Baitul Muttaqin students to face earthquake disasters.

With the level of preparedness that is getting better, students are also more prepared to face an earthquake every time a disaster occurs. Students are able to reduce disaster risk in their environment, so as to minimize losses and casualties due to disasters, especially earthquakes.

4.3. Pre-test and post-test result

Pre-test and post-test were given to students via google form. **Table 1** describes the number of students who answered correctly the questions in the pre-test and post-test activities. The number of pre-test and post-test questions given is the same, namely 10 multiple choice questions. **Table 2** shows the scores of each student at the pre-test and post-test.

Table 1. Table of pre-test and post-test results.

No	Question	Pre-tes	Post-test
1.	Do you know the types of natural disasters?	4	5
2.	State the types of natural disasters that you have experienced?	3	5
3.	Do you know the earthquake disaster?	3	5
4.	Do you know what is earthquake disaster mitigation?	4	5
5.	Is disaster mitigation counseling important?	3	5
6.	Do you know the importance of earthquake disaster mitigation?	4	5
7.	Has your school ever taught you about earthquake disaster mitigation?	2	5
8.	Did Your Parents Ever Educate About Natural Disasters?	3	5
9.	what to avoid when an earthquake occurs?	4	5
10.	When there is an earthquake what do you do?	5	5

Table 2. results of the pre-test and post-test scores of each student.

Student's Name	Pretest	Interval Pre	Post-test	Interval post	Criteria
Student 1	8	80	10	100	High
Student 2	7	70	10	100	High
Student 3	4	40	10	100	High
Student 4	7	70	10	100	High
Student 5	8	80	10	100	High

There are several points from **Table 1** of this result:

- (i) The result of question number one, explained that in the pre-test there was only one student who answered the disaster incorrectly but after the post-test all students could answer correctly.
- (ii) The results of question number two, explained that there were only two students who answered incorrectly on the pre-test and when doing the post-test all students could answer correctly about the type of disaster.
- (iii) The results of question number three, explained that there were only two students who answered incorrectly on the pre-test and when doing the post-test all students could answer correctly about the earthquake disaster.

- (iv) The results of question number four, explained that in the pre-test there was only one student who answered the disaster incorrectly but after the post-test all students could answer correctly.
- (v) The results of question number five, explained that there were only two students who answered incorrectly on the pre-test and when doing the post-test all students could answer correctly about the importance of earthquake disaster mitigation.
- (vi) The results of question number six, explained that in the pre-test there was only one student who answered the disaster incorrectly but after the post-test all students could answer correctly.
- (vii) The results of question number seven, explained that in the pre-test there were two people who answered correctly about the message contained in the story but after the post-test all students could answer correctly.
- (viii) The results of question number eight, explained that in the pre-test there were three people who answered correctly about the order of the stories but after the post-test all students could answer correctly.
- (ix) The results of question number nine, explained that in the pre-test there were 4 people who answered correctly about the correct sentences according to the story, but after the post-test all students could answer correctly.

The result of question number ten, explains that all students can answer correctly on the pre-test and post-test.

Table 1 shows questions regarding earthquake disasters along with pre-test and post-test values. **Table 2** shows the scores of each student at the pre-test and post-test. Then the value is then weighted so that it shows the criteria for students who understand related to earthquake disasters.

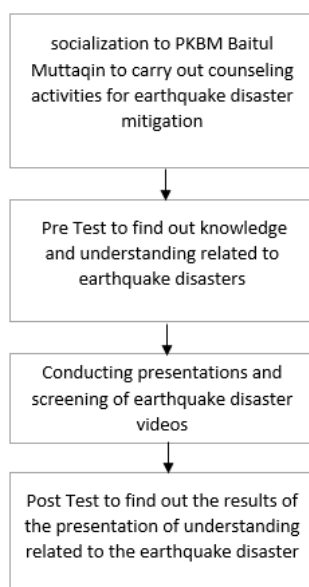


Figure 1. Stages or descriptions of real work lecture activities at Community learning activity centre Baitul Muttaqin.

4.3. Result discussion

Based on the results obtained, it can be seen that all students experienced an increase in answering the pre-test and post-test questions. This is because the level of student understanding increases when researchers are given insight and exposure to earthquake

disaster mitigation. To reduce the risk of a disaster, increasing understanding through knowledge has an important urgency. One way to increase awareness is to change one's knowledge of something (Duval et al., 2000). This research succeeded in providing understanding to students regarding disaster mitigation held at Community learning activity centre Baitul Muttaqin, to prepare a generation that understands about earthquake disasters.

5. CONCLUSION

Conclusions which then can be withdrawn after the activities Extension Disaster quake earth is accomplished:

- (i) Have their knowledge and understanding of the mitigation of disaster so that every action aims to increase self-awareness them about the disaster that potentially occur.
- (ii) it has knowledge of preparedness will mitigate disasters that aim to overcome and reduce the impact of disasters or long - term risks to property and human life.

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7. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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