



## Personal Safety Knowledge of Landslide Disaster Based on The Application of Adobe Flash CS5 Media At Kindergarten PGRI Tunas Patriot Banjarnegara Regency

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### Abstract

Personal safety knowledge of landslide disaster is knowledge of personal security against landslide disaster. Children who are not equipped with personal safety knowledge will have anxiety. A medium that can be used to provide personal safety knowledge in early childhood is by play and pictures. This study aims to determine the difference of adobe flash cs5 media application to personal safety knowledge of landslide disaster in Kindergarten of PGRI Tunas Patriot Banjarnegara Regency. This research uses experimental method with Nonequivalent Control Group Design. The study population is 70 children with 35 children as control group and 35 children as experimental group taken with purposive sampling technique. Moreover, data collection method in this research is test method and documentation method. Hypothesis test results obtained t posttest of control group has no significant difference because the value of  $0.340 > 0.05$ , thus personal safety knowledge on landslide disaster before being given the treatment is relatively same. After the treatment in experimental group, there is an increase in personal disaster safety knowledge, as seen from the Sig score. (2 tailed)  $0,00 < 0,05$ , therefore in experiment group equal to 137,14 and control group equal to 103,71 with difference of 33,43 and t statistic at posttest equal to -24,185. Based on the description, it can be concluded that adobe flash cs5 media provides enhancement to personal safety knowledge of landslide disaster in children aged 5-6 years.

## INTRODUCTION

Banjarnegara has an area of 106,970,997 ha and consists of 20 sub districts. Based on the shape of its natural, Banjarnegara is classified into 3 parts, namely the northern part consists of mountains of corrugated and steep relief, the center part which consists of flat areas and the southern part that consists of steep territory. According to the landslide-prone maps of PU Banjarnegara, the entire regency is only 8% which is not vulnerable. This vulnerable condition is evidenced by the number of landslide disasters in this district throughout history. In the last 7 years there have been 17 landslide disasters, namely in the 13th, 17th, 14th of May, and May 21st, which resulted in 1 person dying and 4 of them severely injured, in 2011, 3rd, 9th April, 4th May November 4 and November 5 that resulted in 2 deaths, damaged roads and farmland damaged, by 2012 January 12, November 22, December 21, resulting in 1 death and 296 displaced persons, in 2013 of December 23 resulting 1 person died and 180 people suffered, in 2014 on 13 February, 12 December, leaving 20 people dead, 88 missing, 150 displaced, and 24 homes destroyed, in 2016 on 24-25 March causing 9 houses damaged Weighing 218 people displaced. (BPS, 2011-2014).

Explicitly, landslide often occur in the rainy season and in the long term landslide disaster caused more losses than other disasters. As a result of changes in soil and temperature around the landslide area. According to PVMBG there are 3 factors causing the movement in the location of landslide disaster that is, the morphology of the disaster area and surrounding areas are generally in the form of hills with sloping slopes to steep, lithology is estimated to be a nest with high water absorption, ie lava, and alluvium deposits from Volcanic riverboat, lava and breccia flows, with basic aid in the form of agglomerates, andesite composite, andesite hornblenda lava and high rainfall tuffs prior to ground movement (SF) events.

As a disaster prone area, local governments have responsibilities and obligations in anticipation before or after a disaster disaster mitigation, emergency response and rehabilitation reconstruction. Astuti, (2010) states that one of the priorities in Disaster Risk Reduction (DRR) is the importance of using knowledge, innovation and education to build a culture of safety and toughness at all levels.

The existence of provisions for implementing disaster mitigation, as the agency authorized to implement regional disaster control is the

Regional Disaster Management Agency (BPBD) by adjusting the planned program of National Disaster Management Agency (BNPB). According to Agus as head of Disaster Prevention at the Regional Disaster Management Agency Banjarnegara (2016) when researchers conducted direct interviews stated that Banjarnegara is an area prone to landslide disaster. There are up to 70 point areas prone to landslides. Until now the active landslide is found in 3 places, one of them is in Sampang village, Karangkojar district, Banjarnegara district. This village has not been so crowded because the distance from the city of Banjarnegara to the village far enough around 2 hours.

According to Law Number 24 of 2007 on Disaster Management and Government Regulation Number 21 of 2008 on Disaster Management Implementation, there are three components that must play a role in disaster management namely Government, Society and Business Institution. According to Satake (Agustina, 2013:98) states that in this condition, people in disaster prone areas must understand and have skills to minimize the impact of disasters that may occur. Therefore, the need for knowledge, readiness, skills and understanding to detect and anticipate earlier various kinds of disasters or better known as disaster mitigation.

Law No. 24 of 2007 on disaster management in Chapter V which regulates the Rights and Responsibilities of the Community. In article 26 paragraph 1 point (a) that everyone is entitled to get education, training, and skills in disaster management. While the obligation of each parent is stated in article 27 points (b) that is doing disaster management activities. This means that disaster mitigation should be sought to be socialized to the wider community. One of them is the children who are one of the groups most at risk of disaster. In addition to their vulnerable conditions, the high risk of disasters among children is due to the limited understanding of the disaster risks that surround them. Zulfikar (2013:178) states that disaster materials can be delivered in schools that are vulnerable to natural disasters, with social learning strategies such as simulated learning strategies or role playing. Simulation and role play learning strategies are more effective because in this learning the students' attitudes are different to the learning outcomes of knowledge about natural disasters, learning by role playing strategies is more accommodative than simulated learning.

Lack of knowledge and understanding of disaster risk has resulted in a lack of prepared-

ness in the face of disasters. In early childhood it is still difficult to understand the preparedness in understanding disaster. According to Setyosari (Zulfikar, 2013:117) states that knowledge is insufficient, there needs to be skill on disaster mitigation going on around, while Von Gatsersfeld (in Paul, 2006) suggests that there are several abilities needed in the process of constructing knowledge: (1) Ability to remember and re-reveal experiences, (2) Ability to compare and take decisions on similarities and differences, (3) Ability to prefer a one-on-one burial.

Based on the description above, social learning becomes an option as learning in disaster prone areas. Children aged 5-6 years are golden age, where at this age of child's thinking is still concrete, it is difficult to understand what is happening in the child's environment today. There is a need for special methods to help understand what is happening in the natural environment, such as landslides. Learning media is one of the factors that affect the learning outcomes that will be obtained by children. According to Ibung in Soraya (2013) stated that the influence of the media not only affect children alone is not only in positive things, but also negative things. so the use of the learning media needed to support learning.

In practice, the learning media can not be separated from the learning model, considering that the learning method is the wrapper or frame of the media used. The learning method according to Joice et al (Rusman 2013: 133) states that the learning method is a plan or pattern that can be used to form the curriculum (long-term learning plan), design the learning materials, and guide the learning in the classroom or the other. According to Hasjiandito (2015) states that the current existing learning media are often not interesting enough for children to learn. Media for early childhood learning is increasingly important considering that the development of children at this age is the time when they start thinking concretely. This suggests the use of media as a channel to send message or information to the children.

Pranajati (2013:6), considering that the level of school community awareness is lower than the community and apparatus (LIPD), the school remains trusted as an effective vehicle for building a nation's culture including building immediate disaster preparedness at the age of the child, educators, education personnel and stakeholders including the wider community and the readiness of schools in the face of disasters are also part of the Disaster Risk Reduction (DRR) effort on

the Hygo Action Framework 2005 - 2015 which forms the basis of international DRR. In addition, it is also a step towards promoting the inclusion of disaster risk reduction knowledge in relevant sections of the school curriculum at all levels and using other formal and informal channels to reach youth and children, promoting the integration of disaster risk reduction as an intrinsic element. Additionally, according to Mulyatun in Hasjiandito (2015) states that the learning media can help students remember and understand the material concept. Compared to conventional learning that uses traditional instructional media, interactive learning using the media has several advantages, namely improving the student's ability, the speed of students in mastering the concepts being learned, and longer retention (memory)

Therefore, it is suitable if in educational institutions both formal and non-formal can provide information and education knowledge about disaster preparedness education or disaster risk reduction education as a preventive and anticipatory action against the natural state of our environment that is prone to natural disasters, so that the future community and participants Educate able and know what action should be done if coming natural disasters in their region (Pranajati, 2013:8).

Integrated disaster management into the education sector is an example to campaign and minimize losses in disaster victims. Here the role of schools as educational institutions is very strategic, related to the development of knowledge needed in the effort of forming knowledge about mit landslide disaster mitigation. In this case researchers working with BPBD Banjarnegara to provide knowledge about disaster management in children. This is in line with the program of BPBD which is to conduct training and simulation in schools at elementary, junior and senior high schools. In elementary school children only given to grade 6 children. There is not any training and simulation Kindergarten and elementary school because the technique of giving the material certainly different between small children and adolescents, whereas in Kindergarten children is still difficult to understand the training so that the BPBD recommend if the research is conducted to provide personal safety of landslide disaster to educate children about the danger in the surrounding environment, because intelligence of children aged 5-6 years old becomes absolutely essential for individuals to be able to adapt well to the environment and to be successful (Fitriyani, 2014:47)

**METHOD**

This research is an experiment research. Research on personal safety of landslide disaster knowledge in Kindergarten PGRI Tunas Patriot Banjarnegara is an experimental research. According Sugiyono (2015:107) experimental research methods can be interpreted as research methods used to seek the influence of certain treatment against others in controlled conditions. This research was conducted on May 17, 2017 until June 06, 2017.

The subject of this research is children of Kindergarten PGRI Tunas Patriot Banjarnegara Regency consisting of 35 samples. Sampling technique purposive sampling. The sample of this research is children aged 5-6 years in Kindergarten PGRI Tunas Patriot. In addition, data collection method in this research is test method and documentation method.

**RESULTS AND DISCUSSION**

This research took place in Kindergarten PGRI Tunas Patriot, Karangobar village, Karangobar subdistrict, Banjarnegara district as experimental class and Kindergarten PGRI Permata Hati Slati, Sampang Village, Karangobar subdistrict, Banjarnegara regency as control class. The two Kindergartens of PGRI are under the auspices of Yayasan Pembina Lembaga Dasar Dasar and Menengah PGRI Central Java. These two Kindergartens are located in highland areas prone to landslide disaster, to get to Karangobar village it takes 1 hour from downtown Banjarnegara.

Prior to the previous research conducted, the researchers made observations to the Regional Disaster Management Agency Banjarnegara to know the areas prone to landslide disasters and materials suitable for children especially early childhood. Before being given treatment in this research is done pretest first to know the level of knowledge of personal safety of landslide disaster, after that newly given treatment by using adobe flash cs5 media after that new given posttest to measure extent of progress level of knowledge of personal safety of landslide disaster. The results of control class and experiment class research can be summarized according to the following table:

Data	N	Mean	Median	Mode	Minimum	Maximum
Pre-test	35	103,71	101	101	67	118
Post-test	35	137,14	140	140	89	148

Table shows data of descriptive analysis related to respondents level of personal safety knowledge of landslide disaster children aged 5-6 years. The data shows that the number of respondents is 35 children. The mean (mean) value for pretest respondents was 103.71 and the value for posttest respondents was 137.14. The median value of the pretest respondents was 101 and the median value in the respondent's posttest was 140. The mode value of the pretest respondents was 101 and the posttest of the respondent's posttest was 140. The smallest (minimum) value of the pretest respondents was 67 and the smallest of the posttest respondents was 89. The largest (maximum) value of the pretest respondents was 118 and the largest value of the posttest respondents was 148.

Class	Mean	Std. Deviation	T	Sig(2-tailed)
Pretest-Post-test Experiment	33.429	8.514	-23.228	.000
Pretest-Post-test Control	-1.571	9.602	-.968	.340

Based on the above table, it can be concluded of an increase if the value of Sig 2-tailed <0.05 and vice versa if > 0.05 there is no difference.

Meanwhile, mean value in the experimental class is 33.429 and the value of Sig 2 tailed 0,000 which means there is an increase or difference in personal knowledge safety landslide disaster. Whereas in the control class the mean value -1.571 and the value of Sig 2-tailed 0.340 which means there is no difference or level of personal safety knowledge is relatively similar.

**CONCLUSION**

Based on the results, it can be concluded that there are differences in the use of adobe flash cs5 media method to the personal safety knowledge of landslide disaster in children aged 5-6 years. After the given treatment, personal safety knowledge of landslide disaster in children began to develop. It is seen that there is no difference in the control class or relatively similar, however in experimental class, after being treated there is difference of personal safety knowledge of landslide disaster.

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