

Geographic Skills of Elementary School Students in Solving Emergency Flood Response Problems

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Abstract. The purpose of this research is to get information from the student's skill in which problem solving ability in emergency response of flood in their area, using quantitative descriptive research method to describe phenomenon of phenomenon that happened, by taking 100 students each education level become respondent 300 Student. Floods can be seen that students are accustomed to flooding, so they know what to do before the flood comes, such as lifting or adding durable goods, preparing rice for disaster and medicines that are considered very important and personal to the family. Knowledge of disaster mitigation in this aspect of school students' knowledge is not appropriate already existed early because disaster in a region has unique characteristics. Activities undertaken aim to reduce the loss of property and human casualties due to hazards and ensure losses are also minimal in the event of a disaster. Includes readiness and mitigation. Similarly knowledge of waste, for knowledge management Aspects Student attitudes toward disaster preparedness can be seen from attitudes toward pre-disaster planning. The students' attitude states that the plan, where they will stay when the floods come. Natural disasters often cause casualties, therefore need to be rescued in case of disaster, such as rescue action to be done. If a natural disaster has occurred, the first step to take is self-preservation. Some rescue steps in case of disaster. People who work together in disasters, the role of parents is considered to have a wise attitude in predicting future disaster preparations to be faced. Therefore, parents need education and increase their awareness and understanding of the importance of disaster preparedness and disaster risk reduction. Thus, messages on disaster risk reduction and preparedness on the environmental aspects of knowledge for students are informed of the factors that cause floods in their areas, and the physical and social environment impacts on them. Aspects of attitude, they know what to do and how tendency if the flood disaster comes. Finally, students are also able to solve problems in accordance with the ability to think tailored to the characteristics of the social environment of the family and society and the physical environment where he lived.

1. Introduction

Indonesia is astronomically located at 6 ° N - 11 ° N and 95 ° E - 141 ° E. The location of latitudes at 6 ° N - 11 ° LS influences the climatic conditions of Indonesia which tend to have a tropical climate (the place of the annual solar circular disturbance) through which the equator line passes. That is, the place that always pass by shifting pseudo-sun from the north-back line to the southern reverse line / vice versa



position causes sunlight that comes always big (often), thus causing the temperature of air in Indonesia hot. In Indonesia itself a frequent disaster is flood disaster. Flooding is an occurrence when water inundates areas that are not normally inundated within a certain time interval [1]. Floods generally occur when the water flow exceeds the volume of water that can be accommodated in rivers, swamp lakes, drainage, or other water channels at certain intervals. In Indonesia, although the time of floods and magnitude varies, almost all regions face significant flood hazards. Losses and damage from floods account for two-thirds of all natural disasters [2]. The intensity of rainfall is high enough to make Indonesia as flood-prone areas since 1815 until 2012, Indonesia has experienced floods as much as 4291 times and claimed the lives of 18,615 people.

Disaster is a series of events that threaten and disrupt the lives of people both caused by natural / non-natural factors as well as human factors resulting in the occurrence of casualties, environmental damage, loss of property and psychological impact [3]. Flood is a major disaster in the world. Incidents and victims of the flood disaster occupy the world's first rank by reaching 55%. The percentage of flood incidents in Indonesia reached 38% of all disasters. The occurrence of landslides reached 18% of all disasters. Preparedness is a series of activities undertaken to anticipate disasters through organizing and through appropriate and efficient measures [4]. Knowledge is a key factor and a key to preparedness. Knowledge owned usually can affect the attitude and awareness to standby in anticipation of disaster [5]. Preparedness is one part of the disaster management process and in today's evolving disaster concept, the importance of preparedness is one of the key elements of proactive active disaster risk reduction prevention activities, prior to a disaster [6]. The problem in this research is how the characteristics of geographical skills that emerged from each level of education in flood disaster preparedness, In Candirenggo Village, Subdistrict Ayah, Kebumen Regency, Central Java Province.

This research was applied in school by using scientific approach to solve a problem in the process of learning. Learning with scientific approach is a learning process, which consists of observing activities (to identify what they want to know), formulating questions (and formulating hypotheses), trying / collecting data (information) with various techniques, associating / analysing / processing data (information) and drawing conclusions and communicating Results consisting of conclusions to acquire knowledge, skills and attitudes [7]. These steps can be followed by creating activities.

The 2013 curriculum develop spiritual attitudes, social attitudes, knowledge, and skills of learners (Permendikbud Number 54/2013) on how does the Curriculum 2013 facilitate learners to gain values, knowledge, and skills in a balanced manner, and how the learning process is being implemented [8].

Flood is a natural phenomenon that usually occurs in an area that many streamed by the river [9]. Simply flood can be defined so that the presence of water in a large area that covers the earth's surface area. In the broad range of talks, we can see flooding as a part of the hydrologic cycle, that is, on the part of the water on the Earth's surface moving into the ocean [10]. In the hydrologic cycle we can see that the volume of water flowing on the Earth's surface is predominantly determined by the level of rainfall, and the rate of water infiltration into the soil. Rainwater reaches the Earth's surface and flows across the Earth's surface, moving toward the sea by forming river flows [11]. These river courses begin in the highest regions of a region, either in mountainous areas, mountains or hills, and end up on the beach when the flow of water enters the sea. Preventing and tackling flooding cannot be done by the government alone or individual only [12]. It takes commitment and cooperation of various parties to avoid Jakarta and other cities in Indonesia from the big flood.

2. Methods

The research method was descriptive approach, different kind of literature used such as a flood disaster theory, a developing creative thinking skills and also about educational phsycology. Literature study is an early step at this research before the researcher determine the results and the conclusion.

3. Results and Discussion

The knowledge aspect about flood disaster can be seen that they are accustomed to face the flood disaster, so they know what they should do before the flood comes, such as raising or raising perishable

goods, the preparation of rice for the future of disaster and drugs, Medicines that are considered very important and personal to the family [13]. Knowledge of disaster mitigation in this case the knowledge aspect of school students less should be that knowledge already exist since early because disaster in a region have unique characteristic. Activities undertaken aim to reduce the loss of property and human casualties caused by hazards and ensure that losses are also minimal when disaster strikes, includes preparedness and mitigation [14]. Knowledge of garbage is considered good only seen that do not understand is elementary school student, knowledge of waste should be given early so that in application at home the child will know which garbage can be recycled or reused and dangerous garbage.

Similar to the knowledge of waste, the knowledge of environmental management is an obligation for all elements in a society [15]. A conducive school environment is needed to create a quality learning process. Providing knowledge and awareness information about clean and healthy life behaviour feels very effective when done to learners since elementary school. The knowledge of environmental awareness is not included in school program, whereas it could be found outside the school region that will construct a good behaviour. Of course we must know the school environment and school education culture when talking about this school is an outgrowth of a learning culture that is an external factor that will build a good culture as well.

So if the environment we live in school wake up with a natural atmosphere, Islamic and scientific, this is certainly going to build a culture of honest, compact, friendly, love science in a school that transfer values, attitudes, and deeds that will be given to peseta learners . This is very different with a company there that is more built. An effective work culture for the career and boss. Thus, the standard of management of environmental education in primary and secondary education is not yet in existence [16]. This can be known based on the results of direct observation on the school, the implementation of environmental education in schools can be made to shape the pattern of development of environmental education in primary and secondary education in realizing environmentally cultivated schools.

The influence of the school environment on the students is very strong environmental influences on learners either it will improve the quality and spirit of learners or even the opposite that will make the student don't have any spirit and willingness in learning [17]. Therefore the school was designed to help or design the school environment to form a natural, scientific and Islamic culture. And of course also a safe and orderly environment. So that the role of environment is directed and become as a driver and as a tool to influence students in following learning. So the environment provides stimulation to learners to concentrate, foster motivation or foster attitudes and competitiveness with peers. So the school environment is also very influential on the development of students in physical and spiritual growth. Darmed time used by a student in educational and get the science is in the school that he occupied long enough and see the example to be imitated. As it is known that the condition of teaching and learning effect is the interest and attention of learners in learning. Interest in learners depends heavily on the learning environment. The learning environment in the educational context has a large and strategic importance [18]. This is because the environment is a place of direct interaction in learning so here we will provide some examples of effective learning environment conditions. Aspects Students' attitudes toward disaster preparedness can be seen from attitudes toward pre-disaster planning. Students' attitudes state that it is already planned, where they will live when the flood comes. Natural disasters often cause casualties, hence the need for rescue measures in times of disaster, such as rescue actions to be taken. If a natural disaster has occurred, the first step to take is self-preservation. Several rescue steps in the event of a disaster. Flooding can be caused by high rainfall with not enough offset of sufficient soil. Or it can happen in the form of rob or bandang (massive flood). Therefore, we must be prepared to anticipate every kind of flood disaster. Things that should be done before the flood.

They have been alert and alert if this happens where the flood disaster that every year visit to the region, the local government was quite alert to the matter. Subdistrict and village administrations have established evacuation sites such as village offices, so residents already know where to go. One of the things that the disaster-stricken community often complains about is the government's lack of responsiveness in dealing with the impacts of disasters. Often disasters are only partially responded by the government. Even the disaster is only responded with an emergency response approach. The lack of

an integral government policy and the lack of coordination between departments are considered as some of the possible causes. Too long and tortuous bureaucratic processes are also sometimes the cause of the government's lack of stability in handling post-disaster impacts. It will take longer and more convoluted bureaucracy to get the second phase of the reconstruction grant. Meanwhile, there are still many people who live their lives in refugee camps and waiting for the reconstruction funds that have been promised since time immemorial. Lack of understanding of every leadership official in an organization is a human resources manager. That is, managers participate and must be involved in taking various steps of human resource management activities, from employment planning to retired employees. However, usually within an organization formed a work that conducts human resource management activities and work units that are functionally responsible for conducting various activities and take various steps in human resource management. There are two compelling reasons why such functional units should be formed. First, even though every manager in question is assigned the duties and responsibilities of carrying out other activities, both of which are the main tasks and the supporting tasks, so that his main concern is addressed to the functional responsibilities. Secondly, human resource management absolutely needs to be professionally handled by specialists because only then can a very complex human resource management be handled properly. From some of the above description it is concluded that the role is a behavior, a big task influence on an event. So that in the context of the discussion the role is intended as an active involvement or participation in an achievement made by individuals or groups against flood disaster management in order to materialize as a safe and peaceful territory.

In the aspect of family and community support. In this indicator explain them mutual cooperation in disaster, it is known that Indonesia is a disaster-prone area or often we are familiar with the title of Ring of Fire as one of the consequences geography and geological conditions. Many natural disasters are caused by humans or even come from nature itself [19]. Almost all forms of Disaster, both large and small scale, exist in Indonesia. In the new paradigm of disaster management need a cooperation and support of all parties in its handling, especially in the effort to develop the culture of disaster risk reduction so that it can be implemented directed and integrated. The most important thing in the disaster risk reduction program is that the community, as one of the parties affected by the disaster, is expected to be ready for alert or to be aware of future disasters. Community preparedness can start from the smallest scope, by including the role of parents in disaster risk reduction efforts. Parents have more life experience than other family members. The role of parents is considered to have a wise attitude in predicting to prepare themselves in the disaster that will be faced in the future. Therefore, parents need education and increase their awareness and understanding of the importance of disaster preparedness and disaster risk reduction. Thus, messages on Disaster risk reduction and Disaster preparedness can be a chain message delivered by parents to the wider community. It is apparent that the parents of learners in the village of Candirenggo, subdistrict Ayah, Kebumen Regency, Central Java Province, provide life experiences for their children about the flood disaster, which they live in coastal areas that sometimes experience floods of rob and Flooding in the rainy season.

The attitude of learners to the activities gotong royong in the face of a disaster indeed in Candirenggo Village, District Ayah, Kebumen Regency Central Java Province is said to be good. Candirenggo Village, subdistrict Ayah, Kebumen Regency Central Java Province, still often experience flood disaster, let alone rainy season. Eliminating the flood altogether is not possible. Rainfall that is higher than average in a given year according to various hydrological studies is one of the character of the rain itself. As the impact of above-normal rainfall, puddles and floods become an inevitable phenomenon. Residents who live in the subscription area seem to be adaptable. The residents surrendered and tried to survive the flood when the rainy season arrived. This is indeed quite amazing where citizens have a high adaptability. But adaptation of course can't prevent losses arising from the flood disaster. What can be done as citizens to overcome the risk of flooding. Mitigation efforts or reduce the risk of flooding have not been seen as dominant activities undertaken by citizens. Whereas mitigation is a more realistic activity in reducing the risk of dealing with floods.

In the above data it is clear that the local government has involved the community in conducting disaster simulations, not just the floods but the tsunami disaster is also often done. Disaster differs from

danger or threat. Hazards or threats contain damaging events either in the form of potential or events that have occurred. A danger can be said to be a disaster if the incident has damaged and harmed man. For example the danger of flooding. Floods almost every time occur in nature to accompany the events of rain with high intensity. Flooding that occurs in rivers in uninhabited wilderness is not a disaster in this sense because it does not cause harm to humans. Disaster also has another perspective, namely concerning the losses / victims caused. Two disasters with the same large scale do not necessarily cause the same loss in humans. There is a factor of human susceptibility in it that plays a role in determining the magnitude of the losses incurred. In the case of natural disasters, where the scale of danger can not be minimized let alone controlled, the factor of vulnerability is very big role to reduce the impact of the disaster both the material loss and loss of life. Efforts to improve the resilience and preparedness of humans face disaster is what we know as mitigation efforts. Some mitigation efforts that can be done are: research on potential natural hazards, spatial preparation, road construction and transportation access, establishment of evacuation points, disaster-resistant building preparation, disaster awareness education for the community, preparedness of disaster management organizations and early warning systems. Disaster simulation can be done in two forms, the first is a simulation of the physical behaviour of disaster events and simulations during a disaster. The first simulation involves experts in the field of disaster, especially those who study the physical phenomena of disasters. This phenomenon concerns, the source of the disaster trigger, its magnitude scale, the extent of its influence area, its spreading (in the case of tsunamis), the destructive power and the time that humans have to respond to the disaster. These phenomena are usually analyzed and used as a whole to see the interaction of one phenomenon with another. With the help of computer and technology advancement, various simulations of the phenomenon of disaster events can be easily compiled and viewed the response to be evaluated and made reference to prepare other mitigation activities for the better. While the second simulation is useful to provide experience to the community how should act during the disaster. Communities are provided with understanding and experience of disaster behavior, evacuation routes, thought patterns and actions that need or need not be done in the event of a disaster, utilizing evacuation routes, utilizing previously established information systems and most importantly deciding which actions should take in that short time with a good mentality.

4. Conclusions

Aspects of knowledge about the surrounding environment for students is good know how the flood occurred, and what impact on the physical environment and their social. Aspects of attitude, they know what to do and what are the efforts to tendency if the disaster comes. Learners are able to solve problems according to the ability to think according to the characteristics of school age in the face of flood natural disasters. In order to the knowledge of the environment to be more cargo in learning from an early age, as if many familiar to the environment is expected to feel the love of the environment more deeply. Social control in the environment is enhanced so that the community in general and learners in particular are more able to appreciate the environment and responsive in natural disaster hazards in accordance with the characteristics of the region. Nationalism indicator measured were knowledge of Indonesian geographic, demographic and social.

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