



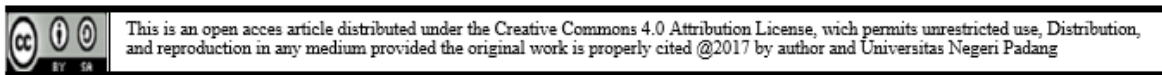
The Implementation of Disaster Preparedness School (DPS) in SMPN 2 Rao Utara, Pasaman, West Sumatra

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Abstract

The purpose of this research describes 1) the implementation of Disaster Preparedness School (DPS) in SMPN 2 Rao Utara, and 2) supporting and inhibiting factors. This research was descriptive qualitative. The Subjects of this research were principals, teachers, and students. Data collection techniques used interview techniques, questionnaires, observation, and documentation. The result of this research shows that 1) the implementation DPS in SMPN 2 Rao Utara was done through three activities that were organizing, interpretation, and application. DPS organizing was a cooperation with various parties, making contingency plan of documents, and loading disaster mitigation material on the curriculum. The DPS interpretation was to draw up guidelines for the contingency plan of documents, the loading of disaster mitigation, and the vision of the school mission, and to provide supporting infrastructure. 2) DPS supporting factors in cooperation with the institution, have supporting tools, assistance from BPBD, while the factors inhibiting student turnover of new teachings, many school activities, less funding simulation activities, and less communication with the institution. Indicates that SMPN 2 Rao Utara, has been able to implement in terms of building structure, has been implemented DPS.

Keywords: Implementation, Disaster Preparedness School (DPS)

Introduction

Indonesia is a country that has potential natural disasters or earthquakes is high enough. This is due to the geographical location of Indonesia which is located at the meeting of four tectonic plates of the Asian Continent, the Australian Continent, the Indian Ocean plate and the Pacific Ocean. In the southern and eastern parts of Indonesia, there is a belt of volcanic (volcanic arc) that extends from the island of Sumatra, Java, Nusa Tenggara, Sulawesi, the sides in the form of old volcanic mountains and lowlands partly dominated by swamps. The condition is a potential proneness to disasters such as volcanic eruptions, earthquakes, tsunamis, floods, and landslides (BNPB, 2009; Adams, L and S. Canlini, 2009; Hermon, 2014; Rohman, 2014).

The government, in this case, the Ministry of Education realized the importance of mainstreaming disaster risk in schools. In the context of disaster risk reduction education, the basic concept is a manifestation of the Hyogo Framework for 2005-2015, Priority 3 (three), using knowledge, innovation, and education to build a culture of safety and resilience at all levels (Hermon, 2012; Hermon, 2017). Thus, the concept of DPS is not only focused on the element of preparedness, but also includes efforts to develop innovative knowledge to achieve a culture of safety, security, and resilience for all citizens of the school against disaster. The concept of DPS has two main elements, namely: 1) Safe Learning Environment and 2) School Preparedness. Disaster



mitigation in schools is very important to support the implementation of DPS. Disaster mitigation as referred to in Act No. 24 of 2007 Article 44 letter c is undertaken to reduce disaster risk for people in disaster prone areas which can be done through various means including spatial planning, development arrangement, infrastructure development, building structure and education, counseling, and training both conventionally and modernly.

The issue is whether the DPS in SMPN 2 Rao Utara has been well implemented, whether the material integration of disaster as a learning material is effective and does not reduce the effectiveness of learning activities in other subjects. Therefore, the integration of mitigation in schools needs to be designed with a creative and innovative to build resilience the school community awareness of disaster risk discourse that continues to grow in people's lives. Reivich (2002) conveys that resilience is one's ability to survive, rise and adjust to difficult conditions. Every individual has different capabilities in developing aspects of resilience, however, schools can actually be a means to develop the resilience of the school which is indispensable to deal with the change process after the eruption of Merapi.

According UU No.24 of 2007 on disaster management, disaster is "a series of events that threaten and disrupt the life and livelihood of people caused by natural factors and or non-natural factors and human factors, resulting in human casualties, environmental damage, loss of property and psychological impact and beyond the capacity of the community with its resources ". DPS policy in building school resilience has an important role. How schools can instill resilience aspects to students as well as teachers and stakeholders manage the resilience as well as the implementation of disaster prepared schools. The effort to prepare for disaster preparedness in schools if it is not balanced with the resilience aspect is less impactful. Then the DPS policy should be able to influence the formation of resilience. In reality, schools implementing DPS policies have not been implemented optimally in building school resilience.

The aims of disaster preparedness school to build the capacity of schools by strengthening the knowledge and attitudes, school policies, emergency response plans, early warning systems and resource mobilization school based on the capacity of the existing school. Preparedness planning in schools should be supported by the procedures as a plan of the school about what, who, when, where and how the procedure should be carried out in disaster relief either before, during and after the disaster. The permanent procedure is made and arranged by mutual agreement of all components of the existing school (Suharto, 2005; Bruce, 2009; Oktorie, 2017). Resource mobilization includes the capacity of schools, government, communities around the school environment and other outside parties concerned (Wang and Yuan, 2011). Implementation of disaster prepared schools is very important especially in disaster prone areas. In general, school preparedness needs to be improved to support "1 million schools and safe hospital" campaigns and also create a safe school environment from disaster hazards. The average of almost all relatively small DPS parameters signifies the preparedness of school components that are still below expectations. This is due to the new socialization of DPS, where some areas in Magelang District will turn in 2013. The need for a review of how DPS socialization can increase better awareness of the school component to establish a safe school environment from disaster hazard.

The key to the success of the DPS is to create a stability of preparedness in the time before a disaster (Aravind, 2015; Hermon *et al.*, 2018a; Hermon *et al.*, 2018b). The repeated experience of disasters is not enough, then integrated training and further socialization of DPS is essential. Documented plans should begin to be made, socialized and simulated, because organizations including schools should always assume that writing alone is not enough (Wang and Yuan, 2011). The written plan should be supported by real training and simulation of disaster management. Based on the above problems the researchers wanted to examine the implementation of the policy in building resilience DPS in SMPN 2 Rao Utara. Research on policy implementation DPS with resilience has not been widely studied. Based on the above problems the researchers wanted to examine the implementation of the policy in building resilience DPS SMPN 2 Rao Utara. Research on policy implementation DPS with resilience has not been widely studied. Though schools in disaster-prone areas, such research is very useful for the development of DPS and policy formulation for the government to tackle the problem of education in disaster-prone areas. Therefore, researchers hope to study the implementation of policies in building resilience DPS in SMPN 2 North Rao this as additional reference material for improving the quality of education at the school.



Method

This research uses descriptive qualitative. The focus of this research as a description of shape, activity, characteristics, change, relationships, similarities with other phenomena. According to Sukmadinata (2011), quantitative research takes the distance between researchers with the object under study while qualitative research merges with the situation and the phenomenon being studied. This research was conducted at SMPN 2 Rao Utara. The subjects of this study were principals, teachers, and students. While the object of this study related to the activities and programs of DPS. Data collection techniques used in this study are interviews, questionnaires, observation, and documentation. The technique of qualitative data analysis is done interactively and run continuously until complete, so the data is saturated.

Results and Discussion

DPS is a new policy for schools in prone areas to natural disasters such as volcanic eruptions, landslides, floods, earthquakes, and tsunamis. SMPN 2 Rao Utara is one of the schools that implement the DPS. The factors that underlying the implementation of DPS in SMPN 2 Rao Utara is because the locations were flooded. The disaster vulnerability index map in Indonesia can be seen in the figure below. DPS in SMP N 2 Rao Utara ready to face the school and disaster response. School Disaster Preparedness means in order to reduce or even eliminate the victim a single that case by flooding or landslides, so that with the implementation of the DPS is a school can set up, equip, and anticipate with education (reduction risk disaster) toward school community to have a readiness from the beginning as possible. Disaster preparedness school aims to build the capacity of schools by strengthening the knowledge and attitudes, school policies, emergency response plans, early warning systems and resource mobilization school based on the capacity of the existing school.

Implementation of DPS Policies

SMPN 2 Rao Utara in organizing DPS starting from: 1) cooperation built with the Regional Disaster Management Agency (BPBD) DIY and Pasaman, police station, health center, and several universities, 2) Create Document contains steps or procedures and policy -the policies and strategies that schools take on before, during, and after a disaster. In the document also contains contingency emergency school teams involving working groups and each working group has the main task, 3) loading the material on disaster mitigation in the curriculum on relevant subjects. DPS in SMP N 2 Rao Utara as a school that was ready to face and responds to the disaster. Disaster Preparedness Schools was intended to reduce or even eliminate any casualties in the event of flooding or landslides, so that with the implementation of the disaster preparedness school was a school to prepare, equip, and anticipate with education (Disaster Risk Reduction) school community in order to have a readiness from the beginning.

Factors supporting DPS policies, among others:

- a) The existence of cooperation with institutions outside the school make the implementation of disaster preparedness school policy can run well such as BPBD, BPPTKG, Education Office, other schools, community health center, police station, and so forth.
- b) Possessing supporting devices such as contingency documents, disaster mitigation curricula, HT communication realms, roadmap guidelines for implementing disaster prepared school policies.
- c) Assistance from BPBD in the form of kitchen equipment. The equipment can be used as a cooking preparation.

Inhibiting factors of DPS include:

- a) Substitution of students every new academic year. The result of a new student turnover should start from scratch again providing materials and training to new students,
- b) The existence of many school activities make the implementation of disaster preparedness school policies run less than the maximum,



- c) Lack of funding for simulation activities so that simulation activities will be implemented once in 2013. Schools have not yet done the simulation of disaster prepared schools,
- d) Schools were less intensive communication with institutions or parties concerned. So schools get information about the progress that was going on.

The efforts made after the disaster are as follows:

- a. Health Office at Regency
 - 1) Communicate and coordinate with BPBD and other.
 - 2) Conducting data collection and monitoring of the condition of residents affected.
 - 3) Conducting evacuation process of affected people to evacuation location
- b. Provincial Health Office by monitoring and reporting progress
- c. Monitoring and making progress reports
- d. Ministry of Health was done monitoring and making progress reports

Table 1. Type of Disaster According to Law Number 24 Year 2007 on Disaster Management

Natural disaster	<ol style="list-style-type: none"> 1. Earthquakes and Tsunamis 2. Eruption 3. Typhoon 4. Flood and Landslide 5. Drought
Non natural disaster	<ol style="list-style-type: none"> 1. Outbreaks of disease 2. technology practices 3. Famine
Social Disaster	<ol style="list-style-type: none"> 1. Social unrest 2. Social Conflict

Research conducted by Taupik (2006), implementation of DPS policy in building school resilience in SMPN 2 Cangkringan, Sleman, Indonesia, that there were four results found, namely: 1) implementation of DPS in SMPN 2 Cangkringan was done through three pillars of activity, namely Organizing, Interpretation, and Applications. DPS organizing was cooperation with various parties, making contingency plan documents, and loading disaster mitigation material on a curriculum. The DPS interpretation to draw up guidelines for contingency plan documents, the loading of disaster mitigation, and the vision of the school mission. DPS applications are simulations, integration of disaster mitigation on subjects, incorporating the vision of the school mission, and providing supporting infrastructure, 2) DPS supporting factors in collaboration with institutions, supporting tools, assistance from BPBD, while inhibiting factors for changing new students, many school activities, less funding of simulation activities, and lack of communication with institutions, 3) highly visible school resilience from six aspects: to increase ties with schools, clarify rules, teach life skill, care and support school, communicate and realize hope, an opportunity to participate, and 4) Implementation of DPS supports the strengthening of school resilience.

Steps to build DPS include:

1. Building mutual understanding and commitment among members of the school community with or without being facilitated by outsiders.
2. Create a joint action plan between schools, school committees, parents, and children (either in the form of workshops, FGDs, or regular meetings)
3. Conduct a school preparedness assessment using five parameters (knowledge and attitudes, policies, emergency response plans, early warning systems, and mobilization, resources)
4. Capacity building (training) for all school stakeholders (teachers, staff / administrative staff, security units, school committee members, parents, children)
5. Workshop on the establishment of disaster prepared schools (formulating activities to improve knowledge and attitude, policy draft, early warning system, emergency response plan, and resource mobility)



6. Simulation / drill is facing disaster (according to the type of threat) with the frequency adjusted to the needs and capabilities of the school concerned standardization / standardization of disaster prepared schools.
7. Monitoring and evaluation of DPS program implementation.
8. Socialization and promotion of DPS

The global campaign to build national resilience and community resilience is still continuing. In 2010-2011, UNISDR (United Nations International Strategy for Disaster Reduction) launched a worldwide DRR campaign focusing on the development of urban environments. With the theme "Building a Tough City, Targeting Urban Risk", the "One Million School Safe and Safe Hospital Campaign" campaign was organized to encourage DRR practices at schools and hospitals.

Supporters of Success

In addition to the school itself, the success of DRR efforts and the implementation of DPS requires the support and commitment of relevant stakeholders, namely the commitment of the Principal and the school community; the existence of government policies that support the implementation of DPS in schools; as well as ongoing support from the Education Office in its territory, agencies / organizations related to DRR, and communities around the school environment.

Roles and Responsibilities

Disaster risk reduction (DRR) requires joint efforts of the parties in accordance with their availability, capacity, knowledge and skills. The following are the basic things that may be done by each party (school members, parents, implementing agencies, and donors)

What can children do?

- a. Children and young people may benefit from P2K training and DRR activities provided by non-governmental organizations and/or Red Cross and Red Crescent Societies. Furthermore, older children are expected to also teach the younger.
- b. Children and young people can tell their parents what they learn about hazards and risks.

What can parents do?

- a. Parents can inquire about school safety at school board meetings. They can also lobby government officials about the resources needed for school security.
- b. Parents can join other community members to support their children in learning the DRR and help disseminate the use of participatory risk assessment in the community
- c. Parents who lose their child during a disaster event at school can join an association or non-governmental organization to do whatever they can to prevent other parents from suffering similar losses. The way parents who have experienced the loss of their children organizing activities will have a more culturally diverse and culturally diverse form.
- d. The Association of Parents and Teachers comes in many forms in many countries. The association can be used as a forum to discuss what children and youth and hazards are learning and how schools can be protected.

What can other educators and professionals do?

- a. Professionals work hard to enrich their education with knowledge essential to sustainable human development, peace, justice and security by focusing on natural hazards, without diminishing their work in other important areas.
- b. Schools may initiate teaching disaster risk reduction and disaster lessons once a week in certain subjects, such as Geography/Biology, and/or bringing children outside the classroom to recognize and mark risk zones and/or drawing a map of the risks that exist in their school environment.



What can non-governmental organizations, national and international organizations do?

- a. Together with professionals, educators, children, communities and youth, they can develop a list of "quick win" actions that can improve school security and raise the level of awareness of risks among school members. They can support coalitions and partnerships between schools and build inter-school knowledge networks.
- b. They can develop and provide educational materials

What can donors do?

- a. Incorporate PRB measures in their funding for school construction projects.
- b. Funding educational projects for PRB.

DPS relies on the preparation of human resources, facilities and infrastructure from schools in DRR as well as disaster mitigation. Resource mobilization includes the capacity of schools, government, communities around the school environment and other outside parties concerned. Implementation of disaster prepared schools is very important especially in disaster prone areas. In general, school preparedness needs to be improved to support "1 million schools and safe hospital" campaigns and also create a safe school environment from disaster hazards. The average of almost all relatively small DPS parameters signifies the preparedness of school components that are still below expectations. This is due to the new socialization of DPS, where some areas in Magelang will turn in 2013. The need for a review of how DPS socialization can increase better awareness of the school component to establish a safe school environment from disaster hazard.

The key to the success of DRR is to create a stability of preparedness in the time before a disaster (Hermon, 2012; Hermon, 2014). The repeated experience of disasters is not enough, then integrated training and further socialization of DPS is essential. Documented plans should begin to be made, socialized and simulated, because organizations including schools should always assume that writing alone is not enough (Kano and Bourque, 2007). The written plan should be supported by real training and simulation of disaster management. Implementation of DPS supports the strengthening of school resilience. Implementation of DPS policy in building school resilience is organized by involving stakeholders in the process of vision, mission, objectives, and skill development by facilitating learning needs and giving the opportunity to participate actively participate in school programs. Likewise on interpretation by developing school activities that support the vision, mission, and goals of the school.

School-based disaster preparedness is very important for its existence in preparing for a disaster that can happen at any time suddenly. The existence of such schools is very useful. Disaster education activities in schools are very effective, dynamic and sustainable in the effort to disseminate education and disaster knowledge. The provision of disaster education in schools is very good, because the information and knowledge about the disaster given can be transmitted and submitted by the school community to the nearest community. Implementing a disaster preparedness school should be started by improving the understanding and knowledge of all school components on preparedness in school activities. Disaster knowledge possessed by all components of the school plays an important role in the process of escape when disaster occurs. The more each school component understands the disaster well, the easier it is to carry out proper self-sustaining measures.

Each school-based disaster preparedness disaster should prepare a special team that consists of all components of the school. One of the efforts in the establishment of disaster based on the junior team is to form a cluster of Disaster in the school environment. Disaster each cluster member must be equipped with the knowledge and skills about disaster risk reduction. The initial step in the provision of knowledge and skills about the disaster can be started by making regular training and programmed and guided and coordinated by the parties who are professional and competent in the field of disaster. This training may be initiated with a simple game. However, without realizing of simple games that appeared and saved enormous significance of the pen-educated disaster. Wang and Yuan (2017) conducted in the area of the coastal city of Padang said that knowledge school community about the disaster tend to be good, disaster catching skills tend to good, not all schools have policies/SOP in a good school, and in general, there were no schools that have a plan emergency response/resource mobility. That means the DPS in the coastal area of Padang has been implemented properly.



Aravind (2015) state that the emergency preparedness and disaster management has received the high rank of attention as a result of the practice in the United States recently with the events of natural and manmade. There are several organizations and academic institutions that have made inroads into training on this matter.

Conclusion

The implementation of DPS in SMPN 2 Rao Utara, among others, through three stages, namely organizing, interpretation, and application. Organization of DPS is a cooperation with various parties, making contingency plan documents, and loading disaster mitigation material on the curriculum. Interpretation of DPS, which constitutes contingency document guidance, integration of disaster mitigation materials on subjects, incorporates vision of school mission, and provides supporting infrastructure. The supporting factors of disaster preparedness school policy are among others: a) the existence of cooperation with related institutions, b) having supporting equipment, c) assistance from BPBD. While the obstacles of disaster preparedness school policy include: a) change of student every new academic year, b) many school activities, c) lack of funding simulation activities, d) lack of communication with the institution.

References

- Adams, L and S. Canlini (2009). Disaster Readiness: A Community-University Partnership. *The Journal of Issues in Nursing-America Nurses Association*.
- Aravind, R. (2015). Psychosocial Disaster Preparedness For Scholl Children by Teacher. *International Journal of Disaster Risk Reduction*. Volume 12, June 2015. Pages 119-124.
- Badan Nasional Penanggulangan Bencana (BNPB). (2009). *Data Bencana Indonesia Tahun 2009*.
- Bruce, G. (2009). Disaster Preparedness and Disaster Management: The Development and Piloting of a Self-Assessment Survey to Judge the Adequacy of Community-Based Physician Knowledge. *American Journal of Clinical Medicine*. Summer 2009. Volume Six, Number Three.
- Hermon, D. (2012). *Mitigasi Bencana Hidrometeorologi: Banjir, Longsor, Degradasi Lahan, Ekologi, Kekeringan, dan Puting Beliung*. UNP Press.
- Hermon, D. (2014). *Geografi Bencana Alam*. Radjawali Press.
- Hermon, D. (2017). *Climate Change Mitigation*. Rajawali Pers (Radjagrafindo). Jakarta.
- Hermon, D., A. Putra., and O. Oktorie. (2018a). Suitability Evaluation of Space Utilization Based on Enviromental Sustainability at The Coastal Area of Bungus Bay in Padang City, Indonesia. Vol. 14, Issu 41: 193-202.
- Hermon, D., Ganefri., A. Putra., and O. Oktorie. (2018b). The Model of Mangrove Land Cover Change for the Estimation of Blue Carbon Stock Change in Belitung Island-Indonesia. *International Journal of Applied Environmental Sciences*. Vol. 13. Number 2: 191-202.
- Oktorie, O. (2017). A Study of Landslide Areas Mitigation and Adaptation in Palupuah Subdistrict, Agam Regency, West Sumatra Province, Indonesia. *Sumatra Journal of Disaster, Geography and Geography Education*. Vol. 1. No. 1: 43-49
- Rohman, A. (2014). *Kebijakan Pendidikan Analisis Dinamika Formulasi dan Implementasi*. Yogyakarta: Aswaja Pressindo.
- Suharto, E. (2005). *Membangun Masyarakat Memberdayakan Rakyat: Kajian Strategis Pembangunan Kesejahteraan Sosial dan Pekerjaan Sosial*. Bandung: Refika Aditama.
- Sukmadinata, N.S. (2011). *Metodologi Penelitian Pendidikan*. Edisi ke7. Bandung: PT. Remaja Rosdakarya.
- Taupik, A. (2006). Implementasi Kebijakan Sekolah Siaga Bencana Dalam Membangun Resiliensi Sekolah di SMPN 2 Cangkringan Kabupaten Sleman. *Journal*
- Wang, J and H. Yuan (2011). Factors Affecting Contractors' Risk Attitudes in Construction Projects: Case Study from China, *International Journal of Project Management*.