Joint Research Proposal
YSU-CLSU

Comparative Study: School Role in Disaster Mitigation in Junior High School in Indonesia and Philippines

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Activity: Comparative Study: School Role in Disaster Mitigation in Junior High School in Indonesia and Philippines

ABSTRACT
Disaster mitigation education is needed for disaster-prone country so that the number of casualties during disasters can be minimized. It can be done effectively and systemically by the school institution. Disaster mitigation education can be done optimally by the school to the students through building the awareness of disaster risks as early as possible, but in the reality, the education of disaster mitigation conducted by the school is not optimal. By doing a comparative study of disaster mitigation education in Indonesia and the Philippines, it can be obtained an empiric picture of students' level of awareness of disaster so that the school can design more contextual education by developing an education of disaster mitigation in accordance with each school. Through this comparative study, it will be obtained the differences and similarities of existing disaster mitigation education and the currently designed by the government of Indonesia and the Philippines, especially for junior high school.

I. INTRODUCTION
A. Background

The ratification among 168 countries including Indonesia in Hyogo Framework for Action 2005-2015 (HFA) committed to significant decrease in death and social, economical, and environmental assets caused by disaster in the country. The accomplishment of this plan depends on the political commitment and active involvement of the society including Higher Education Institution as one of the stakeholders of the action plan (Wuryanti, 2007). One of the HFA five priorities is the importance of applying knowledge, innovation, and education to develop a safety and strong culture in every level (It is hoped that in the long term will be able to develop effective, well-prepared response toward disaster in every level).
Mitigation, an effort to reduce disaster risk, consists of 4 conceptual frameworks, i.e.:

a. Awareness
b. Knowledge Development
c. Public Commitment, and
d. Risk Management

From the Conceptual framework above, Knowledge Development will be the main focus of this research to increase the first point, Awareness.

Disaster Knowledge conceptually and operationally is important; therefore placing the Disaster Risk Reduction in the first line of the HFA becomes the part of risk management which cannot be separated from the sustainable development. It should be understood that there will always be natural disaster in this world and it will be more threatening because of the increasing number of the people which will increase the susceptible condition of the society, the lack of effective and sufficient plan related to housing area especially in the high risk disaster area, bad management, deforestation, and natural ecosystem destruction (Sugeng, 2008).

The threat of the disaster will create psychosocial effect if teacher and student do not aware of their adaptation ability toward internal and external changes from the beginning by understanding their personal and social strength as the protection factor and the weaknesses as the part of their selves and the society which become the risk factor. Therefore, the resiliency ability should be developed as early as possible before the disaster happen, when it happens, and after it happens. It continuously becomes an important study especially the role of the teacher as the educator at school and in the society in general so that the Disaster Risk Reduction becomes effective.

Indonesian Constitution No. 24 Year 2007 about Disaster Management defines that disaster is an event or series of events which threatens and disturb the people’s life and activities which is caused by natural or non-natural factor and cause victims, environment destruction, material loss, and psychological effects (Pribadi, 2008). The efforts to solve the disaster problems have not been done in systematical and sustainable way so that there is still relatively high number of victims whenever disaster happens. Based on some researches it is said that Disaster Education is indeed needed in Indonesia. The awareness of the Indonesian position in the high-risk area of earthquake needs to be designed creatively and innovatively.
In this context, National Disaster Risk Reduction Action is an action that should be designed in an integrated and well-planned way. It is strengthened by the fact that Indonesian is in the 7th position of the country suffering from disaster in 2005 based on the International Strategy for Disaster Reduction 2006-2009, World Disaster.

The description of the Disaster in Indonesia which takes place in 2004-2007 is as below:

<table>
<thead>
<tr>
<th>Disaster Event</th>
<th>Date</th>
<th>Number Killed/House destroyed</th>
<th>Damage &amp; Losses (US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsunami Aceh</td>
<td>December 2004</td>
<td>165,708 people killed</td>
<td>4,450 million</td>
</tr>
<tr>
<td>Earthquake Yogyakarta-Central Java</td>
<td>May 2006</td>
<td>5,716 people killed/156,662 housings</td>
<td>3,134 million</td>
</tr>
<tr>
<td>Tsunami Pangandaran-West Java</td>
<td>July 2006</td>
<td>643 people killed/1,908 housings</td>
<td>138.7 million</td>
</tr>
<tr>
<td>Flood Jakarta</td>
<td>February 2007</td>
<td>145,742 housings damaged</td>
<td>967 million (incl. indirect economic losses)</td>
</tr>
</tbody>
</table>


The Disaster Risk Management in Indonesia has not been done optimally. There are two main problems i.e. 1) low management system and 2) low awareness on the importance of Disaster Risk Reduction. Those problems become a challenge for Indonesia to seriously design a creative and proactive Disaster Management. A new paradigm is needed in designing programs for the Disaster Management in Indonesia. The new paradigm in Disaster Management nowadays needs some schemes as below:

- e. Disaster Management does not only stress on the emergency perceptive aspect but on whole Risk Management.
- f. Society protection from the disaster threat by government is an implementation of human rights not just as the government obligation.
- g. Disaster management is not only the government responsibility, but also the responsibility of the society.

The paradigm developed by the government becomes the base of Disaster Risk Reduction-platform. There are three design plans of this. They are:
### Plan

#### Global Platform

1. **United Nation Resolution:**
   - a) To increase the society awareness
   - b) To guarantee the government commitment realization
   - c) To improve the society participation
   - d) To reduce the social and economic loss

2. **Yokohama Strategy**, focusing on:
   - a) Systematical efforts to include DRR in the sustainable development program
   - b) Effort to increase the society endurance capacity building in risk reduction and management.

3. **Hyogo Framework for Action**, strategic aim:
   - Sustainable development policy

#### Regional Platform

- **Beijing Action Plan**:
  - a) The agreement among Asian countries to arrange Disaster Risk Reduction as the main priority
  - b) The regional cooperation in Asia under UN

#### National Platform

1. **Short term Plan, Program and activities on DRR** by related sectors.

2. **Government Working Plan**
   - Policy Direction year 2008
   - a) Government Working Plan through area mapping plan.
   - b) To improve the readiness of the institution and society in dealing and facing the disaster.

   **Focus**:
   - a) Development of the institution capability and human resources.
   - b) Implementation of DRR National Action Plan
   - c) Implementation of regional and national mapping based on DRR

*Source: DRR National Action Plan Seminar, BAPPENAS, Yogyakarta 24 March 2007*

One of the DRR action priorities is the importance of knowledge, innovation, education to build endurance and safety culture in all levels of society. In relation with it, the improvement of the education through DRR integration at school on its curriculum and safety culture is highly needed. The problem is that whether the DRR integration to the school learning material and subject will not disturb and reduce the learning effectiveness of other subjects. Therefore, it is importance to study how the school role in developing disaster mitigation education is.
B. The Aims of the Research

1. To collect information about the students’ comprehension and awareness on Disaster Mitigation.

2. To collect information about the role of the school in the Disaster Mitigation Education.

C. Research Relevancy

This research is relevant to the YSU’s vision to improve the research development, science and technology implementation, and to create the intelligent, autonomous, and conscious human being.

D. Inputs

1. The research will be conducted by the researcher team of YSU and CLSU lecturers.
2. The research will be conducted in 2011.
3. The source of the research fund is from YSU and CLSU.

E. Outputs

The joint research between YSU, Indonesia and CLSU, Philippines can be realized.

F. Outcomes

Following up the proposal into research action in Junior High Schools in Yogyakarta, Indonesia and Nueva Ecija Munoz, Philippines.

G. Benefits

1. Understanding the similarities and differences of junior high school students’ understanding in Indonesia and Philippines on Disaster Mitigation.

2. Understanding the similarities and differences of the school role in the Disaster Mitigation in Indonesia and Philippines.
II. LITERATURE REVIEW

The disaster issue involves various dimensions of life both individually and organizationally, so that in handling the problem, it requires a comprehensive approach and so as building awareness of the disaster. The approach of this research focuses on the structural dimension, based on the consideration that the disaster in general will affect the structure, both structural and non-structural.

Disaster management is the science related to efforts to minimize risks, which include the act of preparation, support, and rebuilding society when disaster strikes. In general, the disaster management is a continuous process undertaken by individuals, groups and communities in managing disaster as an attempt to avoid or reduce the impact of disasters. The actions taken depend on the perception of the risks faced. The effectiveness of disaster management depends on the integration of all elements; both governments and non-government institution. Activities in each hierarchal structure (individual, group, society) bring influence on different levels. The disaster management cycle consists of four stages, namely:

1. Prevention / mitigation
2. Preparedness
3. Emergency Response
4. Rehabilitation and reconstruction of the aftermath level

Mitigation is action taken to reduce the impact caused by the disaster. Mitigation stage focuses on the long-term action to reduce the disaster risk. Implementation of mitigation strategies can be considered as a part of the recovery process if mitigation is done after the disaster. However, despite it is considered as recovery efforts, the action taken to eliminate or reduce the risk of future disaster is categorized as mitigation action (Krishna S. Pribadi, 2008).

Mitigation action consists of mitigation of structural and non structural mitigation. Structural Mitigation is an action taken to reduce or avoid possible impacts of physical disaster, e.g. the construction of earthquake-resistant housing, infrastructure development, construction of embankments along the river, and so forth. Non-structural mitigation is the action related to policy, development of awareness, knowledge development, public commitment, and implementation of the methods and operation, including participatory mechanisms and dissemination of information, which is done to reduce the risks
related to the impact of disasters. Mitigation is the most efficient action to reduce the impact caused by the disaster.

Citizen awareness about disaster mitigation is very important. This is based on the approaches to disaster management in which one of the principles is the development of human capabilities. The rationale of this study is built based on the approach to disaster management that develops "capacity management", which in principle develops two aspects, namely (Ma'arif, 2009:36-37):

1. Human Resource Capacity

We must admit that the capacity of disaster management in Indonesia still requires to be strengthened. Strengths and resources that exist within the community must be further identified and developed. Cultural values that are rooted within the community must be explored and cultivated as social capital that can enhance the resilience of the people against disaster. By utilizing the advance science and technology, we will be able to strengthen our capacity in handling disaster and the number of disaster events, as well as its impacts can be reduced.

2. Equipment

Series of disaster that occurred simultaneously within last month has become more aware on the importance of available standard equipment that is normally required during sudden-on-set emergency that threaten the lives of thousand of people with vast impacts. The standard equipment that must be owned or at least made available include:

i. Moderate communication system, and yet reliable functioning in the affected areas where the regular electricity power and communication line is damaged.

ii. Transportation means (air, land and sea) available anytime dependable emergency management system.

Employing knowledge, innovation and education to build a culture of safety and resilience at the school and the community should promote the integration of DRR as an intrinsic element of Sustainable Development (United Nations Decade of Education for Sustainable Development, 2005-2015).

Disaster mitigation needs to be submitted to people by the policy makers. This is where the values of the level of creativity should always be raised by the community so that they will have a high concern and awareness in dealing with the occurrence, when incurred and completion of these natural disasters occur. Creativity is not just about insight / thoughts on science, but also creativity in the sense that the process of doing so, and creativity in producing an action and / or behavior that is profitable and is expected in disaster risk reduction efforts. The ability to change the mindset and ability in doing an action of disaster mitigation will be a paradigm in the social life which is expected to integrate gradually in the dynamics of social life so that the aim of reducing disaster risks can be realized.
Conceptual Framework

Disaster mitigation education is needed so that the community can respond quickly and proactively to catastrophic events. Socialization of disaster mitigation can be done by providing cognitive knowledge to the disaster-prone communities. In this regard, schools have an important role in providing awareness of the importance of understanding of disaster mitigation.

In addition, the disaster mitigation education required students' awareness of disaster events. Therefore, to understand students' awareness from the psychosocial perspective, this research begins with the attempt to understand students' cognitive conditions up to the action / decision to respond to disasters. The mechanisms of thought and disaster response are expected to be an indicator of students’ careful and complete understanding in the sense of how the level of awareness of disaster risk mitigation and response become a knowledge and perspective of them. Wholeness in thinking to understand the disaster or catastrophic risk is through the dynamics of thinking and acting in ORID (Lazan & Mary, 2003). The indicator is expressed by the questions on the recall process of:

1. The extent to which students' level of sensitivity in responding the disaster through the ability of sensory (O);
2. The extent to which the level of reflective students in living up to their disaster experience or internal reaction to student / perception (compare with conditions before and after the disaster, fear, and possible positive experience of the students (R);
3. The extent to which awareness of the reality experienced by residents, this requires interpretive ability of residents, so that the direct-indirect influence on society, family and the future is important to be told (I);
4. With the stages experienced thoughts and responses on the 1-3 then people will build a commitment to deal with disasters and put up adaptation to a variety of changes experienced by each student as a personal decision (D).
III. METHOD OF RESEARCH

This research employs qualitative approach. It will be conducted at junior high schools in Indonesia, especially in Yogyakarta and secondary schools in the Philippines, particularly those in Munoz Nueva Ecija, by taking 2 schools as research settings. Data are collected by using interviews, questionnaires, observation and participation as well as documentation. In analyzing the data, three key activities are carried out: Notice things, Collect things and Think about things.

First, the Notice things is to find something. This activity can be in the form ‘to find something’ by observation or data collection: find what is seen, what is heard, what had happened. Notice things, can also be the findings found in the process of coding, reading and find coding.

Second, Collect things, after finding the code it is considered necessary to be collected and merged back what has been broken down or divided for the past coding process that has been done. To reunite it is needed to be identified and sorted by comparing one with another, both the existing inter-coding and inter-coding with the concept, to find the similarities and discover the categories.

Third, Think about things, i.e., activity that contains three objectives: a) give or find the meaning of each category or set of Things; b) finding patterns and relationships of various categories or collection of Things that exist, and, c) finding or providing a general picture on the theme of the phenomenon at hand.

The above three activities are dynamic, recursive and multi-move. Dynamic means that the activities do not have a standard sequence, but rather move freely and develop in accordance with existing conditions. These steps cannot be determined with certainty, but is strongly influenced by existing conditions and findings. Recursive, the activities between Notice Things, collect things and think about Things are reciprocal and have mutual influencing effects.


Dea, dkk. *Pendidikan Siaga Bencana*. Pusat Mitigasi Bencana-ITB.


*Makalah* Pelatihan Psikososial Dasar yang diselenggarakan pada tanggal 3-6 Juli 2006 di Lembaga Penelitian UNY.


UU RI No. 24 Tahun 2007 Tentang Penanggulangan Bencana