The Disaster Education In Strategic Management Studies

Nurochim[1], Siti Ngaisah[2]
{nurochim@uinjkt.ac.id[1], sitingaisah.61@ui.ac.id[2]}

[1]UIN Syarif Hidayatullah Jakarta, Indonesia
[2]University of Indonesia, Depok, Indonesia

Abstract. Acording to Law of Republic of Indonesia Number 24 of 2007, disaster management should be conducted on integrated task during pre-disaster period, emergency response, and post-disaster period. One of this pre-disaster management includes education and training in order to prepare student with the high level of awareness for facing disasters. To achieve this goal, in 2009 the Curriculum Center has compiled a series of 18 disaster risk reduction modules. However, the implementation result of this disaster education in all levels of school is not as expected. Therefore, this article shows that the strategic management perspective should be adopted on the disaster education. It is argued that the strategic management perspective which valued SWOT analysis (Strengths, Weakness, Opportunities, Threats) in formulating disaster education will make the disaster management more reliable.

KeyWords: Management; Disaster; Education; Strategic.

1. INTRODUCTION

Indonesia is the country which has historical experience of the two biggest volcanic mountain eruption ever in the world. The first was Mount Tambora eruption on Sumbawa Island, West Nusa Tenggara, occurred In 1815. At that time, Tambora was erupting and releasing about 1.7 million tons of ash and volcanic material. Some of this volcanic material formed a layer in the atmosphere that blocked the sunlight and throw it back out of the atmosphere as consequence. Because the amount of sunlight entering the atmosphere was greatly reduced, the earth did not receive enough heat and cold waves suddenly occurred. This situation was known as "the year without summer" triggering a large number of crop failure in many places and widespread famine. The second eruption was Mount Krakatoa eruption in 1883. This eruption was estimated have a power equals to 200 megatons of TNT. This power are more bigger 13,000 times than Hiroshima atomic bomb explosion in the second World War [1].

Indonesia is located in disaster prone area which make this country has a large number of volcano mountain. As archipelago state, Indonesia has many groups of islands which are inhabited by the high number of tribes and races. Therefore, the potential disasters in Indonesia is not only natural disasters but also social disasters as well. Natural disasters in Indonesia are triggered by intense and powerful natural events such as tsunamis, earthquakes, and floods, fires, and dryness. Social disasters in Indonesia comes from potential communal conflicts ranging from quarrel among youth and student in rural area to the inter-ethnic, tribes,

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and religion violence conflict. Moreover, the massive distribution of hoaxes content in social media are considered now as one of national social disaster trigger because of its great impact on conflict escalation.

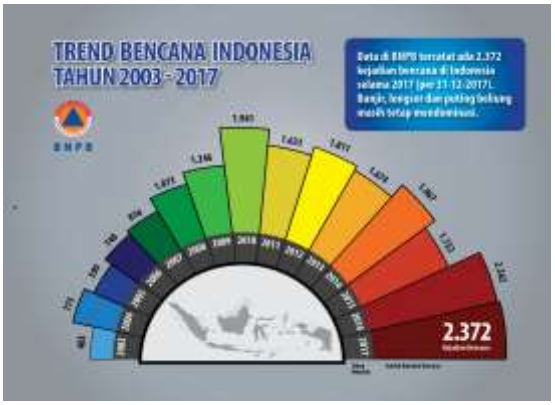

Figure 1. Disaster Trends in Indonesia 2003-2017 (The National Disaster Management Agency).

Based on this picture, the disaster trend from 2003 to 2017, tends to rise. The highest number of disasters in 2017 was 2,372.

Figure 2. 10 Disaster in The World 2018 (Centre for Research on the Epidemiology of Disaster, IDN Times).

In 2018, the deadliest disasters occurred in Indonesia, namely in Lombok and Sulawesi. Natural disaster in Indonesia are commonly affected by its geological aspect which is located in the junction of Indo-Australia plate, Eurasian Plate, and the Pacific Ocean plate. The encounter of these three plates made Indonesia prone to earthquakes and volcanic eruptions. So that, Indonesia is included in the part of the Ring of Fire of the world [2].

The impacts of disaster are ranging from death to physical injury or illness. The other potential problem that arise from disaster is destruction of goods, employment, groundwork for life, and natural resources [3]. Disaster impacts to food and agriculture sectors lies on the declining number of farming production triggering economic loss of the country. This

condition may contribute to the entire value chain of food [4]. For this reason, it is crucial for the state to manage this issue by reducing the risk of these disaster.

The disaster can strike anyone regardless of their nationality, background, identity, and age. Even in this case, children, elderly, women, and poor people are the most vulnerable group in term of facing the effects of disasters. For example, kids and woman are generally known as the most exposed group in the community as a result of their minimum scope of resources to deal with the disaster. For this reason, the disaster education should be initiated from the level of individual, family, and school to get the effective result [5].

Disaster awareness is a social process achieved by the learning process. Therefore, school is the most suitable place for implementing this kind of learning process due to its characteristic as public organization in which people from the different levels gather and interact each other in one place for a certain time. These people are considered as school elements including teachers, students, and school staff. This element is also built on intangible aspect as well such as school value, school management, leadership, finance condition, curriculum, and learning media. Through education, it is hoped that students will get the improvement of their knowledge, attitudes, and skills in dealing with problems of daily life. Based on this point, disaster education must cover these three aspects, namely knowledge, attitudes, and skills.

Unfortunately, Indonesia has not implemented this kind of the disaster education properly. To get this comprehensive disaster education, there are three level of competency that must be accomplished systematically: disaster anticipation management, emergency response management, and post disaster managemen [6]. The non-governmental organization, Sekala, offered disaster mitigation education, but state schools refused, citing many activities (Trinirlamalangningrum in Abdulsalam, 2019). Tsunami detection devices are damaged so as to weaken the government's mitigation or preventive measures to prevent the emergence of casualties when a tsunami wave hits the land [7].

There are several countries that has implemented SWOT perspective in their disaster management. Myanmar is one of the country in ASEAN that has been implementing SWOT perspective in their disaster risk reduction planning [8]. The shortcoming is that the implementation of this agenda is still general. In this context, schools is not placed in the central subject of this disaster education. A more comprehensive SWOT analysis was conducted by Canada in which, the social institution such as the church, school, teachers, bidders, sports groups, participate actively and have the willingness to provide an input for the disaster education [9].

Several countries have made the school as the central basis for implementing disaster education. Cape Verde, for instance, have the “institutionalized” disaster risk reduction in its schools; Mozambique has the special trained teachers to adopt the mainstream disaster risk reduction into school curricula; and the United Kingdom has implemented a project through the Internet to educate students about how to prepare for and respond to a number of hazards [10]. From this example, I suggest that Indonesia may follow the path of these countries by adopting strategic management analysis for disaster education.

2. METHOD

The research method used in this article is literature review. A literature review is an extensive summary of previous study than has been explored on the several specific topics. it reviews journal, books, and other sources related to a distinct area of research. It should give the basic perspective for the research and also help the reader to determine the nature of the

study. This kind of earlier studies are critical as the rationalization for the next research [11]. In this article the authors carry out identification, critical evaluation, and integration of findings about disaster awareness in school communities. The author draws conclusions from a critical analysis of the literature on disasters published in the last 10 years. The disaster literature comes from the case of Indonesia and other countries such as Japan. Furthermore, the authors concludes critically about strategic management studies with a SWOT analysis [12] of disaster education in Indonesia. The sources for this article are primary source (disaster report), secondary source, theoretical, and opinion.

3. DISCUSSION AND RESULT

One of the most important finding from this research is that Indonesia is suffered with the lack of integration and comprehensive coordination and cooperation in dealing with emergency response situations. The orientation of disaster management in general is still more focused on handling emergencies and not on aspects of disaster prevention and risk reduction [13].

Education on disasters has tended to focus on disaster response and recovery, as opposed to proactive actions to reduce disaster risk and increase preparedness. Furthermore, disaster risk is framed as an external event or threat rather than being integrated into development patterns. In order to build disaster resilience in societies around the world, education is needed to reframe how disaster risk can be understood and reduced-not only reducing existing risks, but also preventing the creation of new risks [14].

Some of the countries which have many natural hazards such as Japan and US usually do separate disaster education. In Japan for example, disaster education includes only education for natural hazards. Traffic safety and anticrime education are not included in disaster education. On the other hand, British disaster learning method is diverse from this path which are characterized to be more far-reaching to the all type of risk. For this reason, this type of disaster education implemented by British should not be considered disaster education but exposure training or safety education [15].

Moreover, the historical aspect of the disaster experienced by the country should be considered as the fundamental aspect of disaster management development. Natural catastrophe such Hanshin-Awaji Earthquake on 1995 and Great East Japan Earthquake and Tsunami on 2011 became the fundamental element for evolution in Japan disaster management [16]. These context-specific revisions of the governance contribute to the reduction of risk for future disasters. It is known that the initiative to make collaborative reform in the disaster management by Japanese government are highly motivated to solve the weakness of collaboration between schools and the community and weakness of collaboration between actors in schools as well in disaster response management.

According to the SWOT analyses, there are several strengths that Indonesia has in its disaster education and should be improved. One of this strength is the role that played by Pusat Teknologi Komunikasi Kementrian Pendidikan Kebudayaan (PUSTEKOM) in coordinating the disaster education. Pustekkom is the governmental office under the Indonesia minister of education that facilitates the implementation of information technology in education, learning, and teaching. It has played a critical role in producing educational resources in various media in Indonesia language version. This action benefits most of student and teacher because this disaster education material in Indonesia version are not available before. Pustekkom has been authorized by the government to enclose web content and

multimedia as the response for the significant technology information innovation in the global and domestic area [17]. PUSTEKOM becomes a strength as a medium for teaching material, a means of communication. Effective communication media is one of the success factors in increasing disaster awareness in schools. PUSTEKOM should be used to support a variety of teaching materials, including disaster teaching material.

Another strength comes from the joint agenda organized by KEMENDIKBUD and the government office for disaster in producing the preparation of disaster risk reduction teaching modules. The material in the modules was compiled in 2009, containing enrichment material for teachers, ranging from elementary school teachers to high school [18]. The modules contain about reducing the risk of disasters in earthquakes, tsunamis, landslides, fires and floods. These modules can be used as a teaching guide by the teacher. In addition, the module can be used to build teacher creativity in applying disaster risk knowledge. The module is structured systematically and comprehensively integrates disaster risk reduction knowledge into subjects, local content and self-development in schools.

Indonesia now days is entering a demographic surplus era due to the changes in its age structure of the population characterized by a decrease in the ratio nonproductive population (age less than 15 years and 65 years and over) and the increase in the ratio of productive populations (ages 15-64 years). This change has a great impact on Indonesia dependency ratio. Demographic bonus is a rare phenomenon because it will only happen once in the history of a nation. This is because the demographic bonus occurs when the proportion of the population of productive age is above 2/3 of the total population, or in other words the demographic bonus occurs when the dependency ratio is below 50 [19]. A demographic bonus is a strength for disaster education because of its impact in the development of quality human resources.

According to Preston's argument, the least number of books published on disaster subject [18] should contribute to the weakness of disaster education. Student preparedness in disaster requests pedagogy based on disaster education. Pedagogy based on disaster education needs learning material, disaster trained educators, student psychology analysis, disaster props, and integrated curriculum analysis. The preparedness of student is the important aspect because it involves alertness and preparation to deal with a crisis [19]. This Preparedness should include the student themselves and the others in any situation, before or after disaster and also when disaster happen.

Soon after devastating tsunami 2004, the Indonesia government had been forced to adopt disaster curricula into school. Due to the complexity of educational bureaucracy, the discussion of disaster risk reduction into school was raising debate whether disaster risk education should be established a new specialized subject of disaster or incorporated into existing school course/subjects. These different methods have an advantage and disadvantage. Establishing a new subject of disaster theme into curriculum would create difficulties and take long time to implement it because it related to the need of change the regulation, developing curriculum covering national and adopting local characteristic into disaster subject [20]. The complexity of educational bureaucracy is a weakness in Indonesian disaster education.

The opportunity of disaster education comes from the development of cooperation between institutions through memorandums of understanding as a commitment to support the implementation of disaster management [21]. This awareness of local governments to work across sectors has become a support and opportunity of disaster education.

Another opportunities is that the education for disaster risk reduction has not been systematically incorporated into the curriculum guidelines [22], but in Indonesian school system enables school to find room to integrate disaster issues into the current curricula. This opportunity comes from education system in Indonesia which give the teachers an autonomy

to develop their teaching [23]. In this case, teachers in Indonesia have the autonomy to develop learning, which should be linked to disaster education, especially social studies teachers.

Disaster Management Agencies in several regions have drawn up strategic plans, specifically in the field of disaster prevention and preparedness [24]. This has become one of the opportunities. The Prevention and Preparedness Sector has the function of implementing cooperation with related agencies or institutions in the field of avoidance and moderation of disaster which is also involves the preparedness in pre-disaster and disaster risk minimization. It has been known that the strategic plan in the area of disaster management and prevention has strengthened the coordination between offices in realizing disaster-aware communities.

One of the milestones that should be noticed is that the Indonesia Law Number 24 of 2007 become the legal basis for implementing disaster management. This law represents the shift in Indonesia disaster management from responsive to preventive perspective. Therefore, The Law Number 24 of 2007 should be considered as basis for education sector to carry out disaster education.

However, this constitutional advantage does not give the great impact to the development of disaster education due to the weakness of Indonesia education environment. Even the national education has made a progress but there are still fundamental shortcoming and problem. One of the progress that should be appreciated is that the duration of study or entering school for student becomes more longer than before. Despite the fact of this progress, this path has a little impact on the quality of education and its result [25]. Some education problems in Indonesia are the quality of salaries, the low learning outcomes, the lack of facilities, disciplinary problems, poor educational management, and perverse incentive structure.

The absence of the basic knowledge of geological and environmental condition are the most critical problem leading to the inadequacy of disaster awareness. As a consequence, the number of geohazard victims are still in high level [26]. The dry season, which causes the importance of fires in Jakarta, is a challenge for disaster education [27]. The Data from Jakarta from 1 January to 5 August 2019 shows, besides electricity there are several other causes including the burning of 123 cases of garbage, 107 cases of gas, 38 cases of cigarettes, and 14 cases of candles. Regarding the spread of fire areas, according to the same data, East Jakarta ranks highest with 288 cases, followed by South Jakarta with 280 cases [28].

In addition to this natural disaster, Indonesia is also having a big potential problem of social disaster. Social disaster is catastrophe soured in the aftermath of human behavior including clash between groups and between communities and terror.

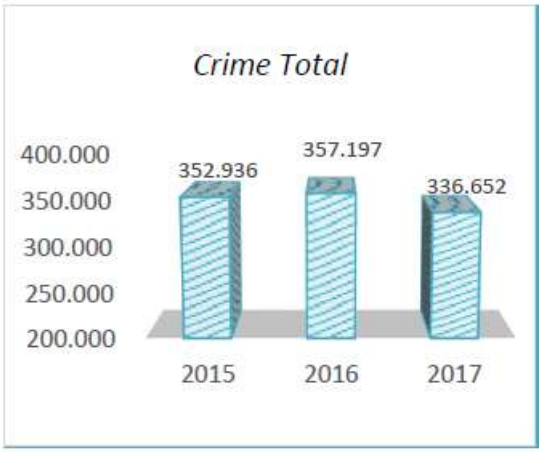

Figure 3.: Crime Total in Indonesia 2015-2017 (BPS, 2017)

One of thing that indicates this social disaster is crime rate. The crime rate in Indonesia is still high [29] in Indonesia, including in social disasters, become a disaster education threat.

Indonesian Police Traffic Corps (Korlantas) issued the statistic on traffic casualty that took place in the four years. In detail, the number of traffic accidents in 2014 reached 88,897 events, then in 2015 it rose to 96,073, increased again in the following year to 106,591 events, and decreased to 104,327 during 2017. Then, increased again in 2018 with a total of 107,968 events. As for victims who died, an average of 30,000 people per year, or 80 people per day. It is different with the victims of serious injuries which have always declined in the last four years or an average of around 20,000 people per year [30].

Susanto explained that in 2014, the total number of brawl cases in education reached 24%. One year later, cases decreased to 17.9%, then to 12.9% in 2016. While last year, cases reached 12.9%. Whereas in September this year it reached 14%. Even in the last two years, KPAI noted there were 202 children who faced legal proceedings in brawl cases. While 74 others were recorded as being involved in cases of possession of sharp weapons. Until now, Susanto admitted there was no effective formula and solution to stop the brawl tradition [31].

Non-natural disasters are caused by mining activities, oil and natural gas drilling, exploitation of ground water sources, and bomb blasts [32]. For example, in Bolaang Mongondow Regency a landslide gold mine caused 16 workers to die [33]. According to the data issued by National Disaster Management Agency (BNPB) it has been recorded that 328,724 hectares lands are burned from January to August this year. South Sumatra, Riau, Jambi, Central Kalimantan, West Kalimantan and South Kalimantan are categorized as the most vulnerable land in this issue [34].

4. CONSLUSION

Disaster education is important to be studied with strategic management perspective in order to find out the Strengths, Weaknesses, Opportunities and Threats. One of that strength comes from Indonesia demographic surplus contributing in the development of human resources. This demographic surplus should not give us the advantage if the development of school is still not oriented in producing disaster awareness of student. Unfortunately, natural disasters have not become an important issue in the scope of schools and the disaster

education has not been systematically compiled as well. This problem has the great impact on the quality of human resources. As consequence, natural and non-natural disasters has become a threat in Indonesia.

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