

# The Literation of Disaster Mitigation for Early Childhood

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**Abstract**—The development of the literation program of the disaster mitigation at the early childhood education is necessary remembering it is getting a lot of disaster around us. Therefore, it is necessary to develop soon and include into the learning, even become one of the themes in education curriculum of early childhood education. Especially in this research aims to develop the learning program of the disaster mitigation at early childhood education. To obtain the research result is used the research method of development. The result of preliminary research produces the introduction study on the implementation of learning about the disasters in early childhood education through a focus group discussion recommending the importance of children is introduced about the wider and deeper disaster themes, because during this time the introduction of disaster is only limited to the aspect of knowledge itself, it does not reach yet how efforts to overcome if the disaster occurs. Furthermore, it has formulated a special learning plan which made in a theme about fire natural disasters with detailed and comprehensive by touching of cognitive, attitude and psychomotor aspects of children in facing of the fire disaster.

**Keywords:** *literation, mitigation, disaster, early childhood children, kindergarten*

## I. INTRODUCTION

The potential of disasters in the Bandung city which is originally "only" limited to floods or fires and hydrological disasters, apparently has been developed. Based on information from the Bappelitbang of Bandung city, 10 sub-districts have the potential to experience liquefactions, if one of the causes is an earthquake in the Lembang Fault occurs [1]. Seeing the facts above, so it is extremely necessary to make an effort in giving awareness to the entire society in order to be aware of natural disasters that will occur unexpectedly. One of the efforts for facing the situation is through the participation and education.

Natural disasters that often occur today strengthen the importance of disaster mitigation education. Mitigation is a series of efforts to reduce the risk of disaster, not only by means of the physical building but also by means of the awareness and the capacity building to face the threat of disaster. Thus the disaster mitigation is an effort to raise the awareness of citizens about wary actions to face natural disasters [2].

The researcher at the Ministry of General Affairs and People Housing, Ahmad Taufiq said, Indonesia could imitate Japan, which could face earthquakes, tsunamis, typhoons, until floods in several ways. One of them is by applying the curriculum policy of disaster lessons since children in Japan sit on a kindergarten bench [3]. Disaster mitigation education can be done by (a) identifying local wisdom in disaster mitigation and (b) integrating learning.

Regarding to the learning in Indonesia, the disaster mitigation education has not been yet included into the learning materials. Such as, moral and religious education, health education of drugs and anti-corruption education.

The West Java Governor, Ridwan Kamil starting from 2019 oblige all schools to implement a disaster response curriculum. Because, West Java region is troubled to natural disasters. Therefore, disaster alert skills are needed to minimize the number of victims [4].

The plan for implementing the above program is given from elementary schools to the high schools level, while the kindergarten or Early Childhood Education level has not been noticed. To balance the West Java governor's program above, the Development of the Disaster Mitigation Literacy Program at the Kindergarten Level is already needed, remembering the potential of the Bandung city in this rainy season, some points are still flooding. We can conclude that the disaster literacy program in early childhood is something that is urgent and necessary to be developed immediately by looking at examples in Japan that have implemented a disaster mitigation curriculum at the level of early childhood education.

Some of the results of previous researches related to the disaster mitigation literacy are: a research on disaster mitigation training in early childhood which is conducted in the village of Tlogolele which concluded that by means of the direct involvement of children in disaster mitigation practices, making children understand what actions should be taken when a disaster occurs so that children have the potential to be survived from the disaster that has occurred [5].

The next research is titled with a survey of school-age preparedness against floods, it concludes that school-age children are able to be agents of reformer for understanding the importance of disaster preparedness, for parents who have children after schooling to give a good example in maintaining

environmental conditions, and schoolchildren preparedness activities for flood disasters can be taught independently in extracurricular activities [6].

The third research regarding the role of geography educators in developing the disaster literacy curriculum, concludes that the first disaster literacy cannot stop the disasters occur but it can reduce the impact of it, both teachers or lecturers are able to play a role in building disaster literacy by means of the arrangement of a disaster literacy curriculum and the use of disaster contextual methods in classroom learning [7].

The latest research on children's participation in the risk reduction program and local disaster risk management as well their contribution toward their rights to develop in building an individual preparedness in the future in responding to disasters and other emergencies safely and responsibly. The research was conducted in the cities of Catarman and Laoang in the Northern Samar Province. Respondents included the principals from primary and secondary schools, private and public schools, several local officials and parents, and a number of elementary school students who were in V and VI classes, and all year levels at the secondary level and elected NGO representatives. The results have revealed that is around 75 percent of activities which involved children were under the preparedness phase of disaster countermeasures, while the remaining 25 percent were included in the mitigation phase [8].

Other research related to the development and application of disaster mitigation learning in children or at the school level has been carried out in several countries, for example in New Ireland, Bangladesh, Cuba and China [9-13].

The position of this research toward the previous researches, this research focuses more on the development of learning themes especially for early childhood, so that previous themes about natural disasters are still part of the sub themes on the major themes in early childhood education. So especially the purpose of this research is to produce an integrated learning program and to be able to enter into the part of the Early Childhood Education curriculum structure, by producing a Semester Program, Weekly Learning Implementation Plan (RPPM) and Daily Learning Implementation Plan (RPPH).

## II. METHOD

This research uses the research method of development [9], its phases are: preliminary study, collecting information and literature study, product design, design validation, design improvement, model testing, model revision and wider testing. This article is only limited to the product design.

The preliminary research was conducted by collecting information from a number of PAUD schools in the area of Bandung City related to the learning plan that has been developed with the literacy of natural disasters toward children. The collecting information is conducted by Focus Group Discussion (FGD), its result is the discussion can analyse any needs related to natural disaster introduction programs in early childhood.

The result of the identification above then it is followed up by the researchers by creating learning programs and disaster mitigation literacy guidelines for early childhood. The next step is the development of learning programs and disaster mitigation guidelines for Early Childhood teachers (AUD), these two products are a core part in the development effort of disaster mitigation literacy for early childhood.

## III. RESULTS AND DISCUSSION

### A. Introduction Study

The disaster mitigation literacy research activities for early childhood, begins with a literature study of information in online news, concerning the plan of the Governor of West Java, on the Disaster Mitigation Curriculum that will begin to be implemented at schools. It starts from elementary school up to high school level. To add information, we also conducted a literature study by examining the results of previous researches on the disaster mitigation for early childhood in online journals.

### B. Focus Group Discussion

Then, to get more accurate information about how far the learning materials that have been developed in PAUD, then the need for any materials that is proper with the disaster potential in the Bandung City, remembering one of the rules in making learning themes for children are necessary to have meaningfulness for children in the future. So we first spreader the questionnaire to PAUD teacher representatives in the Bandung City followed by the Focus Group Discussion (FGD) activities so that the direction and objectives of our research were clearer. The FGD participants were attended by 10 PAUD schools who were represented by school principals or teachers from all over the Bandung City.

The meeting resulted in an understanding of the importance of children to be introduced to the theme of disasters more widely and deeply, because so far the introduction of disasters is only limited to the aspect of knowledge, it did not reach yet to how efforts to overcome when the disasters occur.

Furthermore, in the future it is necessary to be developed special learning plans that are made in a theme about natural disasters independently. Therefore, in the rules of PAUD curriculum development, so it is necessary to be studied start from Core Competencies then Basic Competencies related to the theme of natural disasters, then further developed learning materials and learning achievement indicators. Further, certainly it is made, the RPPM, RPPH, learning scenarios, up to development assessment tools.

The next input is necessary to be a cooperation with special experts who have had an interest in disasters, related to what material and how to practice the disaster mitigation in fact.

As a follow-up to the FGD, so we and the team collaborated with the teacher participants who attended the FGD activities to arrange lesson plans with the theme of Natural Disasters.

The focus of the sub themes that are considered suitable with the geographical conditions of the Bandung city are

floods, fire disasters and earthquake disasters. The achieved results are arranged a complete learning plan, including: RPPM, RPPH, learning scenarios, child development assessment formats.

*C. The Results of the Development of Learning Plans on the Theme of Natural Disasters*

The theme of natural disasters that is presented in this article is limited only to fire disasters. The results of the learning plans that are produced, have been arranged according to the principles of learning in PAUD namely, holistic and integrative. Furthermore, the learning plans also follow the rules of the arrangement of learning based on the 2013 PAUD curriculum where in learning activities contain of Core Competencies and Basic Competencies that are integrated into early childhood development tasks, that accommodate the development of moral and religious values, social emotional, cognitive, language and physical motor and art.

In general, learning materials that are conducted in one week including : drawing fire as God's creation, knowing the cause of fire, knowing the writings of fire causes (human, electricity, lightning, volcano erupting), making fire collages, experimenting fire drill, colouring, conversing, singing fire songs, cutting and sticking creation of fire making, distinguishing images, decorating boxes from scraps, competition of inserting coins into boxes, telling stories, comparing the contents of alms boxes, fire simulations, watching documentaries. In its implementation the phases of learning activities in kindergarten are from simple things then introduced to the complex things.

The development of this learning plan is still focused on the phases of disaster mitigation or awareness efforts toward the community about the various hazards that exist in Indonesia, then learning materials in early childhood are further developed on the prevention of disaster hazards around him/her.

The examples of detailed activities in the Implementation Plan of Weekly Learning are presented in table 1. As follow:

TABLE I. THE IMPLEMENTATION PLANS OF WEEKLY

Activity plan					
<i>Moral and Religion Values</i>	<i>Emotional Social</i>	<i>Language</i>	<i>Cognitive</i>	<i>Physical Motor</i>	<i>Art</i>
Conversing about fire and its nature is the creation of Allah	Children can pay attention and listen to the teacher while talking Children can patiently wait their turn when speaking. when they are washing hands, children can share food when they are eating together, Children can control their emotions when they are playing activities	Can mention the cause of the fire	Matching pictures and recreational equipment goods.	Fire collage	Squeezing red crepe papers
Praying before and after the activity	Completing the task completely	Mentioning the cause of the fire and its mitigation	Observing simulations of fire occurrence and countermeasures	Coloring	Coloring the fire atmosphere
Praying before and after the activity	Discipline in daily activities	Expressing opinions about fires	Distinguishing safe and unsafe pictures	Motions and songs to sing "Fire" songs.	Cutting and sticking activities
Praying before and after the activity	Empathizing the people that are affected by the fire disasters	Telling about the benefits of alms	Comparing alms boxes (light-weight)	Jumping to insert coins into the alms boxes	Decorating alms boxes
Praying before and after the activity	Completing the task completely	Listening, paying attention to stories and expressing opinions	Remembering what to do when a fire occurs	Running	Singing

IV. CONCLUSION

Damaging earthquakes in urban or rural areas around the world have caused severe damage to local societies. Pre-disaster prevention and post-disaster reconstruction are able to reduce significantly the impact of the earthquakes on societies [10].

The disaster risk in a global context is becoming more prevalent in political, economic, social and academic discourses. By increasing media coverage over the past few years, natural disasters have been recognized as events that contain a number of social, political and psychological consequences at the local, regional and national levels. The ability of societies to face natural disasters is still very minimal. This problem is important because it encourages an

understanding of the risks that are be inflicted by disasters and crises as part of the impacts that occur. The efforts that can be conducted are by an education to increase everyone's awareness by building knowledge from the Early Childhood Education level in the general education curriculum [11].

At present the Indonesian government is more focused on the rehabilitation and construction. The government is responsible for giving full awareness of the dangers of disasters that are faced by citizens. Therefore, an approach of literacy mitigation disaster is very important to do. We can learn from big countries like Japan and Korea, in the education system has instilled a natural disaster education there.

Considering the risks that caused by Japan's geography condition that face on earthquake prone areas, it is said that the

disaster education is always delivered at schools in Japan, however, its treatment in the curriculum has changed over the years, from a scientific knowledge model, to a society participation model, to a model multi-danger, to everyday life model in a wider economic, political and social context [12].

The same opportunity that we can do is developing awareness of disaster dangers at first to early childhood. Because at the age of 5-6 years, the awareness phase is the most appropriate phase to be developed for children.

The development of this learning plan is still focused on the phase of disaster mitigation or awareness efforts toward children about the types of hazards that are around them, then the learning materials in early childhood are further developed on the prevention of the disaster hazards that exist surround them in a simple way.

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