ALTERNATIVE APPROACHES AND PRACTICES OF EARLY CHILDHOOD EDUCATION IN THE 21st CENTURY

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Editors:
Hani Yulindrasari
Vina Adriany
Yeni Rachmawati

EARLY CHILDHOOD EDUCATION
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UNIVERSITAS PENDIDIKAN INDONESIA

Mapping the disaster responsiveness in the institutions of early childhood education in Yogyakarta

P. Y. Fauziah
Universitas Negeri Yogyakarta

B. S. Adi
Universitas Negeri Yogyakarta

R. Wulandari
Universitas Negeri Yogyakarta

ABSTRACT: The Province of Yogyakarta is a disaster-vulnerable area. In the same time, there are plenty of early childhood education institutions in the province and these institutions have numerous students. Due to the situation, there should be a study toward the responsiveness of these early childhood education institutions in dealing with the disaster since there have not been many studies that tackle the topic. Therefore, the object of the study was to map the disaster Earthquake responsiveness in the institutions of early childhood education. The approach that had been implemented in the study was the quantitative approach using the descriptive statistical method. Then, the instrument that had been operated was questionnaire and the number of respondents that had been involved in the questionnaire completion was 200 institutions of early childhood education. These institutions were scattered around the Province of Yogyakarta Special Region and the surrounding regencies namely the Regency of Purworejo, the Regency of Klaten, and the Regency of Wonogiri. The results of the study show that 64% of the early childhood education institutions have not mastered the disaster responsiveness, 26 % of the early childhood education institutions have already disaster responsiveness planning, and 10% of the early childhood education institutions have already mastered disaster responsiveness.

1 INTRODUCTION

Based on the history of earthquake incidents, the Province of Yogyakarta Special Region has experienced several cases of destructing earthquakes and these earthquakes occurred in 1840, 1859 (followed by tsunami), 1867 (5 people were dead and 327 settlements were devastated), 1875, 1937 (2200 settlements were devastated), 1943 (250 people were dead, 28,000 settlements were devastated), 1957, 1982, 1992, 2001, 2004, and 2006 (Gusti, 2009). These incidents clearly state that the Province of Yogyakarta Special Region is vulnerable to earthquake. Unfortunately, in relation to the presence of the potential earthquake, the disaster mitigation has not been included to both the curriculum and the learning activities especially in the programs of early childhood education institutions (day care

service, playgroup, and even kindergarten). Any media or institutions that facilitate the explanation about earthquake to the early childhood education institutions are still highly limited. With regards to the statement, a learning model about disaster responsiveness should not only be dealing with the learning materials in the context of daily life but should also be dealing with the non-formal activities through the provision of training programs for the teachers of the early childhood education institutions. Therefore, through the present study the researchers would like to focus on the mapping of the condition and the capacity that the early childhood education institutions have in terms of disaster responsiveness.

The existing curriculum of early childhood education institutions discusses the learning process that involves the materials of disaster responsiveness along with the themes about the natural phenomena (Gov Regulation No 146 2013). However, the curriculum itself is limited to the introduction to numerous incidents of disaster such as earthquake, flood, and eruption without further elaboration with the children like eliciting the children's reaction toward the incidence of the disaster. Recalling the fact that Yogyakarta is vulnerable to disaster, once again there should be a learning model and even a learning module about the learning process on the disaster responsiveness. Both the model and the module will train the educations in the early childhood education institutions to teach and habituate the appropriate attitudes among the children by means of simulation so that the children will be more responsive when they have to deal with the disaster. Thereby, through the study a learning model for the disaster responsiveness will be focused on the teachers and will finally be assigned into limited experiment on the early childhood education institutions. Specifically, the first-year study will be focused on the mapping of the early childhood education institutions' capacity in dealing with the disaster responsiveness. Then, the second-year study will be focused on the development of the learning model on the actions that should be taken when an earthquake occurs, the process of children evacuation, the design of responsiveness marks, the design of evacuation direction, and the performance of limited experiment. Next, the third-year study will focus on the dissemination of the results.

The problems that have been found in the study are related to the limited training program and curriculum development in order to prepare the early childhood teachers so that the teachers will be more responsive in dealing with the disaster. The disaster responsiveness among the teachers are important to pursue since disaster might not be predicted both in terms of incidence. Therefore, the only action that might be taken is to prepare the teachers so that the teachers will not be panic and will understand what they have to do when an earthquake occurs.

In addition to having potential earthquake, the Province of Yogyakarta Special Region also has plenty of early childhood education institutions. For example, in the Regency of Bantul there are 933 residence area in 75 villages and 17 districts with 1,338 early childhood education institutions. On the other hand, the children's participation or involvement in these institutions are 98.75%

(http://www.pendidikandiy.go.id/dinas). As a result, it will be quite risky if an earthquake occurs during the teaching-learning period since the children who will rely on the adults during the incidents do not understand what they have to do unless the disaster responsiveness is taught and is habituated in these institutions. In addition, the results of the field observation show that 30 early childhood education institutions that have been asked to complete the questionnaire do not understand the importance of teaching the disaster responsiveness and do not have the Standard Operating Procedures (SOP) if a disaster occurs. Such situation has encouraged the researchers to develop the most appropriate learning model for the early childhood education institutions so that these institutions will master the disaster responsiveness. Then, the output of the study is a pocket book that will be the guideline for the early childhood education institutions with regards to the Standard Operating Procedures that they should have.

2 METHOD

The method that had been implemented in the study was the descriptive quantitative study using a survey. Then, the instrument that had been implemented in the study was questionnaire. We used survey because they offer researchers a way to collect a great deal of information in a relatively quick and easy way. A large number of responses can be obtained quite quickly, which allows scientists to work with a lot of data. The aspects studied were: attitudes and knowledge, policies, emergency response plans and resource mobilization The number of the institutions that had been surveyed were 200 institutions around the Province of Yogyakarta Special Region and the Province of Central Java. Last but not the least, the respondents in the study were the principals and the teachers of the early childhood education institutions.

3 DISCUSSION

Early Childhood Education refers to the efforts of providing stimulation, training, education, and guidance to the 0 – 8 years old children in accordance to their growth and development in order to prepare their next stage of development (Sisdiknas, nd). Ulla Horkonen defined Early childhood education as a subject and an area of teaching can not be separated from scientific research, they all form one whole. The development of the subject and academic education should be based on scientific research. In Indonesia, the development of Early Childhood Education is quite significant; in terms of quantity, the number of early childhood education institutions has been increasing over the years.

The efforts to strengthen the institution might be pursued by means of formal education, namely the continuation to the higher educational institution, and also by means of non-formal education, namely the provision of training programs. Goldstein and Gressner in Tight (2004) define training as a systematic effort to master the skills, the regulations, the concepts, and the behavioural manners that impact the performance improvement. On the other hand, Singh (1991) explains that non-formal education in this regard refers to the training programs that will

lead to the creation of learner society that have commonly agreed values in order to identify their potentials and to develop these potentials through the lifelong learning on the disaster responsiveness. In relation to the elaboration, the output of the study aims at improving the performance of the teachers and the educational staffs in the early childhood education institutions in managing the institutions when a disaster occurs. It is expected that the output might impact the curriculum that regulates the teaching-learning process among the children.

The earthquake responsiveness training, aims at training good habits on the disaster responsiveness. The objective is in accordance to the opinion by Sarah et al. (1992), who state that the goal of most public education efforts is to change people's behaviour. Furthermore, they state that earthquake education attempts to increase protective actions by people, groups, and institutions by presenting information about the hazard and the risk it poses. As having been explained, one of the objectives in education is to change people's behaviours. Therefore, achieving this end is highly important since the disaster, or specifically the earthquake, responsiveness education aims at improving the individual, the communal, and even the institutional protective performance through the dissemination of the information about the disaster risks and the post-disaster risks.

In general, numerous efforts of limited anticipation have been pursued during the incidence of a disaster and yet the process of post-disaster mitigation has been less discussed whereas post-disaster situation handling is a very important activity since it is related to the society's needs after the incidence of a disaster. The examples of post-disaster handling activity are providing the evacuation shelter, providing the fundamental needs, ensuring security, and pursuing mental recovery in order to avoid the occurrence of trauma among the victims. Similar level of importance should also be given to the training programs for the disaster responsiveness learning process.

Hazard itself refers to both a natural and manmade conditions which have the potentials to cause damage or loss and casualty among the human beings. On the other hand, Vulnerability refers to a number of conditions or causes (physical, social, economic, and environmental factors) that have detrimental impacts on the efforts of disaster prevention and mitigation (Indonesian Ministry of Health, 2016). Last but not the least, Disaster refers to a condition that might cause the damage and even the casualty among the human beings. Hazard in the context of Disaster might be in the form of Earthquake, Volcanic Eruption, Tsunami, Tropical Cyclone (Typhoon or Hurricane), Flood, Landslide, Bushfire (Wildfire), Drought, Epidemy, Major Accident, and Civil Unrest (Carter, 2008). On the contrary, the impact of a disaster might be: Loss of Life, Property Damage and Destruction, Subsistence and Cash Crops Damage and Destruction, Production Disruption, Lifestyle Disruption, Loss of Livelihood, Essential Service Disruption, National Infrastructure Disruption, Governmental Systems Disruption, National Economic Loss, and Sociological and Psychological After Impacts (Carter, 2008).

In Law Number 24 Year 2007 regarding Disaster Mitigation it is mentioned that the objective of designing the law are as follows: (1) protecting the society from the disaster; (2) pursuing the harmony among the existing regulations; (3) ensuring the provision of planned, integrative, coordinated, and overall disaster mitigation efforts that appreciate the local culture; (4) establishing public – private partnership and participation; (5) forging the spirit of communality, solidarity, and generosity; and (6) creating peace in the society, the nation, and the state.

From the process of the disaster mitigation, it might be seen that the disaster responsiveness consists of three stages namely mitigation, responsiveness, and early enrichment. When the disaster emergency situations occur, the actions that should be taken are defining the status of the disaster, performing the search and rescue (SAR) efforts, and protecting the vulnerable groups. On the other hand, the disaster recovery consists of two stages namely rehabilitation and reconstruction. A clear description on these efforts might be consulted in Figure 1 below.

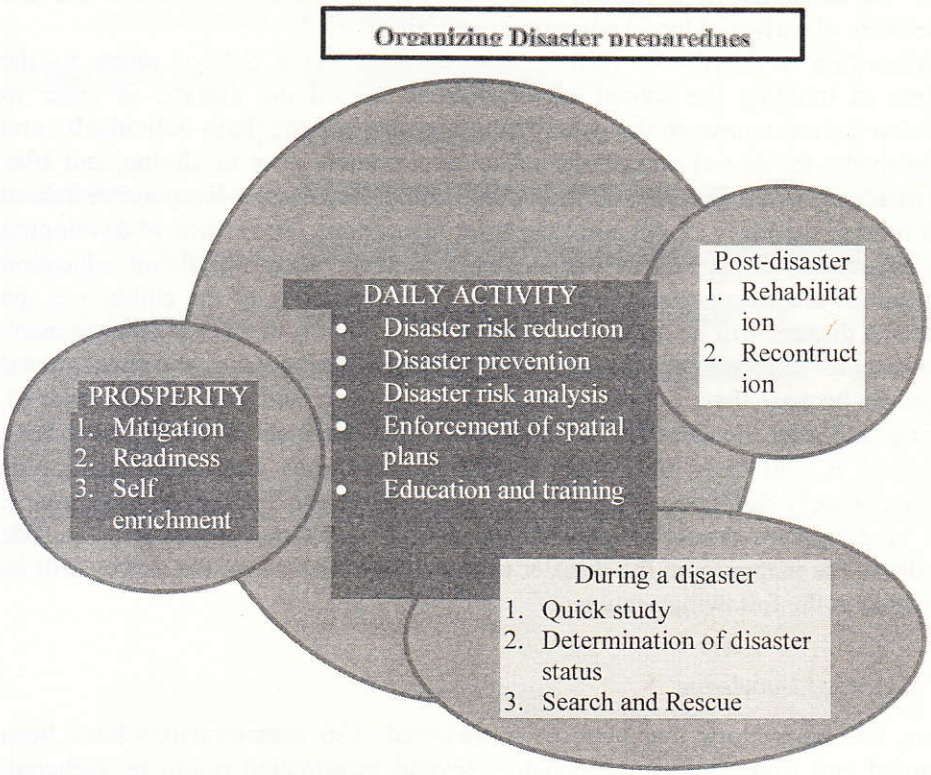

Figure 1. The Conduct of Disaster Mitigation

Children's needs have unique characteristics. In a disaster-caused emergency situation, the needs of every single child should be given attention since in a disaster the children are very vulnerable to be the victims. Not to mention, in a disaster as well the children will be very dependent on the adults. In this context, parents, teachers, and caregivers will be the ones that the children should rely on.

The reliability of the parents, the teachers, and the caregivers are very important since the impacts of the disaster will not only target the children's psychology but also the children's growth and development in the next stage.

The children's condition that is very vulnerable to the disaster urges the parents, the teachers, and the caregivers to pay attention to the children. In a very limited sight during the disaster, the children might be confused about what they have to do, what they have to bring, and where they have to run. Therefore, the safety of the children will depend on the instructions that the parents, the teachers, and the caregivers provide.

The conduct of disaster responsiveness learning process in the low-level, mid-level, and even high-level educational institutions is still low. Not to mention, the conduct of disaster responsiveness learning process in the early childhood education institutions is even still minimum especially with regards to the concept of disaster responsiveness. Therefore, through the conduct of the study it is expected that general guidelines for the disaster responsiveness prior to, during, after the incidence of a disaster might be generated for the teachers and the caretakers of early childhood education institutions.

According to UNESCO (2015), Disaster-Responsive School refers to the efforts of building the school responsiveness toward the disaster in order to develop the awareness on the overall educational elements, both individually and collectively, inside and outside the school environment prior to, during, and after the incidence of the disaster. In the present study, the Disaster-Responsive School will refer to the Early Childhood Education Institutions. The efforts of developing the awareness among all of the elements in these early childhood education institutions are very important to conduct since the safety of the children in the case of a disaster will be highly dependable on the adults, in this case the teachers. The responsiveness of the teachers and the caretakers becomes the fundamental necessity because these people have to act immediately and responsively prior to, during, and after the disaster. Then, the number of the institutions that have been surveyed is 200 early childhood education institutions and these institutions consist of early childhood education-alike units, day-care institutions, playgroups, and kindergartens throughout the Province of Yogyakarta Special Region. The results of the mapping on the disaster responsiveness based on the survey will be provided in the following sections.

3.1 Aspect of knowledge

From 200 institutions that have been surveyed, 136 questionnaires have been returned and from these questionnaires several information might be gathered. 51% teachers have fixed schedules or agenda to attain the knowledge of the hazard and the discuss the kinds and the source of the hazard, the coverage of the hazard, the signs of the hazard in the school environment. Then, 74% institutions have access to the overall school components in order to elicit the capacity, the knowledge, the understanding, and the skills of disaster responsiveness (reference materials, training participation, teacher forum, village-level meeting, students' jamboree and alike). Next, 62% teachers are provided with the knowledge about

the history of the disaster that once took place in the school environment or in the region. 82% teachers or caretakers possess the knowledge of vulnerability and capacity that the school and the surrounding environment have. Furthermore, 54% institutions have the knowledge and pursue the efforts to minimize the disaster risks in the school through the continuous learning programs or activities. 36% institutions have the skills in the form of training programs for all educational components with regards to the conduct of the disaster responsiveness plan (fire, earthquake, or other situations of disaster) and 38% institutions perform regular simulations for the children. Last but not the least, 24% institutions have performed the socialization and the training programs on the disaster responsiveness for the children and the stakeholders.

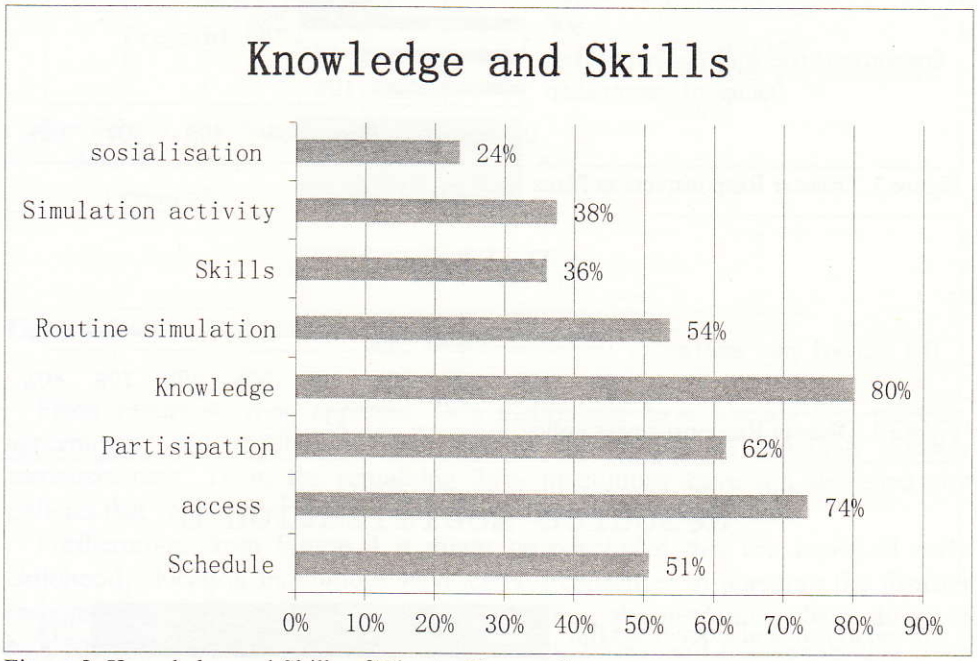

Figure 2. Knowledge and Skills of Disaster Responsiveness

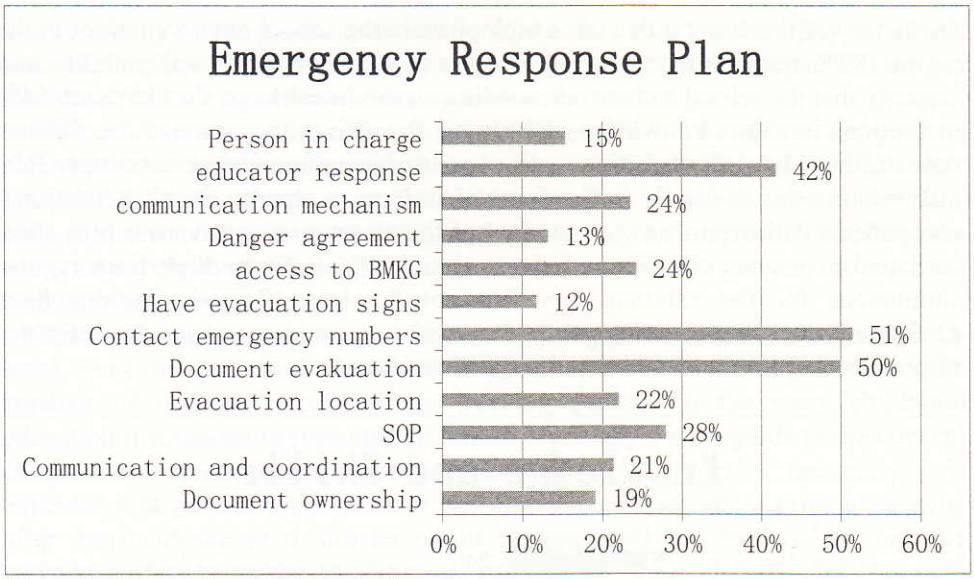

Figure 3. Disaster Responsiveness Plans

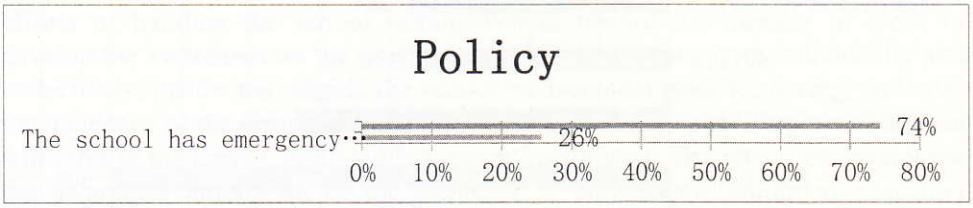

Figure 3. Disaster Responsiveness Policy

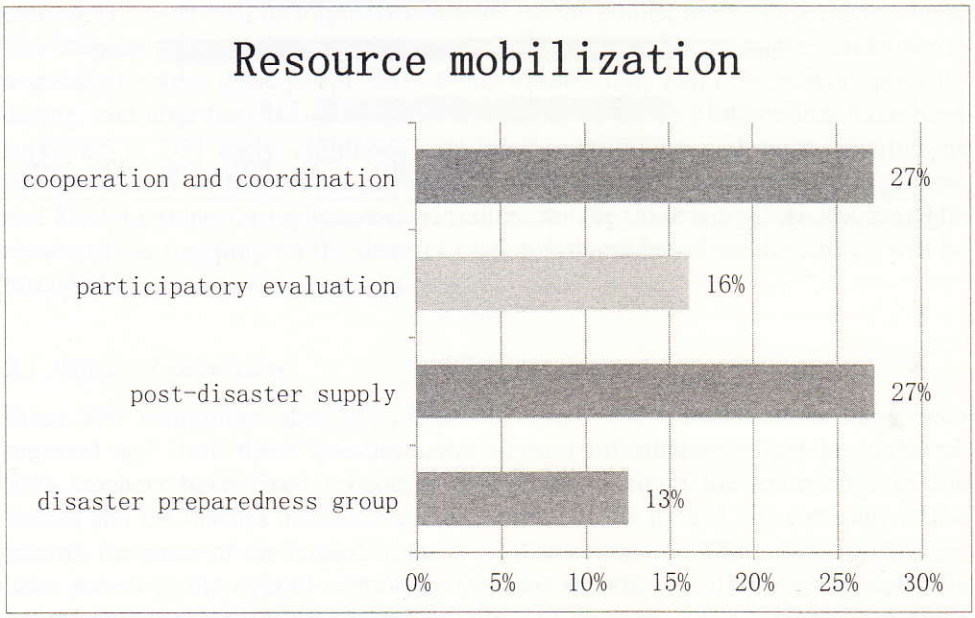

Figure 4. Resources Mobilization

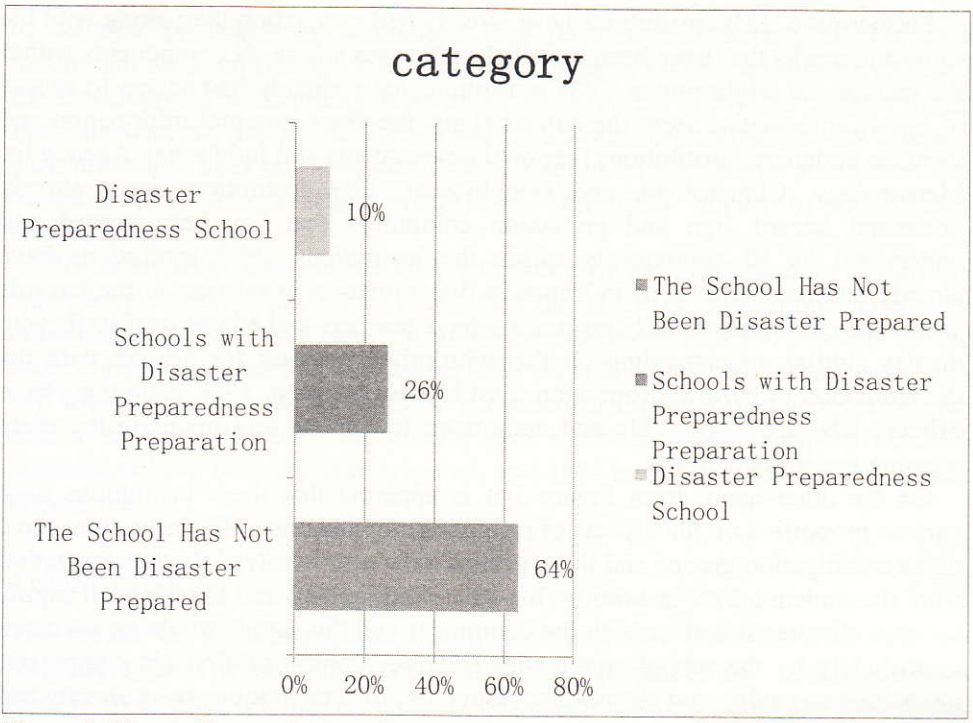

Figure 5. Disaster Responsiveness Category

From Figure 4, it is apparent 26% institutions have already had policies, agreements, and regulations that support the efforts of pursuing disaster responsiveness. Then, the remaining 74% institutions have not designed any policies that support the efforts of pursuing disaster responsiveness.

Furthermore, from Figure 4 it might be concluded that the surveyed early childhood education institutions have certain capacities in pursuing the disaster responsiveness. With regards to these capacities, the institutions have different proportion. 19% institutions have disaster risk assessment documents that have been participatorily designed with the foundations, the teachers, the parents, and the stakeholders. 21% institutions have communication and coordination protocols when a disaster occurs. 28% institutions have Responsiveness Fixed Procedures that have been agreed and been implemented by all of the components. 22% institutions have evacuation location/shelter agreement and availability within the close proximity and both the agreement and the availability of the evacuation location/shelter have been socialized to the institution components, the parents, the surrounding communities, and the regional government. 50% institutions copy and store important documents in order to preserve the legitimacy of the institution. 24% institutions have recorded important information such as phone numbers of several hospitals, fire extinguishers, phone numbers of several sectorial police departments, emergency aid within close proximity, public health centres/hospitals within close proximity, and nearby security apparatus.

Furthermore, 12% institutions have already had evacuation map along with the signs and marks that have been installed in the area where all components within the institutions might notice. 24% institutions have already had access to source of hazard information from the natural signs, the environmental information and even the authorized institutions (regional governments and Indonesian Agency for Meteorology, Climatology, and Geophysics). 13% institutions have already possessed hazard sign and protection equipment that has been agreed and understood by all components within the institutions. 24% institutions have already had mechanisms of information dissemination in relation to the hazards within the environment. 42% institutions have teachers and educational staffs who display similar understanding on the appropriate reaction for dealing with the dissemination of hazard information. Last but not the least, 15% institutions have officers who are responsible and authorized to operate and maintain the early warning system equipment.

On the other hand, from Figure 5 it is apparent that these institutions have various proportion on the aspects of resources mobilization. 13% institutions have disaster mitigation groups and these groups have also involved the representation from the students. 27% institutions have basic equipment and fundamental supply for after-disaster situation; both the equipment and the supply might be accessed immediately by the school community and they consist of first aid equipment, medicines, tarpaulin, and clean water resources. 16% institutions have already had participatory monitoring and evaluation system with regards to the disaster responsiveness and the system involves regular training programs. Last but not the least, 27% institutions have established cooperation with the relevant parties in relation to the conduct of disaster mitigation; the cooperation itself involves the local authority (village/district environment) and governmental institutions/Indonesian National Board for Disaster Management that are responsible for the coordination and the conduct of disaster mitigation in the city/regency.

Based on the data, the interesting part that might be found from the aspect of knowledge and skills is the high level of knowledge that the teachers and the caretakers have in relation to the introduction to and the situation within the disaster. However, in relation to the implementation of the knowledge and skills into curriculum and learning simulation, there are only less than 30% institutions that have the related knowledge and skills. There are even 24% institutions only that provides the knowledge about the disaster. Then, from the aspect of policy it is found that 76% institutions have not designed any policy, agreement, and regulation that refer to the presence of synergy or collaboration with the authorized parties. Certainly, this finding should be a common concern because any learning activities on the disaster responsiveness might not be designed if these activities are not equipped with any disaster responsiveness-related policies as the solid base for implementation. Fortunately, despite the finding there are still some institutions that have designed the disaster responsiveness-related policy, regulation, and coordination. Such situation occurs due to the imbalanced figure between the number of early childhood education institutions and the quota

of training programs or workshops that relevant institutions, in this case Indonesian National Board for Disaster Management, Office of Education, Centre for Development of Learning Activities, and Learning Activities Studio, might facilitate with regards to the discussions of disaster responsiveness. As a result, each institution does not have detail curriculum up to the disaster simulation and therefore this concern might bring about significant impact to the disaster responsiveness.

Moreover, from the analysis on the capacity of the institutions to design the emergency response plan it is found that the surveyed institutions have very minimum capacity. As a result, it might be concluded that the capacity of the early childhood education institutions with regards to disaster responsiveness is still low. The low capacity might be consulted in Figure 5. In overall, from the data it is found that 64% institutions have not been disaster responsive, 26% institutions have been disaster prepared, and 10% institutions have been disaster responsive.

4 CONCLUSION

The results of the study show that 64% institutions have not been disaster responsive, 26% institutions have been disaster prepared, and 10% institutions have been disaster responsive. Disaster responsiveness indicators are: knowledge and skill, disaster responsiveness planned, policy and resources mobilization. Departing from the conclusions, a further study should be conducted in the second-year study in order to provide solutions for the development of disaster responsiveness learning model in the early childhood educations institutions. In the same time, an observation and an in-depth interview should be performed and several documents should also be reviewed in order to crosscheck the items that the questionnaires have completed.

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