

## EMPOWERING STUDENTS IN DISASTER RISK REDUCTION THROUGH PARTICIPATORY APPROACH

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### Abstract

This paper aims at discussing the results of a study in SMA Muhammadiyah 1 Klaten in 2015. The study investigated how participatory approach can empower students in disaster risk reduction (DRR). This is beneficial in the fulfillment of child rights in terms of protection and participation in building a safe school. The study covers the procedures, materials, and the effect of participatory approach on students participation in DRR. The research was qualitative research. The participants were 40 students of students organization board of SMA Muhammadiyah I Klaten and two tutors from Muhammadiyah University of Surakarta. The data were collected through observation and interview and analyzed using inductive technique. The result shows that the procedures of DRR training using participatory approach consist of: 1) Preparation: preparing students for DRR, socializing DRR program, setting the negotiated scheduled, 2) Training: Guided and Independent training, 3) Material selection: involving students in determining the materials of the training. 4) Students' activities after the training program: Spreading the knowledge to other students/community, training other fellow students and The students board (OSIS) has established a division of DRR called "TIM SIAGA BENCANA" which consists of some selected students. The students determine the mechanism of recruitment by themselves. The students feel that DRR training is important to help them cope with disaster and participatory approach, make the material easy to understand and practice. The approach has made students participate in DRR with sixth level of participation. Therefore, the approach has empowered the students to highly participate in spreading the knowledge and the awareness of DRR to other students and the community.

**Key words:** Participatory approach, Disaster Risk Reduction, safe school.

### INTRODUCTION

Children have their rights to fulfill which include 3 P's (Provision, Protection and Participation). These include 3 P's in all circumstances - including disasters, when they are at their most vulnerable - and the right to participate in decisions that ultimately affect them. Government of Indonesia has issued some regulations about children rights including developing child-friendly environment, cities and schools. As for the school, safe schools in disaster potential areas have become the main consideration.

A safe school is a school which is safe for all people at school including the students, teachers, and other education staffs. The safety of a school may deal with all risks of all kinds of disaster, including natural

disaster. SMA Muhammadiyah I Surakarta is one of schools located in disaster area in Central Java. The teaching and learning process in this school to some extents has concerned 3P's of CRC. In terms of provision, this school provides facilities for teaching and learning process such as free books for students, comfortable and well-equipped classrooms and qualified teachers. In terms of protection, this school has protected children with the rules such as anti-violence and bullying rules while in term of participation, the school has involved student's organization, named Organisasi Siswa Intra Sekolah (OSIS), to take part in any programs. In addition the teaching method in this school has been students-centered which makes students highly participate in teaching learning process.

However, as a school which is located in disaster area and which has experienced some effects of disaster, the curriculum has not included the provision of subject or program which involves students' participation related to the mitigation of disaster and how to cope with disaster.

Since it was founded, this school has experienced the effects of Merapi eruptions many times including some earthquakes caused by the eruptions. Dealing with the disasters in this region, the actions given so far are those needed to help the casualties of the disasters. The local government quickly responds the disaster by some fast-responsive programs including some trauma-recovery programs for children. In this case, the government has paid their attention to the child rights to get recovery from disaster effects. The local government has not been aware of the importance of the mitigation of disaster by providing some knowledge and training especially for children and their teachers.

Related to the preparedness of the disaster, initial evaluation of SMA Muhammadiyah 1 Klaten in disaster preparedness need improvement. Based on Indonesia Science Institute (LIPI) criteria (2006), the percentage of preparedness of this school is 50% that categorized of less of preparedness. This evaluation shows low of performance in students protection, especially in rights of children to live and survive. Therefore, the team implemented and investigates the project in child friendly classrooms in Muhammadiyah I Senior High School Klaten to empower students in disaster risk reduction (DRR) through participatory approach.

Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters. Reducing exposure to hazards, lessening vulnerability of people and property, wise management of land and the environment, and improving preparedness and early warning for adverse events are all examples of disaster risk reduction (UNESCO). The DRR is closely related to Child Rights

Convention (CRC) referring to article 19 of CRC that talk about child's right protection from all forms of violence. In addition, article 6 of CRC states about life, survival and development that among others is about educating a child about disaster risk and empowering the child to use that knowledge supports (life, survival and development). While ensuring the participation and voice of a child in DRR efforts uphold Article 12 (respect of the child's views).

There has been some research on disaster risk reduction, but there is no research on DRR found in Indonesia. Therefore the writer investigated the DRR in SMA Muhammadiyah 1 Kaltén which used participatory approach to empower students. The research problem is how can students be empowered in disaster risk reduction using participatory approach? To answer this question, the research investigated the procedures of empowering students in DRR, the materials of DRR training using participatory approach and the students' follow up activities related to DRR.

Participatory approach is a teaching strategy that incorporates themes or content area that are of interest to the learners. According to Auerbach (as cited in Ross, 1995), learners are also encouraged to take ownership of their learning as well as collaborate with the teacher, including participating in small and whole group activities for learning to be meaningful. The Participatory Approach is a brainchild of Brazilian language educator Paulo Freire. The goal of this method is to use language learning as a tool to provide solutions to social problems that impact learners in their daily lives.

Some principles of participatory approach adopted from Pretty (1999) include: 1) defined methodology and system of learning and interaction emphasis on the validity of participants' different opinions and perspectives group learning processes, 2) involving interaction of development participants with local people, and interaction of different disciplines and sectors, 3) flexible approaches adapted to each set of conditions and participants, 4) development

participants facilitate the agenda and priorities of local stakeholders.

Participatory approach is related to the participation. The level of participation is shown in the following table shows the level of participation according to Ladder.

Table 1. Sherry Arnstein’s Ladder of Participation

Degree s	The Ladder of Participatio n	Description
<b>PARTICIPATION</b>	8. Child-initiated, shared decisions with adults	Children have ideas, set up the project and come to adults for advice, discussion and support. The adults do not direct but offer their expertise for the children consider.
	7. Child-initiated and directed	Children have the initial idea and decide how the project is carried out. Adlts are available but do not take charge.
	6. Adult-initiated, shared decisions with children	Adults have the initial idea but children are involved in every step of the planning and implementation . Not only are their views considered, but they are also involved in taking the
<b>NON-PARTICIPATION</b>	5. Consulted and informed	The project is designed and run by adults but children are consulted. They have a full understanding of the process and their opinions are taken seriously.
	4. Assignment but informed	Adults decide on the project and children volunteer for it. The children understand the project, and know how decide why they should be involved and why. Adults respect their views.
	3. Tokenism	Children are asked to say what they think about an issue but have little or no choice about the way they express those views or the scope of the ideas they can express.
	2. Decoration	Children take part in event, e.g. singing, dancing or wearing ‘T’ shirts with logos on, but they do not really

	understand the issues.
1. Manipulation	Children do or say what adults suggest they do, but have no real understanding of the issue OR, Children have asked what they think, adults use some of ideas but do not tell them what influence they have had on the final decision.

Source: Hart. R. (1992) Children's Participation: From Tokenism to Citizenship, Innocenti Essays, UNICEF

**RESEARCH METHOD**

The study investigated how participatory approach can empower students in disaster risk reduction (DRR). This is beneficial in the fulfillment of child rights in terms of protection and participation in building a safe school. The study covers the procedures, materials, and the effect of participatory approach on students participation in DRR. The research was qualitative research. The participants were 40 students of students organization board of SMA Muhammadiyah I Klaten and two tutors from Muhammadiyah University of Surakarta. The data were collected through observation, interview and analyzed using inductive technique. Observation was conducted to get information about the procedures and the materials being used. The interview was conducted to get information about the students' activities in DRR after the training given by the tutors.

**RESULT AND DISCUSSION**

The result shows that the procedures of participatory approach in DRR consists of 1) Preparation: preparing students for DRR, socializing DRR program, setting the negotiated scheduled, 2) Training: Guided and Independent training, and 3) Material selection: negotiating the format of the training and determining the materials of the training. 4) Follow-up Activities: Spreading the knowledge to other students/community.

**Preparation**

Before the training program, the team informed the students about the program of DRR. The team set the meeting agenda with the students. The meetings with students were conducted twice. Firstly, meeting with student board or called as OSIS. They were 6 students as the part of OSIS. After explaining the project, team asked the OSIS's students about disaster and they described that they only remembered the panic situation when Mount Merapi erupted. The second meeting was conducted in the mid of orientation programme for the new students of SMA Muhi Klaten. However, the training was only for the members of OSIS. In the second meeting, the DRR training scheduled was negotiated with the students so that they were involved in determining the schedule.

**Training**

The students agreed to have training on Fridays every week, from 4-5 pm. After the preparation in the first month, the team interviewed the teachers and the students to collect some information about their knowledge, perspectives and feelings about disasters and their ideas about how to cope with disaster. This information is used to help the team design the materials for training that fit the students' best interest. The materials consisted of some knowledge

about disaster preparedness and simulations of DRR which covers the Concept of School-Based Disaster Preparedness, Parameter, Indicator, and Verification, and Guidelines for School-Based Disaster Preparedness Development

The team trained the students once a week . The activities consist of Evacuation and Response Simulation. The simulation was conducted twice. Before simulation, school community (students, teachers, principal, and administrator) participated in identifying school's resources and designing of evacuation route, school's response policy and procedure on disaster, and disaster response team have responsibility on emergency response plan, disaster early warning system and resource mobilization. After the discussion, students practice the result of discussion on two simulations.

At the beginning, the students were trained based on the tutor's instruction. The responses were not so good as the students seemed did all the activities reluctantly. The tutors then changed the activities in the following meeting by involving students much in the scenario of activities. The students participated in creating the scenario of simulation. They also participated in making evacuation signs. After the training and simulation, students and OSIS were encouraged to have initiation to empower other students. The students spread their knowledge and the mitigation issue to other students and community. In the guided training, the tutor became the instructor who instructed students to do some activities related to DRR. This seemed to be not so successful since the students performed the activities reluctantly. They did the practice as if it were only a game.

In the second and the following meetings, tutor then changed the nature of the training to be an independent training. This means that the tutors only acted as facilitators who only gave some explanation

to what the students should do. The students created a simulation based on what they knew about disaster and the knowledge given in the first meeting. They even made some slogans that made them do the practice seriously. Based on the observation, the training made the students more active and skilfull. The training activities covering the activities of DRR which are adjusted to the students needs.

Initially, this program was facilitated by CRC team with support from Center for Disaster Mitigation of UMS. After three times, there was changing in initiative after the principal discussed this with some teachers and students then decided to invite some staffs from Regional Disaster Mitigation Center.

### **The material**

As for the material of the training, the tutors negotiate the material to be used on training. The tutor firstly showed the existing material for DRR from Consortium for Disaster Education and *Modul Ajar Pengintegrasian Pengurangan Risiko Gempa Bumi* written by Sofyatiningrum (2009). The tutors negotiated it with the students. The students asked the tutors to simplify the material. They felt that the material was too complicated for them. They thought it was too serious and scary. Based on the students' opinion, the tutors then modified and simplified the material. The students feel that the material is easy to understand and practice.

### **The students activities in DRR after the training**

After the training and simulation, students and OSIS were encouraged to have initiation to empower other students. The students spread their knowledge and the mitigation issue to other students and community. Their activities were:

- a. Socialization to other students
- b. Socialization to parents and community

Referring to the Level of student's participation was increasing to level 6 of Sherry Arnstein's Ladder. Change agents had the initial idea but students were involved in every step of the planning and implementation. Not only were their views considered, but they were also involved in taking the decisions. Students also educated the parents and community about disaster risk reduction as community development activities. These give the impact not only to teachers-students relation in school but also school-community relation.

The activities following the program was then supported by the school through the building of the DRR team of Muhammadiyah 1 Surakarta. This team has been trained and spread their knowledge by their own creativity which can be categorized to level 6 of Ladder.

The above results show that the participatory approach has made students participate in DRR through their activities such as spreading the knowledge to the community and other students and training other students. The students board (OSIS) has established a division of DRR called TIM SIAGA BENCANA which consists of some selected students. They determine the mechanism of recruitment. The participatory approach used is in line with that proposed by Pretty (1999) which includes:

- 1) defined system of learning and interaction emphasis on the validity of participants' different opinions and perspectives group learning processes.
- 2) involving interaction of development participants with local people, and interaction of different disciplines and sectors,
- 3) flexible approaches adapted to each set of conditions and participants,
- 4) development participants facilitate the agenda and priorities of local stakeholders.

In this study the students defined the schedule and the nature of training which reflected the flexible approaches

implemented in the program. The students are also involved in the material selection and set their own agenda for the communities and their surrounding.

## CONCLUSION AND SUGGESTION

This study shows that the participatory approach has given the stimulus for students to build their creativity to spread their knowledge about disaster and train other students. By using participatory approach, students are encouraged to highly participate in all DRR activities. Therefore, this leads to the empowerment of the students in DRR. Moreover, as the students participate in DRR, the school has also been enthusiastically developed this program by giving regular trainings collaborated with the disaster management board of Klaten. This supports the school to become a save school while also accommodate child rights to participate and to protect themselves.

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