INDONESIA

Empowering students in disaster risk reduction (DRR). A CRC project at Muhammadiyah 1 senior High School Klaten

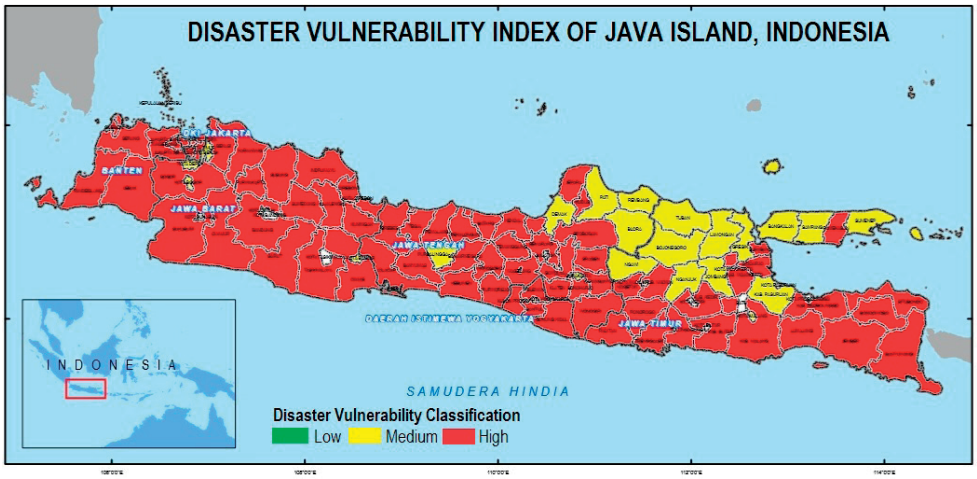
M. Amin Sunarhadi, Mauly Halwat Hikmat, Agus Supriyadi

1. Introduction

Indonesia has experienced many disasters as it is an archipelago located at the meeting points of the earth's tectonic plates. The Euroasian plate is directly collided with the Indo-Australian plate in the west and south side. Another meeting point of three plates are in the east, namely Phillipine Sea plate, Pacific plate and Indo-Australian plate. Such geographical location has made this country prone of geological hazards such as earthquake, tsunami, landslide and volcanic eruption.

In addition, due to the impact of global climate change and rapid population growth with the complexion of plurality in the society, Indonesia becomes more vulnerable. In short, the geographical and demographic characteristics as well as other aspects have posed Indonesia at a high level of risks. *Badan Nasional Penanggulangan Bencana*/ BNPB (the National Agency for Disaster Management) recorded that there were 1,306 disaster occurences with the total number of 624 people dead and missing, 5,570,928 people suffered and internally-displaced due to disasters, and 77,975 houses damaged each year (in 2009). However, so far the government does not pay much attention to the students' participation in the mitigation of disaster despite good responses and action to help the casualties of the disaster.

Under the UN Convention on the Rights of the Child (CRC) children have inalienable rights in all circumstances - including disasters, when they are at their most vulnerable - and the right to participate in decisions that ultimately affect them. The DRR is closely related to CRC referring to article 19 of CRC that talks about child's right to protection from all forms of violence. In addition, article 6 of CRC states children's rights to life, survival and development that among others is about educating a child



about disaster risk and empowering the child. Simultaneously it is necessary to ensure the participation and voice of children in DRR efforts to enforce Article 12 (respecting the views of children).

This article presents the report of the project of CRC sponsored by SIDA. The project focused on empowering students in disaster risk reduction (DRR) and was conducted at Muhammadiyah I Senior High School in Klaten, Central Java.

2. Frame of reference

Indonesia has ratified the UN Convention on the Rights of the Child of November 1989 on August 25th, 1990 with Indonesia Presidential Decree number 36/1990, and other laws. However, most Indonesian people, even the educated, know a little or nothing about child rights despite the efforts made by the government. Actually, Indonesian government has taken many efforts to realize 3Ps (Provision, Protection, and Participation) of child rights.

For Provision, the government of Indonesia implements some programs, such as: (1) Additional Food Program for School Children (*Program Makanan Tambahan Anak Sekolah*), (2) Milk Drinking Movement (*Gerakan Minum Susu*), (3) School Doctor (*Dokter Sekolah*), (4) Act of Education System, number 20/2003, where 9 years education is compulsory for all children, (5) Financial Assistance for School Operation (*Bantuan Operasional Sekolah*), and (6) Financial Assistance for Poor Students (*Bantuan Siswa Miskin*).

Dealing with Protection, with the law on Child Protection, Law Number 23/2002 (Undang- undang Perlindungan Anak), Indonesia really cares about protecting children from trafficking, employment, parents' ignorance, bullying, and abuse. There are also some Non-Governmental Organizations handling these issues.

In terms of childrens' Participation, Indonesia has promoted many programs related to the right of the child to freedom of expression. In education context, the government implements many programs that are intended to encourage the students to be active in the classroom or at school. Through the latest curriculum, the teachers were urged to implement student-centered learning and active learning and PAIKEM (*Pembelajaran Aktif, Inovatif, Kreatif dan Menyenangkan*/Active, Innovative, Creative, and Friendly Learning). The Government also provides in-service training to facilitate the teachers to implement that program. The teacher training colleagues are also invited by the municipality to coach the teachers in the local area such as in MGMP (Teachers Group by Subject) which are held every week. The training and coaching are usually focused on how the content, process, operation and evaluation standard are all arranged in lesson plans and implemented in the learning process. Related to student organization, there is an OSIS (Internal Student Organization of School) in every Junior and Senior Secondary School. This organization enables the students to take part in school activities although it has not yet functioned as students' council.

To promote CRC Indonesia has sent 14 teams to training held by SIDA. The first batch was sent in 2003 and the last batch (batch 20) was sent in 2014. Therefore there are 42 agents of change in Indonesia. The three P's are the concern of all change projects with speical focus on participation and development of child friendly schools. The projects are covering schools located both in urban and rural areas.

The change agents represent different socio-administrative levels. As for batch 20, the team consists of the vice principal of Muhammadiyah I Senior High School, Klaten, two lecturers of teacher training and education Faculty of Universitas Muhammadiyah Surakarta (UMS). One is lecturer of Geography Education and one is lecturer of English Education as well as a member of Centre of Teacher Improvement of UMS.

Referring to the data of disaster preparedness, as surveyed in 2012, Muhammadiyah 1 Senior High School Klaten was classified "not prepared" to face a disaster. This evaluation shows low performance in protection of the students, their rights to live and survive.

3. Purpose

This project aims to empower students in DRR.There are three specific objectives:

1. Providing students with the knowledge of disaster.
2. Involving students in disaster preparedness and socializing the knowledge and disaster preparedness to other students and community, and
3. Integrating DRR knowledge in the curriculum.

4. Project site

The setting of the project is Muhammadiyah 1 Senior High School Klaten. It belongs to *Muhammadiyah*, the second-largest non-governmental organization in Indonesia with 29 million members, established in 1912. It has more than 27 universities, 5,754 schools, 144 hospitals, 318 orphan houses, 81 disable rehabilitation centers, 6.118 mosques, and so on (www.muhammadiyah.or.id). Since Muhammadiyah plays a big role in education, the project is expected to inspire and even innovate the curriculum in other schools located in any potentially disaster area.

The teaching and learning process in the selected school had already, when the project started, to some extent implemented the 3P's of CRC . In terms of provision, the 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, the 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 student-centered which makes students highly participate in teaching learning process. However, as a school which is located in a 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 needed improvement as well as shown as Table 2. Based on Indonesia Science Institute (LIPI) criteria (2006), the percentage of preparedness of this school was 50% that categorized of less of preparedness.

As for handling disaster, so far the government and even the school management and community think that it is merely of adults responsibility. Children are not involved. Referring to this condition, the project will provide primarily teachers and students with adequate knowledge about disaster and how students participate to cope with disaster and mitigation of the disaster effects. The parents and community will become the target of dissemination by the students. This will give the impact not only to teachers-students relation in school but also school-community relation.

5. Methodology

The team designed the program to empower students' participation and improve school roles in disaster risk reduction.

Target Group and Stakeholders

The Target Groups are students, teachers, school management and stakeholders including BPBD (Regional Disaster Mitigation Center), school community, and Education Department.

Activities

To achieve the objective, the team arranged meeting with parents, workshops for teachers, and Disaster Risk Reduction training for students'.

6. Results

The program was implemented in the following activities based on the following outputs as planned:

1. Preparing the target groups

The team informed the target groups about the plan. The target groups (teachers and the students) were informed about the project and the procedures. The participants of the meeting were 30 teachers and 100 students.

On June 19th, 2013 the team informed the principal and all teachers about the plan.The background of the project and the procedures that would be implemented

Figure 1. Introduction about change project

Figure 2. Teachers gave hight attention by the CRC Team to teachers and support for change project

were the main topics of that meeting. The participants of the meeting were 30 teachers. The team described the CRC project, and introduced the participants to the project. All teachers gave the high attention to the team and gave very good responses to the project.

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. The second meeting was conducted in the mid of orientation programme for the new students of SMA Muhi Klaten. There were 100 students attending the meeting.

The third meeting was meeting with parents. Parents were informed about the disaster risk reduction and the program of empowering students to participate in disaster risk reduction.

2. Creating baseline.

The teachers and the students were given questionnaires to measure their preparedness. The result of this was compared to that after the training. The team was supported by many students involving in this research. The teachers and the students were given questionnaires to measure their preparedness.

The preparedness levels of teachers in disaster are in range from "prepared" to "very prepared". The study showed that teachers have a very good knowledge about disaster and also "Very Prepared" in Disaster Preparedness. In contrast, students have low level for preparedness even they know much about kind and processes of disasters.

The data about school preparedness before the CRC change project can be seen in the following Table 1.

Table 1. Initial data of SMA Muhammadiyah 1 Klaten in disaster preparedness index

INDICATORS	Yes	No	Score (0 or 1)
School has the section of Disaster Preparedness in School and Medical Aid Team		V	0
School provides the basic equipment for Victims of disaster, e.g. first aid , stretcher (dragbar), medicines, tarpaulins, tents, and water resources .		V	0
School monitors and prepares evacuation (school provides readiness test or train on a regular basis)		V	0
School cooperates with relevant parties both local disaster management (village and sub district) as well as governmental agencies responsible for the coordination and implementation of disaster management in the city or county .		V	0
School buildings are not located on land near the former and final disposal (landfill) and the local mining		V	1
School building is away from high voltage power lines (at least 0.5 km)		V	1
School building is quite far from the river and is at an elevation that is safe from floods		V	1
School buildings are not on top of a cliff or slope should not exceed 6 %		V	1
Form of school buildings as much as possible are symmetric and simple to anticipate the damage caused by the earthquake	V		1
The shapes of the school building are T, L, and U to prevent the separation of structure damage caused by the earthquake or subsidence.	V		1
The building is designed with air circulation and adequate lighting.	V		1
The class has two doors open out.		V	0
School has enough evacuation route, not blocked and secure with clear directions and are easily identifiable by learners.		V	0
School has furnished equipment ,media education, books, and other learning resources, information technology and communications and other equipment	V		1
The building is equipped with facilities and infrastructure fire prevention and suppression, at least in the form of a light fire extinguishers (APAR)		V	0
School buildings has sufficient and adequate clean water and sanitation.		V	0
Total			8
Percentage			50%

Source: Survey

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. The result of the interviews shows that students have experience with earthquakes and volcanic eruptions, but do not know exactly what to do if it happens again. This is reflected in an excerpt of an interview with the student.

> Question (Q): What did you do when Merapi errupted in 2010
>
> **Student Answer (SA): It happened when I was 14 years old. I was just trembling and called my parents.**
>
> Q: what if the disaster happened at school when you were in the school?
>
> **SA: I did not know....confused may be**
>
> Q: Do you think this knowledge is important?
>
> **SA: Yeah...important**
>
> Q: Do you think it is necessary for the school to give training or to get knowledge about disaster at school?
>
> **SA: Yes...**

After compiling the results of interviews and questionnaire survey on students and teachers, the team drew the following conclusions:

1. Teachers and students know well enough about the disaster.
2. Teachers have high score on preparedness for disasters
3. Students have low scores on preparedness for disasters
4. Training on DRR is needed to be given to the students

These informations were used to help the team design the materials for training that fit the students' best interest. The data were analyzed using inductive analysis to find the pattern. The analysis of data obtained from the teachers and the students was used to design the material of the mitigation program.

3. Availability of materials of DRR training

The material design was conducted in the fourth and fifth month of the project. The team collected the material needed and adopted some relevant topics from existing materials. The team then developed the simplified version of the materials which is suitable for high school students. It contains 47 pages and was distributed to all teachers and

students. The material is divided into 4 chapters and is designed as a book. The following is the organization of the book:

CHAPTER I. Introduction
CHAPTER II. The Concept of School-Based Disaster Preparedness
- Definition
- Basic Concept
- Objectives

CHAPTER III. Parameter, Indicator, and Verification
- Attitude and Action
- School Policies
- Preparedness Planning
- Resource Mobilisation

CHAPTER IV. Guidelines for School-Based Disaster Preparedness Development
- Values and Principles
- Roles and Responsibilities
- Supporting Prerequisites
- Measures

The cover of the book is shown in appendix 1

Firstly, the teachers and students were not happy with the lay out because it seemed not interesting and too serious. Considering the response, CRC team modified and simplified the book in booklet form. The new teachers and the students were happy with the changes and the materials were accepted (see Appendix 2). This change gives opportunity to make communication easier than before to students and also teacher.

4. Training the students and the teachers

The team trained the students and the teachers with some activities: Evacuation and Response Simulation. 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 with some teachers and decided to invite some staffs from Regional Disaster Mitigation center. The training was held regularly twice a week, one hour each meeting with 30 students participating in the training. There was one teacher assigned by the school principal as the coordinator of the training.

The school principal has strong commitment to the empowerment of the students in DRR. Therefore, the team of DRR has been built. The members are selected students from the students council. The team was trained regularly with the assistance of some university students and the Disaster Management Board of Klaten. The students participated in creating the scenario of simulation. They also participate in making evacuation signs.

The simulation was conducted twice in two months. Before simulation, school community (students, teachers, principal, and administrator) participated in identify-

Figure 3. Training on evacuation actions

ing 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. 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.

At first, the students did not attend the training seriously. However, after it was conducted twice, and the trainer gave some motivation, they attended the program eagerly. In addition, the support of BPBD and UMS on disaster risk reduction education provides an atmosphere that is conducive to both students and teachers, and made the students realize that the training was important.

5. Socializing the knowledge and disaster preparedness to other students and community

After training, the student organization (OSIS) invite other students to socialize in the classroom. They also spread through school extracurricular activities such as Scouts and Red Cross. This information was given to the entire class, especially regarding the evacuation route and the arrows to show where students should gather when a disaster occurs. Announcements and bulletin boards are also used to convey this. Arrow evacuation, materials, and evacuation procedures were independently designed and implemented by the students. This suggests that after training, the students had a high participation rate in education for disaster risk reduction, ie at level 7 where students produce their own work as an educational program on disaster risk reduction.

Students also gave socialization to parrents and community about disaster risk reduction. After the student council, OSIS, socialize their knowledge about DRR, the students are encouraged to disseminate to their respective families. Each student is expected to spread the information about DRR to his family to improve disaster preparedness.

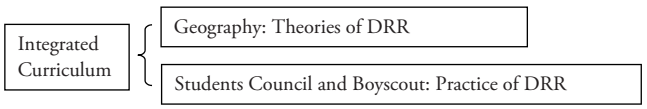
6. Integrating DRR into the curriculum

The adoption of DRR in curriculum is supported by the local government. The local government has announced the decree number 6/2014 about integrating DRR in the curriculum. The team facilitates the teachers to insert the materials to the existing curriculum. The team conducted a workshop about the curriculum of DRR. The school management agreed to insert the materials of DRR in some subjects, namely Geography. The following is the example of the insertion of the DRR material to the syllabus of Geography:

Theme:	Analyzing geosphere and its effect on life
Topic:	Analyze the dynamics and the tendency of the lithosphere and pedosphere change and its impact on life on earth • Cycle rocks and soil • Type earthquakes, landslides, erosion, and volcanoes.
Activities:	Students convey the experience and knowledge of the natural phenomena. Students discuss the cycle of rock and soil that involve natural events that can lead to disaster.
Indicators:	Students can specify the actions to be taken to minimize the impact to the population as material losses and casualties in the earthquake, depression surface, mountain erupts, landslides, degraded land, soil erosion, and soil contamination.
Evaluation:	Non Tests: Poster Session symptoms prior to the volcanic eruption
Test:	Formative and Summative
Reference:	JA. Katili, 1976. Geologi

However, actually the above material can also be inserted in other subjects such as Economy, Chemistry and Biology.

The activities conducted by the team which include developing materials for training the students and the teacher and the training itself provide a model of DRR at Muhammadiyah 1 Klaten. The Model of DRR is illustrated in the following chart:



7. Evaluating School Preparedness

After informing the target groups about the plan, the teachers and the students were given questionnaires to measure their preparedness once more. The preparedness level of teachers in disaster range from “prepared” to “very prepared”. The result showed that

the teachers have a very good knowledge about disaster and also "very prepared" in disaster preparedness. From 64 samples, the team has found out the following results:

- NOT PREPARED are 24 students
- LESS PREPARED are 14 students
- ALMOST PREPARED are 10 students
- PREPARED are 16 students
- VERY PREPARED no one

This can be seen in the following chart:
Total Parameter of Students Preparedness

To measure the students' disaster preparedness, the team spread questionnaire that derived from disaster preparedness parameters. The proportion of correct answers reflect students level of disaster preparedness. By the weighted score, the student's answers of SMA Muhi Klaten to the questionnaire are 44% wrong or only 56% correct answers.

Board of student government made changes to the composition of the management by adding one division, i.e., nature divison.

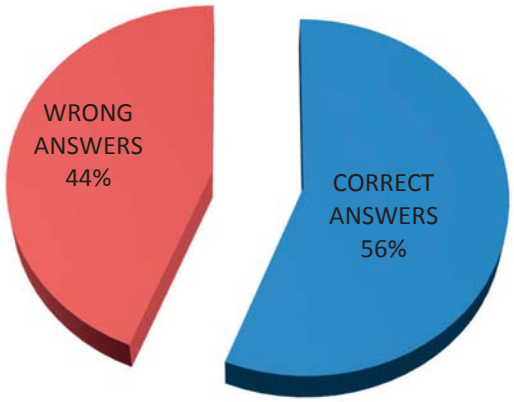


Figure 4. After survey, more students understand how to cope "with" the disasters

7. Discussion and reflection

This section presents the results of the project and the problems in doing the activities. The outcome of the project is that the authorities, the stake-holders, and students of SMA Muhammadiyah 1 Klaten are aware of the Child Right and students' participation in Disaster Risk Reduction by adopting the DRR in their curriculum.

The first result, the availability of the DRR materials for the training, is important to create materials which are suitable with the situation in Muhammadiyah 1 Senior

High School Klaten. The materials were adopted from the existing materials taken from some sources.

The second result, the adoption of DRR in the curriculum, has been done through inserted the materials of DRR to the subject of Geography. As stated by Sucipto et al. (2009), there are three kinds of curriculum organization, namely, Subject-centered curriculum, Correlated Curriculum, and Integrated Curriculum. As the school has implemented School-Level Based Curriculum, the school has decided to choose integrated curriculum which means integrating the DRR materials to some subjects already being taught at school, but for the time being, they are inserted to oine subject, that is Geography. However, actually the DRR materials can be integrated in more than one subject, for example, Geography, Economy, Biology, Chemistry, and Religion.

The third, the improvement of students' participation in DRR has been done 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's category of participation.

Table 2. Sherry Arnstein's Ladder of Citizen Participation (adopted to measure the children's Involvement in decision making by Gerrison Lansdown, Director of Children's Right Office)

Degrees	The Ladder of Participation	Description
PARTICIPATION	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 decisions.
	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.
NON-PARTICIPATION	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, Cildren 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

Based on the category above the team encouraged the students to develop their creativity to spread the knowledge and the training of DRR to other students.

The fourth result, the School's level of preparedness is improved. At the beginning of the program, when creating the baseline, there were some problems in the implementation of disaster risk reduction education. Related to the problems of DRR at school, a study conducted by Hadi in Sofyatiningrum (2009: vii) revealed that the challenges in integrating disaster risk reduction into the education system are: 1) The burden of student curriculum, 2) teachers' lack of understanding on disasters, 3) the lack of capacity and expertise of teachers in the integration of disaster risk reduction into the curriculum, 4) the lack of guidelines, the syllabus and teaching materials are distributed and can be accessed by teachers, 5) lack of resources (personnel, funding and facilities), and 6) the physical condition of school buildings, facilities and infrastructure in general concern, not oriented to the EIA and earthquake-resistant construction. The problems found in this school come from the students and also are related to the teachers' participation in disaster risk reduction. The problems from the students are lack of motivation to participate in DRR and lack of awareness of DRR. The problems from the teacher among others is lack of support from the curriculum.

Referring to the theory proposed by Gwee, Takeuchi, Wen, and Shaw (2011: 196), there are seven issues that require improvements in disaster risk reduction education:

1. Gaps in the systematic integration of planning,
2. primary and secondary business called for the preparation and planning for disaster prevention education but little is done,
3. curriculum and instructional materials involves a bit of attitude, skills, and aspects of psychological and humanitarian efforts,
4. teacher qualification gap as required,
5. The dual role of social media education, it may be quicker to disseminate information but do not guarantee its accuracy so that it can lead to an error of conception,
6. integration of the use of limited resources, and
7. The ability of rehabilitation psychology.

Based on the problems faced by Muhammadiyah 1 Senior High School, the integrated curriculum supports the school through their teachers to improve the students' participation in DRR. Consequently, the preparedness level of the teachers and students is improved. This indicates the improvement of school's awareness of DRR.

In conducting this program, the team found some unexpected outcomes such as:

- There was intensive communication between the community and the school.
- Within the school itself there is a change in the pattern of teacher-pupil relationship which becomes closer.
- Good response from stakeholders such as administrators of Muhammadiyah, the Department of Education, Local Board of Disaster Mitigation and students

- Teacher training students of UMS also support these activities and feel the benefit with the patterns of education for disaster risk.
- The school has developed CRC indicators.

8. Way forward

This project has improved the participation not only the students' participation but also the school management, including the school principal and the teachers. The team so far has given the stimulus and the school has been enthusiastically developing the program by giving regular trainings collaborated with the disaster management board of Klaten.

The materials given to the teachers and the students have improved their knowledge of disaster risk reduction. Their awareness of the importance of DRR has also improved their level of preparedness. The teachers are aware of the necessity to involve the students' participation in DRR aat the school.This is indicated by the building of the DRR team of this school. This is important for this school especially through their students participation to spread this awareness and training to other students from the other schools. As for teachers and school principal, they can socialize this DRR to the community through the students' parents in regular meetings with them. Another way to socialize this, the school as one of the school under Muhammadiyah Organization is supported to spread this DRR to other Muhammadiyah schools through the Muhammadiyah Regional Board of Education at least in Central Java.

The integration of the DRR materials to the curricculum has supported the teachers to implement the teaching of DRR to the students. The integration of this materials to Geography can be broadened to include some other subject such as Economy, Biology, Chemistry and Religion. The school can pick some relevant themes of these subject to disaster risk reduction.

To ensure that the agenda CRC continues to develop the UMS adopts CRC material into the educational curriculum of prospective teachers and school MUHI Klaten as learning development UMS Laboratory. Along with this CRC change project, some titles aligned research on CRC in the disaster have been published in several conferences in preparation involving several students of UMS. Title of research that have been published are:

- Geographical Knowledge of Urban and Rural Communities in Earthquake Preparedness. DOI: 10.13140/2.1.3144.1608
- Published in The International Conference on Disaster Risk Reduction: Strengthening Comunity Resiliency to Disaster Education Development
- Sustainable Development Disaster Preparation Knowledge of Urban and Rural Students at Solo Region. DOI: 10.13140/RG.2.1.4570.5448
- Published in The 2nd International Conference Planning In The Era of Uncertainty: Sustainable Development.

- Development of Prepared and Safe (PAS) School as Disaster Risk Reduction Education Model. DOI: 10.13140/RG.2.1.2473.3927
- Published in The National Conference of Indonesia Disaster Experts (IABI)

Last but not least, the sustainability of this project will be strengthened by the school policy to establish the DRR team whose existence will be maintained through the school policy. Since the member s of the present team will leave the school after they have graduated from this school, the recruitment process should be prepared well, as the recruitment and existence of the students council.

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Appendix 1. Initial Materials for Disaster Risk Reduction

Modul Pelatihan
Pengurangan Risiko Bencana (PRB)
Dalam Pendidikan

Module of Disaster Risk Reduction in Education System

M. Amin Sunarhadi, Mauly Halwat Hikmat, Agus Supriyadi

Mentor: Bodil Rasmusson

EMPOWERING STUDENTS IN DISASTER RISK REDUCTION (DRR)
A Child Right Change Project
AT MUHAMMADIYAH 1 SENIOR HIGH SCHOOL KLATEN
INDONESIA

OBJECTIVE:
Participants can understand the framework for disaster risk reduction education are integrated in the education system.

TOPIC-A. Disaster phenomenon in Indonesia

Aim:
- Understand the rationalization of disaster management operations in Indonesia and in the regions respectively.
- Understand the terms in the field of disaster management, particularly the 'disaster' and 'threat' (or 'danger').

Methods:
- Presentation of facilitators
- Game Card match the term

Material & Equipment:
- Materials views facilitators.
- LCD projector.
- Flipcart and paper insulation (5 units).
- Card terms of disaster management (card terms and definitions card, 5 units).

Process:
- The facilitator presents the objectives of the session (and introduced the speakers, if the material delivered by the speaker).
- The facilitator / resource person gave a presentation of no more than 20 minutes.
- The facilitator manage frequently asked questions about the presentation materials, at the end of the debriefing facilitators / resource persons are welcome to submit conclusions / closing statement.
- The facilitator divides the participants into five groups, and invite participants to gather in their respective groups.
- The facilitator presents the rules of group games, matching cards. Each 'cards the term "own" definition card', the group must find pairs of cards accordingly. The group that most quickly complete and correct result is the winner. The facilitator distributes equipment game, after making sure all groups have to get the equipment - the game starts, carried a maximum of 10 minutes.
- The facilitator invited the fastest group to present its results. Solicit comments from other groups, and give instructions right answer. And ask each group to share the results, and ask the group improve results if any still wrong.
- The facilitator sharpen the findings of the group presentation and convey the importance of the terms 'disasters' such as: threat, disaster, disaster risk, vulnerability, and capacity well understood.
- The facilitator closes the session.

Appendix 2. The change result for material design that more friendly than before

School Disaster Preparedness

Implementation of Child Friendly School at SMA Muhammadiyah 1 Klaten

This module produced for:
- SMA Muhammadiyah 1 Klaten
- FKIP UMS
- Lund University, Swedia
- SIDA

Contents

International Convention on The Right of Child (CRC)

The UN General Assembly adopted the *Convention* and opened it for signature on *20 November 1989* and ratified by the Government of Indonesia through Presidential Decree. No. 36 Year 1990. Furthermore, Indonesia established Law No. 23 of 2002 on Child Protection.

Student Participation in Disaster Risk Reduction (DRR)

Every child, who have not attained the age of 18 years, has the right as a child (Child Rights) protected anywhere in the world. Children's rights, the CRC, grouped into 3 (three), namely:

- right to the basic necessities for survival and growth (provision),
- the right to protection (protection), and
- the right to express their opinions and participate in decision making (participation).

These three rights are often referred to as the 3P (three Ps).

School as a pedestal to prepare the future generation, get a mandate to provide quality education. Quality not only of academic value, but also consider the developmental needs of all students there. Including preparing students to face disaster situations, that naturally occur in Indonesia.

The involvement of students not just as passive objects, but given the opportunity to decide on how safeguards should be done. The establishment of disaster preparedness team by students, determining evacuation routes, as well as socialization done by the student's own initiative is a form of student participation in disaster risk reduction. Participation of students need the support of employees, teachers, and school leaders as a whole school community.

Siswa praktek berlindung bila ada gempa saat di dalam ruang

The strengthening of faith in preparedness

مَا أَصَابَ مِن مُّصِيبَةٍ إِلَّا بِإِذْنِ اللَّهِ وَمَن يُؤْمِن بِاللَّهِ يَهْدِ قَلْبَهُ وَاللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ

"No disaster strikes except by permission of Allah . And whoever believes in Allah - He will guide his heart. And Allah is Knowing of all things. " *[QS. At-Taghabun (64): ayat 11]*

There was no disaster, but with the consent and in accordance with His. Whoever believed, namely looking at the accident of Allah Ta'ala heart undoubtedly shown in the willingness and patience. Whoever was given the gift he was grateful, given the ordeal he was patient when wronged her forgiveness, and misfortune befalls beristirja (say inna lillahi wa inna ilaihi raji'un). He will show his heart to istirja . Allah knows everything, the All-Knowing and other calamities, which he inflicted to humans.

①

COOPERATION

SMA Muhammadiyah 1 Klaten

Faculty of Education and Teacher Training, Universitas Muhammadiyah Surakarta (UMS FKIP) regularly sends lecturers together with representatives of school partner attended international training on the Rights of the Child, Classroom Management and School Management (CRC) at Lund University, Sweden.

CRC-UMS Team Batch XX consists of two lecturers FKIP UMS, namely M. Amin Sunarhadi, S.Si., MP and Maulyl Halwat Himat, Ph.D. and Drs. Agus Supriyadi, M.Pd. from SMA Muhammadiyah 1 Klaten.

Bodil Rasmusson, B.Sc., Ph.D.

Mentor Sekolah Ramah Anak dari Lund University

Bodil Rasmusson is a senior lecturer at Lund University, Sweden. She has worked for decades as a social worker, counselor at the high school, and as a children Ombudsman Council in the city of Lund, Sweden.

Ibu Bodil, as she usually called for in Indonesia, acting as a mentor in the International Training Programme on the Rights of the Child, Classroom Management and School Management (CRC). International training is held since 2003. In addition to being a mentor to participants from Indonesia, Mrs. Bodil ever as mentor to South Africa, and Zambia.

Her research focuses on the lives of children as well as children's perspective related environmental conditions. Other research in depth about social services for children, participation and involvement of children, child welfare custody and orphanages, as well as engage in a national pilot project on child victims of physical and sexual abuse. Had also a National Council for the Child Needs Assessment. In addition to qualitative methods, Mrs. Bodil interviewing children of different ages use photography, group interviews, maps, and pictures.

The results of its collaboration with the University of Gothenburg and the sponsor Allmänna Barnhuset has produced textbooks: Rasmusson, B. & Regnér, M. (2013), entitled Ett utvalt till ett hem utvalt barn. Familjehemsutredningar socialt arbete och i praktiken.

Appendix 3. The Sylabus for Disaster Risk Reduction in Geography

Theme	Topics	Sub Topics	Activities	Indicators	EValuation	Time Allocation	Reasources
3. Analyzing geosphere and its effect on life	3.1 Analyze the dynamics and the tendency of the lithosphere and pedosphere change and its impact on life on earth	Cycle rocks and soil Type earthquakes, landslides, erosion, and volcanoes.	Students convey the experience and knowledge of the natural phenomena. Students discuss the cycle of rock and soil that involve natural events that can lead to disaster.	Students can specify the actions to be taken to minimize the impact to the population as material losses and casualties in the earthquake, depression surface, mountain erupts, landslides, degraded land, soil erosion, and soil contamination.	Non Tests: Poster Session symptoms prior to the volcanic eruption Test: Formative and Summative	1 JP	JA. Katili, 1976. Geologi
	3.2 Analyze the dynamic of atmosphere and its impact on life on earth	Atmospheric dynamics Type of atmospheric disasters and global warming	Students convey the experience and knowledge of the natural atmospheric phenomena Students discuss the cycles in the atmosphere that can lead to disaster	Students can specify the actions to be taken to minimize the impact to the population as material losses and casualties in the tornado, extreme weather, and shifting seasons.	Non Tests: Results of interviews with the community who have experienced tornado Test: Formative and Summative	1 JP	Chay Asdak, 1991. Hidrologi. UGM Press
	3.3. Analyze hydrosphere and its impact on life on earth	Hydrological cycle Mitigation of floods and droughts	Students convey the experience and knowledge of the natural phenomena hydrosphere Students discuss the hydrological cycle that could lead to disaster	Students can specify the actions to be taken to minimize the impact to the population as casualties and material losses during floods, reduced groundwater quality source maupu n quantity.	Non Tests: Develop clippings about the flood and handling Test: Formative and Summative	1 JP	Ruslin Anwar dan Prastumi, Pengembangan Sumberdaya Air. 2013 Chay Asdak, 1991. Hidrologi. UGM Press

Appendix 4. The Integration Sylabus for Disaster Risk Reduction in Geography, Religion, Economic, Chemistry, and Biology

THEME: Situation / disaster events volcanic eruptions and earthquakes, thereby reducing access to groundwater resources in quality and quantity. Action needs to be taken to minimize the impact to the population such as the destruction of buildings and farmland facilities, epidemics, disruption of social and economic activities of society, as well as issues of sanitation and clean water availability.				
CLASS X SEMESTER II				
GEOGRAPHY	RELIGION	EKONOMIC	CHEMISTRY	BIOLOGY
3.3 Analyze hydrosphere and its impact on life on earth	Explaining the sense of envy, riya, persecution and discrimination Citing examples of malicious behavior, riya, persecution and discrimination Avoiding malicious, riya, persecution and discrimination in everyday life	Describe the difference between microeconomics and macroeconomics Describe the problems faced by the government in the economic field	3.2 Explaining the development of the concept of the reduction-oxidation reaction and its relationship with the nomenclature of the compound and its application	4.2 Explaining the link between human activities with the problem of destruction / pollution and environmental protection 4.3 Analyzing the types of waste and recycling of waste

Appendix 5. CRC Team and School Community Activities

Team CRC always give attention in the most student interest

Collaborative works among students as the initial phase in participation

Students from UMS gave explanation in medical responses in disaster

Appendix 6. Presentation for the research on CRC in Disaster Management

With Prof. Rajib Shaw, Director of Diasater Management Center of Kyoto University, and some students of UMS after presented Geographical Knowledge of Urban and Rural Communities in Earthquake Preparedness (DOI: 10.13140/2.1.3144.1608) at The International Conference on Disaster Risk Reduction: Strengthening Comunity Resiliency to Disaster Education Development

Presenting research paper on Sustainable Development Disaster Preparation Knowledge of Urban and Rural Students at Solo Region (DOI: 10.13140/RG.2.1.4570.5448) at Published in The 2nd International Conference Planning In The Era of Uncertainty: Sustainable Development.

Presenting poster Development of Prepared and Safe (PAS) School as Disaster Risk Reduction Education Model (DOI: 10.13140/RG.2.1.2473. 3927) at The National Conference of Indonesia Disaster Experts (IABI).