



# Volcanic Eruption Disaster Response: A Model for Assisting Children in Learning in Refugee Camps in Indonesia

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## ABSTRACT

The purpose of this study was to reveal the existing learning assistance model in the refugee camps at the evacuation site of the eruption of Mount Merapi. The aspects of the model revealed are syntax, reaction principle, social system, support system, instructional impact, and accompaniment impact. The research was conducted on school-aged refugees at the final evacuation site, Deyangan, Magelang. The research design uses a qualitative approach to the type of phenomenology. Efforts to ensure the validity of the research results are carried out by triangulation, namely triangulation of sources and methods. Source triangulation is to ensure the same data is obtained from different sources. The same core questions with different languages were given to data sources, namely teachers and students. Method triangulation is carried out by using different methods to reveal the same indicator. The results of the research show: (1) The learning syntax adapts the emergency curriculum to the curriculum that is applied in schools. (2) The principle of reaction in mentoring is directed at student-centered learning, where the teacher provides opportunities for students to explore their knowledge and experiences. (3) The social system is directed at the affection of a volunteer for children by upholding good manners in every learning activity. (4) The support system uses LKS, which is prepared by teaching volunteers by adopting official books from the government. (5) Instructional impact by helping children achieve school-targeted learning outcomes and ensuring that the right to learn and obtain an education is fulfilled in refugee camps. The implication is that volunteers need to be prepared in volcanic eruption refuge areas; it is necessary to prepare a system of coaching volunteers to teach in the psychosocial, psychosocial field in mentoring learning so that student learning rights can be fulfilled and sustainable.

**Keywords:** *Refugee Camps; Learning Assistance; Volcanic Eruption*

## 1. INTRODUCTION

Disaster management is part of the disaster management consensus applied in almost all countries with high levels of disaster risk, Sendai Framework for Disaster Risk Reduction 2015-2030 is realized for disaster risk reduction. The framework applies to small-scale and large-scale, frequent and infrequent, sudden and slow, disaster risks caused by natural or artificial hazards and associated environmental, technological and biological hazards and risks. It aims to guide multi-hazard disaster risk management in development at all levels and within and across all sectors. A disaster activity that is dangerous and causes damage is a volcanic eruption.

Volcanic activity in Indonesia, Mount Merapi in 2018-2021, is the longest eruption. The eruption caused ash rain at the observation posts for Mount Merapi, Jrahah and Selo and impacted Salatiga City and Semarang Regency. May 2018 Merapi Volcanic activity reached 5,500 vertical meters, which resulted in a thin ash rain that fell in the market area [1]. After the incident in 2019, Merapi returned to activities with 2 minutes at an altitude of 6,000 meters from the summit. In 2019 volcanic activity was relatively stable [2]; Saturday, March 28, 2020, at 19.25 WIB, Mount Merapi erupted. There was a follow-up eruption on Sunday, March 29, 2020, with an altitude of 1,500 meters above the peak and a duration of approximately 2 minutes 30 seconds. On November 5, 2020, BPPTKG announced that the activity level of Mount Merapi had increased from Alert level to

Alert level (level 3). On 6-30 November 2020 and the second on 1-14 December 2020 and the third on 15-31 December 2020, this emergency response status is deemed necessary as a guide for local governments and the community to take emergency response steps for the Mount Merapi disaster following the provisions of the legislation. Then, the emergency response status extension for the fourth time was again issued by the Regent of Magelang [3].

The impact of the alert (level 3) of Mount Merapi, namely the cessation of daily activities involving the economy of the community is disrupted, the occurrence of ash rain which results in air pollution causing discomfort in breathing air, the teaching and learning process is stopped, therefore it is necessary to evacuate the people of the slopes of Merapi from hometown to a safer place. Final Evacuation Place Deyangan Village, Mertoyudan District, Magelang Regency is one of the refugee camps in Magelang Regency. The refugees who were victims of the Merapi eruption came from the hamlets of Trono, Trayem, and Pugeran, Krinjing Village, Dukun District, Magelang Regency, Central Java. Refugees consist of 121 people consisting of vulnerable groups, namely the elderly, pregnant women, breastfeeding mothers, children, toddlers, and people with disabilities.

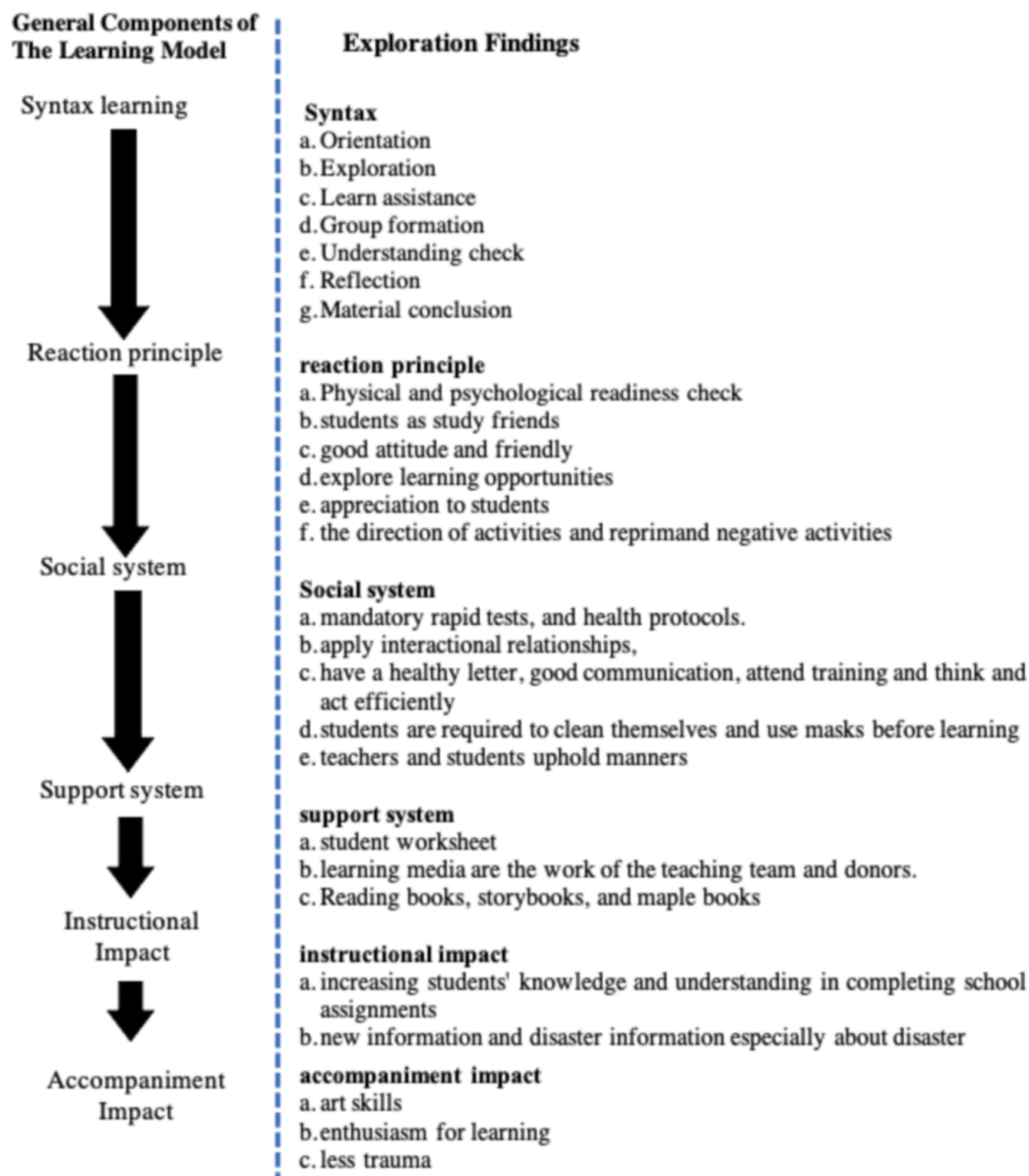
Research on disaster management shows that many people do not know about the village alert. The implementation of preparedness activities is good, but it is not followed by the implementation of the standby village in general [2]. Victims of the Merapi eruption are expected to attend counselling social training to be ready for disaster management and physical, psychological and social recovery [4]. Community participation will increase community enthusiasm in disaster risk reduction activities, and community participation will also minimize resistance because the community will feel they have the policies they have made together initiation from the community. This indicates a change in the perception of disaster in the community and understanding of how to reduce disaster risk [5]. The higher the level of disaster risk, the greater the potential loss due to the eruption of Mount Merapi, namely death, injury, illness, threatened life, loss of sense of security, damage or loss of property, and disruption of community activities [6]. The dynamics of local wisdom are influenced by several factors, namely experience in dealing with disasters, external intervention from the government and other intermediary agencies, and technology [7]. The perception of the people of Patent Village, as much as 72%, considered that the infrastructure to support the sister village program was good and fulfilled. The perception of the people of the Buffer Village towards the form of majority participation is in the form of energy, which is as much as 47%, in

identifying problems with refugees, the majority of the people in the Buffer Village are not disturbed, which is as much as 53% [8]. The community's perception of the refugee camp is related to the culture of the community. Culture of community teachings and teachings, and pray for a potential eruption [9].

Here we investigate learning assistance for school-age refugees who are part of disaster emergency response management. The condition of the eruption of Merapi for more than one month, which lasted quite a long time, made its citizens need to be evacuated, and their education was sought to continue. This assistance is carried out so that they still have the right to learn and get their teaching protected by law. Our research was conducted at the final evacuation site, a sister village of the government's program for the management of the Merapi emergency response. Children's learning assistance starts from making a teaching schedule, preparing teaching materials, preparing learning media and others. The learning mentoring process is still flexible and adaptive following the development of children and the development of the COVID-19 pandemic problems that are happening in Indonesia, especially in the Magelang area. The learning mentoring process is carried out by implementing health protocols during a pandemic, so adaptation is needed in its implementation.

## 2. METHOD

During the Emergency Response, the volunteers for the victims of the volcanic eruption became several in the field of concentration in education, especially in assisting the learning of disaster victims in the refugee camps. Exploration is carried out on the teaching model, which refers to the learning model with characteristics, namely syntax, reaction principle, social system, support system, instructional impact, and accompaniment impact [10]. The qualitative approach was carried out on the model of mentoring learning by volunteers by exploring the activities of emergency schools in refugee camps. Efforts to ensure the validity of the research results are carried out by triangulation, namely triangulation of sources and methods. Source triangulation is to ensure the same data is obtained from different sources. The same core questions with different languages were given to data sources, namely teachers and students. Method triangulation is carried out by using different methods to reveal the same indicator. That is the indicator confirmed by the interview method and observation and scrutiny of documents. Extending the research time, efforts to strengthen the research findings were also carried out. After the research is done and the emergency school is finished.



**Figure 1** exploratory concept of learning assistance model for volcanic refugees (left) which is integrated into the characteristics of the learning model (right)

### 3. RESULT AND DISCUSSION

#### 3.1. Emergency School Learning Syntax

The results of the study by examining activities starting from the learning model can be described in Figure 1. the exploratory concept of the volcanic refugee learning assistance model (left), which is integrated into the characteristics of the learning model (right) Based on interviews with teachers/teaching teams, interviews with students, observations of student activities, and examination of documents at the Merapi emergency school, the learning syntax applied includes an opening, core, and closing activities.

Opening activities are carried out every morning from 07.30-08.00, checking health protocols. Health protocol

checks are carried out by the teaching team located at the final evacuation site for the Deyangan refugee camp, especially in the learning environment. Health protocol checks are carried out by preparing or lining up students to be neat and checked one by one. The checks carried out were whether the children had used masks and washed their hands before the learning activities began. This activity aims to remind students how important health protocols are in a pandemic mass. Then after checking the health protocols, the next activity is morning exercise. The teaching team led the morning exercise. The morning seminar activities were carried out outdoors, followed by all students and the teaching team. The exercise that is taught is physical health gymnastics. Morning gymnastics activities aim to increase body immunity and invite students to move to be enthusiastic about participating in the learning process. Student

apples are one of the activities carried out by students under the coordination of the teaching team. This activity is carried out outdoors.

Moreover, it aims as student habituation so that before learning begins, students must orderly comply with health protocols and discipline to line up neatly when entering the room. Student apples are one of the activities carried out by students under the coordination of the teaching team. This activity is carried out outdoors. Furthermore, it aims as student habituation so that before learning begins, students must orderly comply with health protocols and discipline to line up neatly when entering the room. Student apples are one of the activities carried out by students under the coordination of the teaching team. This activity is carried out outdoors. Furthermore, it aims as student habituation so that before learning begins, students must orderly comply with health protocols and discipline to line up neatly when entering the room.

The first core activity was to check student attendance. This activity is done by calling students one by one. These activities will be seen who the students who enter and who are not are. This activity is carried out after students enter the room. After that, students are invited to pray to be given concentration in understanding the material presented by the teaching team. Then students are invited to sing a national anthem. To instil a sense of love for the homeland in students. The teaching team and students carried out the singing of the national anthem. This core activity can be done indoors or outdoors. Then after the student apple activity is carried out, the next activity is an activity to motivate students. The teaching team carries out student motivation before the provision of material begins. An example of the motivation given is motivation about the spirit of learning in a situation. This example of motivation aims to encourage students who are currently being affected by a disaster, namely the Merapi eruption disaster. The motivations given by the teaching team vary every day, and do not forget to relate to the material provided. The teaching materials taught by the teaching team to students are guided by the teacher's books and student books made by the teaching team. The material delivery is given when students have grouped according to their respective groups. An example is separating the low class and high class. Then after being divided into low- and high-class, students have divided into small groups based on class.

The learning step is one of the most important things when doing the learning. Orientation is a learning step that aims to equate student perceptions with learning objectives. The teaching team carries out orientation by provoking students by giving short stories whose contents are stories about the material to be conveyed to students to know what the teaching team is teaching the material. For example, the teaching team invites students to learn thematic material on science content with the

material achievement being able to know the meaning, kinds, and examples of natural and artificial ecosystems. After students understand the achievements of the material presented, the teaching team assigns students to explore themselves to find out new things related to the ecosystem. After students know what achievements will be achieved, the teaching team invites students to observe examples of ecosystems in the room. This activity aims to develop students' mindsets to understand the material. Then the teaching team provides assistance to invite students to go out of the room to find out the natural and artificial ecosystems outside the room. Do not forget that the teaching team always explains and answers student questions when students discover new things during indoor and outdoor activities. If some students have difficulty learning, the teaching team will provide in-depth explanations to students. Then the teaching team provides assistance to invite students to go out of the room to find out the natural and artificial ecosystems outside the room. Do not forget that the teaching team always explains and answers student questions when students discover new things during indoor and outdoor activities. If some students have difficulty learning, the teaching team will provide in-depth explanations to students. Then the teaching team provides assistance to invite students to go out of the room to find out the natural and artificial ecosystems outside the room. Do not forget that the teaching team always explains and answers student questions when students discover new things during indoor and outdoor activities. If some students have difficulty learning, the teaching team will provide in-depth explanations to students.

The teaching team invites students to leave the room while still using the health protocol. The purpose of the learning assistance is to supervise activities and direct students and become students' study friends so that students are comfortable and have no difficulty understanding the learning material. Then after students understand the material presented by the teaching team. The teaching team checks the understanding of the activities that have been carried out by students. by asking again some of the questions or questions that have been submitted. If there are still students who do not understand the material, the teaching team re-explains the points of the teaching material that has been delivered so that students understand and can answer questions or questions given by the teaching team. At the end of the core activity, there is a reflection and conclusion of the material. Reflection activities aim to entertain. The teaching team usually carries out reflection activities by giving students short, easy, and fun questions at the end of the lesson. The teaching team conveys the material to students at the end of the lesson before students pray and clean the room, which aims to remind at a glance the subject matter that has been discussed.

Closing is the final activity in learning which ends with reading a prayer and cleaning the room. One of the

students led the prayer activity and accompanied the teaching team. Praying activities aim that student do not forget God and are given safety anywhere. After the prayer activity, all students cleaned the room by tidying up everything they had used. This activity aims to make students have the habit of living clean and healthy.

In general, it is concluded that the learning syntax, starting from the opening of the lesson, includes checking health protocols, morning exercise, student apples and washing hands before entering the room. In general, the core activities take place indoors and outdoors. The core activities include student attendance, singing the national anthem, giving motivation before entering the material,



**Figure 2** emergency school learning activities in refugee camps

Study learning activities in refugee areas are patterned in learning syntax. Learning syntax includes 1) Orientation is the process of equalizing perceptions of learning objectives; 2) Exploration is an observation activity that aims to obtain new information; 3) Learning mentoring by the teaching team is carried out by applying protocol health; learning mentoring aims to direct and assist students in understanding the material; 4) The formation of groups is carried out according to the category. The checking of the understanding of the activities is carried out after the delivery of all the material; 5) Reflection and conclusion of the material are done at the end. This is following explaining that the cooperative learning syntax consists of six main components [11], namely: Cooperative Learning Syntax 1) Phase 1 Delivering goals and motivating students 2) Phase 2 Presenting information 3) Phase 3 Organizing students into groups learning 4) Phase 4 Guiding group work and study 5) Phase 5 Evaluation 6) Phase 6 Giving rewards. Teacher behavior, in this learning syntax, 1) Delivering all the objectives to be achieved during learning and motivating students to learn 2) Presenting information to students by way of demonstrations 3) Explaining to students how to form study groups and helping each group make the transition efficiently 4) Guiding study groups as they do their assignments 5) Evaluate learning outcomes about the material that has been studied or ask groups to present their work 6) Appreciate both individual and group efforts and learning

delivering material, and giving assignments to students. In general, the learning steps include: Orientation is a process of equalizing perceptions of learning objectives. Exploration is an observation activity in the field that aims to obtain new information. Learning mentoring by the teaching team is carried out by applying protocol health; learning mentoring aims to direct and assist students in understanding the material. The formation of groups is carried out according to the category. Checking the understanding of the activities is carried out after delivering all the material. Reflection and conclusion of the material are done at the end. In general, learning closing activities include prayer and cleaning the room.



**Figure 3** the process of assisting disaster healing trauma for children

outcomes. The learning syntax is simpler and more flexible with the child's condition. This learning syntax was successfully implemented because this syntax is a core part of the components in the simulation and practice of disaster mitigation learning [12]. In learning activities directed to students active in the process and learning activities. From the syntax, it can be seen that students are required to be more active, while the teacher acts as a facilitator, consultant and mentor. Because students are invited to take a direct role in the actions that must be taken when a disaster occurs and improvements that can be made after a disaster, so that the knowledge that students have during learning at school is applied directly in the context of the real world [13]. The up-to-date learning activities carried out by teaching volunteers also keep up with the times. This is done at the direction of teaching volunteers to participate in the syntax that must contain 21st-century learning skills, namely, 4C Communication, Collaboration, Critical Thinking and Creativity., literacy, and character education [14]. The demand for volunteers to become creative and innovative teachers to assist the Merapi eruption refugee camp victims.

### **3.2. Merapi Emergency School Learning Reaction Principle**

Based on interviews with teaching volunteers, interviews with students, observations of student

activities, and examination of documents at the Merapi emergency school, the principles of learning reactions that are applied include:

- a. The teaching team checks the physical and psychological readiness (to learn following the teacher's directions) for student learning. The teaching team carries out physical readiness checks to check student attendance by asking how the students are or condition. The pattern of activities of the teaching team on physical and psychological readiness is the teaching team checking the physical readiness of students in the form of learning equipment. Examples are books, pencils, rulers, erasers and others.
- b. The teaching team makes students their study partners, the attitude and way of directing students to be comfortable while studying is to make students friends. The teaching team made efforts by inviting students to share their experiences. So that slowly, students want to communicate well with the teaching team. Good communication is formed by students talking about learning problems comfortably without any shadow that teaching volunteers are scary figures. However, students think that a teaching team is friendly like their peers.
- c. The teaching team responds to students' questions with a good and friendly attitude. The teaching team prioritizes service to students. When serving student responses, the teaching team always applies smiles, greetings, courtesy, and courtesy. It aims to teach students to have the habit of smiling, greeting, greeting, and being courteous in everyday life.
- d. The teaching team provokes and explores student questions by offering other students answers. The activity of exploring student questions is how the student team responds to questions asked by students so that other students are actively involved in responding or answering. This activity aims to provide opportunities for students to express their opinions by helping answer questions asked by students who ask.
- e. The teaching team gives appreciation to students as a form of appreciation given by the teaching team. Appreciation is given when one of the students successfully answers the question correctly. The forms given by the teaching team vary. Examples are verbal praise, applause, giving gifts of goods and even the teaching team is willing to spend money when there are students who can answer questions correctly.
- f. Team the teacher directs activities and reprimands activities that do not involve learning. Giving responses to students related to reprimands is very necessary. In the sense that the reprimand is the teaching team's control, the teaching team's caring attitude to the activities carried out by students. Student activities that do not match or deviate from learning will receive a warning from the teaching team.

In general, the teaching team's principle of reaction gives tests to students related to student learning readiness. The teaching team makes students part of their study partners. The teaching team responds to student

questions in a friendly and courteous manner. The teaching team provokes and explores student questions by offering other students answers. The teaching team always gives appreciation to students. The teaching team provides direction for activities and reprimands activities that have nothing to do with learning.

Results The teaching team's principle of reaction: 1) give tests to students related to student learning readiness; 2) make students study friends; 3) respond to students' questions with a good and friendly attitude; 4) provoke and explore student questions by offering other students to answer; 5) give appreciation to students; 6) provide direction for activities and reprimand activities that do not involve learning. This is following the learning model must meet the following principles (1) learning must be better if the efforts made by the teacher are smaller and the learning activities of students are getting bigger; (2) the less time required by the teacher in activating students to learn, the better learning will be; (3) following the way of learning carried out by students; (4) can be implemented well by the teacher; (5) there is no single perfect method that best suits the objectives, types of materials and existing learning processes [15].

Accessibility is implemented using universal design principles and reasonable accommodation to provide comprehensive information in accessible formats, namely learning materials, communication media, and early warning systems [16]. Because they have never offered courses in an online setting before, they worry about missing out on the curriculum, giving students a negative impression of learning and education, or addressing student concerns [17]. Exploration of activities, educators trained in emergency remote teaching, particularly statements about emergency remote teaching skills training to be equated with annual training for first aid skills, could potentially address concerns expressed in their study of the effectiveness of one-time professional development training [18].

### **3.3. Social System**

Based on interviews with the teaching team, interviews with students, observing student activities, as well as examining documents at the Merapi emergency school, the social learning system applied includes:

- a. The teaching team involved is required to conduct a rapid test. The teaching team that helps carry out activities at the Final Evacuation Centre is required to have a rapid test. Rapid tests are used to comply with the rules in the Final Evacuation Shelter. The Magelang district health worker unit organizes the rapid test. When one of the teaching teams is detected as reactive during a rapid test, the teaching team cannot enter and accompany student learning activities.
- b. The teaching team applies interactional relationships by encouraging students to express their ideas.

Interactional relationships are reciprocal relationships between individuals with other individuals. The teaching team invites students to express their ideas. Most students can come up with good ideas but are still shy.

- c. The provisions of the teaching team in learning assistance to reduce the risk of Covid-19 transmission, the teaching team requirements are applied. Namely, the teaching team must have a health certificate or show evidence of rapid test results, explaining that the rapid test results are non-reactive. The teaching team must have an educator spirit, communicate well, and attend special training organized by related parties. The teaching team must be able to think and act efficiently in learning.
- d. Provisions for students to participate in learning. Have mutual respect. Students are required to clean themselves before joining the lesson. This is intended to make students comfortable and safe when participating in learning. In learning conditions, students always wear masks to avoid Covid-19. A courtesy attitude is habituation to students so that students' character increases.
- e. Furthermore, most importantly, students have a desire to learn. This is to make it easier for students. So that students have prepared all the needs that support learning activities.

In general, the social system in the Merapi emergency school model includes the teaching team involved who are required to carry out rapid tests and always apply health protocols. The teaching team must have a healthy letter, have good communication, attend training, think and act efficiently in learning. The teaching team applies interactional relationships, encouraging students to express their ideas. Students are required to be polite in learning. Students are required to clean themselves and wear masks before learning.

Social system, teaching team: 1) carry out rapid tests and always apply health protocols. 2) applying interactional relationships, encouraging students to express their ideas. 3) have a healthy letter, have good communication, attend training, and think and act efficiently in learning. 4) students are required to clean themselves and use masks before learning, 5) be polite in learning and desire to take part in learning. This is following Disasters that occur when the community and the higher social system that work on it cannot manage the threats that occur to them. Threats, triggers and vulnerabilities are singular and can be present in multiple, both series and parallel, A system of values, norms, structures, and social functions that protect social life. This value system becomes a collective consciousness that has strong historical ties from generation to generation[19]. An emergency is considered a manufactured or natural disaster that suddenly interferes with a child's normal life, empathy, and educational opportunities. Therefore, the adverse situation interferes with the delay or denial of the right to education[20].

Syntax learning with games and traditional art exercises strengthens local wisdom Based on local success on disaster mitigation learning wisdom. So it would be better if Indonesia began to dig deeper into the values adopted by local wisdom in Indonesia [21].

### **3.4. Support System**

Based on interviews with teachers/teaching teams, interviews with students, observations of student activities, and scrutiny of documents at the Merapi emergency school, the learning support system applied to include:

#### **3.4.1. Student worksheet**

Student worksheets are used to train students to achieve learning objectives. Student worksheets are made by the teaching team based on the teacher's book to support the teaching team in assessing the achievement of student learning outcomes. Student worksheets are prepared based on student books improvised by the teaching team. Student worksheets done by students are in the form of short entries, matching, completing, and filling in crossword puzzles. In general, student worksheets used by teachers effectively improve students' abilities in learning. This is because the location of the original school is on the slopes of Merapi, based on student information that they usually work on student worksheets that are purchased by students and provided by the school. At the same time, the student worksheets made by the teaching team are more innovative, simple and easy to reach and work on by students. Division of tasks, the teacher explained that students learned several soft skills such as working collaboratively, including managing assignments and time appropriately, negotiating ideas [22].

Students develop their understanding and knowledge of mental health based on sharing stories and real-world experiences of consumers. While the activities mentioned above allow social interactions to thrive, they also promote respect, collaborative work and teamwork [23]. Work behaviour, job satisfaction, and the use of information technology are associated with performance so that a higher impact will be obtained. If work behaviour, job satisfaction, and information technology make sense, it will lead to better performance [24].

#### **3.4.2. Learning Media**

Learning Media is a tool used by the teaching team to deliver messages to students and achieve learning objectives. The media used by the teacher was adopted from the teacher's book according to the class of each elementary school student. The media used by the teaching team were pictures, balls, PowerPoint media, and learning videos. The media used is not only using media created by the teaching team but also media provided by the manager of the last evacuation team obtained through donations and donors from volunteers and volunteers. The teaching team also utilizes donations

of storybooks, reading books, and subject books available in the logistics unit to improve student literacy skills.

In general, the support system at the Merapi emergency school includes student worksheets made by the teaching team based on the 2013 Curriculum teacher's book. Learning media is the work of the teaching team made based on the adoption of the 2013 Curriculum student book. Moreover, using several learning media obtained from book donors. To improve reading literacy, readings, storybooks, and subject books were obtained from donors. Technology also mediates access to local and global support for refugee students leading to better outcomes. Education persistence is realized with academic support [25]. Learning from Japan's valuable experience, it is appropriate to use learning media as an educational medium for volcanic disaster mitigation for students. Various learning media can be chosen [26]. The attractiveness of videos on YouTube, social media, and other non-school use of educational technology has also been shown to harm student learning performance and engagement, especially for students who are already vulnerable to disengagement.

Support system: 1) Student worksheets made by the teaching team based on the 2013 Curriculum teacher's book; 2) Learning Media is the work of the teaching team made based on the adoption of the 2013 Curriculum student book. Moreover, using several learning media obtained from donors; 3) Reading books, storybooks, and maple books obtained from donors to improve reading literacy. This support system is a necessary condition for a model. So, not the model itself. The support system starts from a model's support to create a unique environment. In this connection, the support system consists of capabilities/skills and technical facilities.

### **3.5. Instructional Impact**

The instructional impact of applied learning includes increasing students' knowledge and understanding based on interviews with teachers/teaching teams, observations of student activities, and scrutiny of documents at the Merapi emergency school. Increased understanding is marked by increased information about subject matter that the school has determined. Increased knowledge of students related to new information and disaster information, especially about disasters. The teaching team uses this information to educate and influence students' attitudes and behaviour to stay calm, active and learning in refugee situations. In general, it was concluded that the instructional impact resulted in an increase in students' knowledge and understanding which was indicated by the success of students participating in the end-of-semester assessment at the evacuation site.

The main target of health promotion and education can be focused on the community, divided into small communities in the surrounding environment, especially

school children. Children are particularly vulnerable because of their physical and psychosocial vulnerability in natural disasters compared to adults who survive. In addition, disasters such as earthquakes also impact the routine activities of children's education and health, especially in disadvantaged areas. Disaster risk reduction measures and post-disaster health education can create a safer environment that will help prevent death and illness and safeguard children's health [27]. Some students experienced decreased anxiety and increased self-esteem due to reduced school-related stress, and others showed increased opposition, emotional outbursts and sleep problems, all of which had an impact on them [28].

Instructional effect Student learning outcomes increase. The criteria for disaster mitigation simulation skills are quite good. Based on the poster analysis, the criteria are quite good. The results of the enjoyment questionnaire showed that students did not enjoy it, while the anxiety questionnaire showed that students did not feel anxious. Recommendations that can be given are the necessary pre-learning activities [29].

### **3.6. Accompaniment Impact**

Based on interviews with teachers/teaching teams, interviews with students, observations of student activities, and scrutiny of documents at the Merapi emergency school, the impact of applied learning accompaniment includes artistic skills, enthusiasm and the loss of a sense of trauma. Increased artistic skills are shown by students in refugee areas who learn the traditional dance to carry out harmonious movements with the rhythm of traditional music. Students' enthusiasm for learning also increases because they do not get optimal learning assistance when they are at their place of origin. Precisely in the refugee areas, students receive assistance in learning to read, write, and count for low grades and the ability to understand reading, Javanese language, and English for high grades. This reduced sense of trauma to the disaster is indicated by students who feel happy living in the refugee camps because they can play with many friends and get lots of toys. This is also supported by a trauma healing program carried out by the teaching team and volunteers periodically as long as they live in refugee camps. In general, the accompaniment effects of the existing model in the Merapi emergency school are increased artistic skills, higher enthusiasm for learning, reduced trauma to the eruption disaster. Impact on the teaching and learning environment by leveraging dynamic scalability and resource efficiency, thereby expanding the boundaries of educational opportunities and ensuring the availability of educational services [30].

The Instructional Impact and the Impact of the Merapi Emergency School Driver results. Instructional Impact: The direct result of increasing students' knowledge and understanding is indicated by students'



success in the end-of-semester assessment at the evacuation site. accompaniment impact: Increased artistic skills, higher enthusiasm for learning, reduced sense of trauma to the eruption disaster [15] The instructional impact is the learning outcome achieved by students directly by directing the students to the expected goals, and the accompaniment impact is another learning outcome produced by a teaching and learning process as a result of creating a learning atmosphere experienced directly by the students, without direct direction from the teacher, such as tolerance, democracy, independence, and openness. Accompaniment effect Disaster management course is understanding geography as a science and study, objects, approaches and principles. In addition, this course aims to enable students to design and apply innovative ideas in geography education research to solve educational and learning problems [31].

This study's limitations were limited to the informants studied because it only revealed the model through teacher interviews, student interviews, student observations, and document scrutiny. This research is also limited to the COVID-19 pandemic so that interaction with informants is less intensive and the results obtained are less than optimal. This research is also still limited to revealing learning; there are still psychological, social, and spiritual factors in disaster conditions that are ignored.

The findings of this study are that the learning model applied leads to a cooperative learning model, with syntax adjustments according to the situation and conditions in the refugee camps. In addition to learning assistance provided by the teaching team, this school also develops disaster literacy skills, where many emergency school activities collaborate with volunteers to reduce the trauma of the disaster.

Recommendations for future researchers, further researchers, can carry out disaster recovery and uncover more effective emergency school management. The next researcher also examines disaster conditions' psychological, social, and spiritual aspects.

Obstacles in research are interaction with refugees and limited places and learning facilities in research. Interaction is limited due to the COVID-19 pandemic, so it is necessary to maintain distance and social distancing. This affects the intensity of obtaining in-depth data in learning. Facilities and infrastructure that are not optimal in supporting learning are obstacles for the teaching team to facilitate learning.

This research implies that the manager of the final evacuation site in Deyangan is expected to prepare for the anticipation of learning facilities and infrastructure in the event of re-evacuation. Merapi emergency schools also need to be planned with a mature teaching team, increasing teaching competence in disaster areas and adaptability to teach creatively.

#### 4. CONCLUSION

We find that the learning syntax adapts the emergency curriculum to the curriculum applicable in schools through the proposed method. The flexibility of learning carried out in refugee camps for victims of volcanic eruptions is integrated with the addition of disaster knowledge and strengthens the psychosocial of school-age children in refugee camps. The principle of reaction in mentoring is directed at student-centered learning, where the teacher provides opportunities for students to explore their knowledge and experiences. The social system is directed at a volunteer's affection for children by upholding good manners in every learning activity. The support system uses worksheets compiled by teaching volunteers by adopting official books from the government. In addition, there is a teacher's book, student books and readings to improve literacy skills. Instructional impact by helping children achieve school-targeted learning outcomes and ensuring that the right to learn and obtain an education is fulfilled in refugee camps. The impact of accompaniment increases children's soft skills and formal learning according to the curriculum. The proposed method can ensure that education is implemented in refugee camps and can be carried out by volunteers even if they do not have educational skills.

In conclusion, the elements in the learning mentoring model are clearly described, and this model is very promising for learning assistance procedures in disaster evacuation areas, especially at the final evacuation site for temporary shelter for school-age children. Instructional impact by helping children achieve school-targeted learning outcomes and ensuring that the right to learn and obtain an education is fulfilled in refugee camps. The impact of accompaniment increases children's soft skills and formal learning according to the curriculum. The proposed method can ensure that education is implemented in refugee camps and can be carried out by volunteers even if they do not have educational skills.

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## AUTHORS' CONTRIBUTIONS

The author made substantial contributions to the conception and design of the study. The author takes responsibility for data analysis, interpretation, and discussion of results. The author read and approved the final manuscript.

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## COMPLIANCE WITH ETHICAL STANDARDS

Competing interests, the authors declare that they have no competing interests.

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