



## Post Earthquake Learning Assistance Strategy for Elementary School Students in Cibereum Village, Cugenang District, Cianjur

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### ABSTRACT

The Cianjur earthquake resulted in hundreds of deaths, minor to severe injuries, buildings destruction and landslides. Children studied in tents with appalling conditions. In addition, the impact of the earthquake that is even more serious is the emergence of trauma to children and adults. Before the earthquake happened, the children were cheerful and liked to play with their peers. The post-disaster turns the children's feelings to gloom, quiet and afraid of the aftershocks' potential. The Directorate General of Higher Education, Research and Technology, which is involving Universitas Kristen Indonesia (UKI), is also overseeing the integrated community service (PkM) Incentive Program MBKM based on Key Performance Indicators (IKU) for Private Higher Education (PTS). The aim of the activity is to provide strength learning activity in the study tents and psychological healing for early childhood, kindergarten and elementary school students. The activities carried out are providing study tents and learning facilities, accompanying children by telling stories, playing games and ice breaking.

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## INTRODUCTION

Indonesia is a country that is prone to earthquakes. Indonesia's geological position is at the confluence of three plates namely the Eurasian plate, the Pacific plate, and the Indo-Australian plate where the interaction forces between the plates push and shift various faults (Husein, S., 2016). When seismic waves propagate from a moving fault plane, there is an interaction of various types of waves, which are capable to move the ground vertically and horizontally. Earthquakes are earth vibrations. An earthquake generally occurs due to a sudden movement of the earth's crust along the plane of faults (Pachman, L. M., Abott, K., Chen, Y. W., Amoruso, L., Sinacore, J., Hom, C., ... & Ray, L. 2004). A fault is a crack that separates two blocks of rock when they slide over one another.

This movement can occur because the rock receives and stores the tectonic pressure sent by the interaction of lithospheric plates, gradually accumulating in such a way that the stress force becomes so large and able to shift the rock along the fault plane. The shift occurs suddenly and sends shockwaves in all directions, which are known as earthquakes. Earthquakes are a natural disaster that is always lurking and cannot be avoided in many areas in Indonesia, including in Cianjur, because of the unique position and geological history of this region. The earthquake occurred in Cianjur on November 21 2022 at 13.21.10 WIB. The epicenter of the Cianjur earthquake was at coordinates 6.84 LS-107.05 a depth of 11 KM with a magnitude of 5.6 (Geological Agency). It was further conveyed that the Geological Agency had mapped the location and level of damage to buildings and the location of the most severe ground motion in an area composed of breccia deposits and G.Gede (Qvyg) lava in Cugenang District, Cianjur, Warungkondang, and Gekbrong Districts.

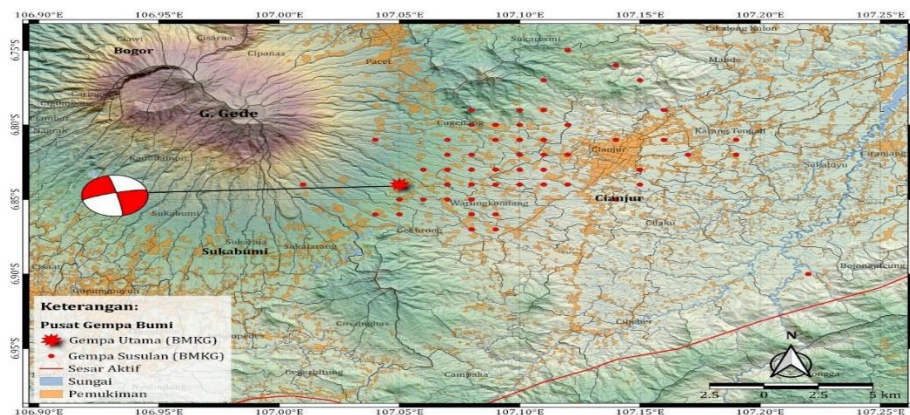


Figure 1. Map of the Epicenter of the 2022 Cianjur Earthquake Including the Mainshock and Aftershocks, Showing the Moving Fault Area or Rupture Area (Blue Box)

The Cianjur earthquake resulted in hundreds of deaths, minor to severe injuries due to falling debris, the destruction of residential buildings, mosques, schools, campuses, tourist attractions, etc. (severe, moderate, and minor damage) and landslides. Building destruction occurred due to several factors

including strong earthquake shocks, proximity to the epicenter, soft soil conditions, and the quality of the buildings. We need to note the statement from world earthquake experts which often appears in the media, that earthquakes cannot kill human but collapsing buildings that fall on people can. People have lost their livelihoods. In addition, the impact of the earthquake that is even more serious is the emergence of trauma to children and adults. Before the earthquake happened, the children were cheerful and liked to play with their peers.

The post-disaster turns the children's feelings to gloom, quiet and afraid of the aftershocks' potential. This situation is called psychological trauma experienced by children and greatly affects their mental development. This condition needs to be handled specifically so that they can rise and recover their mentality. A person who has experienced trauma generally starts from a state of deep and continuous stress that he cannot overcome all alone. While stress is a reaction that arises due to circumstances or events or experiences that burden the mind continuously. The trauma experienced by these children in the long term will result in a heavy psychological burden that can hinder their emotional, social and educational development of children.



Figure 2. Aerial Photo of the Location of the Ground Movement Triggered by the Earthquake in Cisarua Village, Sarampad Village, Cugenang District

The government quickly assisted the Cianjur earthquake victims as well as the community, including the Indonesian Christian University. One day after the Cianjur earthquake, November 22, 2022, the Indonesian Christian University (UKI) academic community and alumni immediately took part in evacuating the victims. People who were not injured were moved to evacuation tents. On December 1, 2022, the PkMan and Community Service Institute Team (LPPM) together with the Personality and Character Development Institute Team (LPKK) and the Student Senate provided medicine, food and assistance.

At the same time, the PkM Team conducted a survey in Tugu Village, RW 03, Cibeureum Village, Cugenang District, Cianjur.

The Directorate General of Higher Education, Research and Technology, which is involving Universitas Kristen Indonesia (UKI), is also overseeing the integrated PkM Incentive Program MBKM based on Key Performance Indicators (IKU) for Private Universities (PTS) FY 2022 Batch II. Some of the activities carried out include the fields of health, sanitation, education and psychological healing. However, this study is limited to education and psychological healing. The initial survey results showed that people were unable to sleep, anxious and pensive. Their minds were also haunted by the fear of aftershocks. The people live in evacuation tents with limited food. They start to catch colds and coughs, have itching, have no enthusiasm to study, are haunted by the fear of aftershocks (trauma), etc. Those who live in the evacuation tents are 485 elementary school students and 27 children from pre-school, kindergarten who should study normally but due to the earthquake, there is no enthusiasm to learn. They live day-to-day by expecting help from the government and society. With the conditions described above, it is necessary to study the strategy for assisting children studying in refugee camps.

## **IMPLEMENTATION AND METHODS**

The aim of the PkM incentive program in Cianjur is to provide strength learning in the study tents and psychological healing for early childhood, kindergarten and elementary school students in Tugu Village, RW 03, Cibeureum Village, Cugenang, Cianjur. The target of the PKM incentive program is 512 children from pre-school, kindergarten and elementary school in command posts unit 1, 2, 4 and 8 in Tugu Village, RW 03, Cibeureum Village, Cugenang, Cianjur. The method of implementation in this community service program is arranged systematically as a preparation, implementation and evaluation stage.

### **a. Preparation Stage**

1. Conduct a survey of the PkM implementation site by contacting the field coordinator and partnering with lecturers from Suryakencana University.
2. Identify the learning needs of early childhood, kindergarten and elementary school students.
3. Listen to complaints experienced by children and parents after the earthquake.
4. Look for psychologists as resource persons for psychological healing.
5. Prepare fun learning materials, ice-breaking and games.
6. Purchase study tents, tarpaulins, carpets, study tables, portable whiteboards, markers, notebooks, coloring books, colored pencils, and healthy food for children

### **b. Implementation Stage**

Community service activities will be held after preparations and a letter of assignment from the UKI leadership is in place. PkM activities are under the responsibility of Research and Community Services Institute (LPPM).

The activity was held in Tugu Village, RW 03, Cibereum Village, Cugenang District, Cianjur. PkM activities were conducted on December 1, 2022, December 12-15, 2022 and December 21, 2022. Activities were conducted at command post unit 1, 2, 4 and 8 for earthquake victims in Cianjur.

The focus of this PkM is a learning assistance strategy for elementary school children while living in study tents and refugee camps and the PkMan sub-focus is (1) learning assistance in tents and (2) the role of parents in accompanying children to study in evacuation tents. The number of elementary school students is 485 people and 27 children from pre-school, kindergarten. In its implementation, the target was explained about fun learning in the study tent, to help ease the psychological burden on children and the community through psychological healing activities. At the implementation stage of this activity, pre-school, kindergarten and elementary school students who became victims of the earthquake will be involved as healing participants. They will be given an understanding by a competent facilitator who has been involved in the implementation of the PkM. Apart from that, the activities carried out were in the form of handing over four (4) study tents and learning facilities to the head of RW 03 and the principal of the elementary school. In addition to handing over learning tools, they also carry out activities that help children to get back to enjoy learning, interacting socially with peers and the surrounding community.

#### c. Evaluation Stage

The evaluation stage is the phase carried out to assess the overall activity and review whether there are any deficiencies during the activity. This evaluation stage aims to ensure that the activities conducted can run effectively and as expected. The evaluation stage focused on psychological healing to help ease the psychological burden on residents who were earthquake victims in Cianjur. Because this PkM activity involves 6 students, the potential for recognition for students will be given a Diploma Assistance Certificate (SKPI) as the PkM Implementing Team, which is facilitated through the MBKM program. As for its relationship with IKU, namely undergraduate program students who get experience outside the campus/achieve a minimum achievement at the national level - IKU 2.

## RESULTS AND DISCUSSIONS

The Cianjur earthquake resulted in hundreds of fatalities, severe, moderate and minor injuries, destructive houses, worship places, schools and campuses, landslides and loss of livelihoods. On top of that, the Cianjur earthquake caused trauma, especially for children. Since November 21st, 2022, to be exact, the earthquake victims have lived in evacuation tents. The government, university community and observers empathize with the events experienced by the earthquake victims. The PkM team conducted community service on December 1st, 12th-15th, 2022 and continued on December 21st, 2022 while conducting interviews with the Head of RW 03, the School Principal, four (4) teachers, parents who took their children to school in study tents and also

parents who live in evacuation tents in command post unit 4 and command post unit 8. The results of the survey conducted by the PkM team will be described below.

### 1. Assistance for Children Studying in Study Tents

The Cianjur earthquake resulted in destructive homes and schools that made learning could not take place in the first week because the children were living in evacuation tents. The earthquake disaster caused the children to be depressed, sad, quiet and traumatized. Psychological trauma can be interpreted as intense anxiety that occurs suddenly due to events experienced in the environment beyond the limits of his ability to survive, avoid or overcome the events experienced (Nevid, 2005). In line with what Kurniati stated, earthquake disasters had physical, psychological and social impacts (Kurniati et al., 2022). Furthermore, it is said that the psychological impact can be repeated at a young age. Therefore it becomes very important to be a concern to teachers and parents.

The government quickly provided aid, as well as people who cared about the earthquake. UKI also cares for and wants to share as an implementation regarding to one of UKI's values. Learning must be carried out because it is already a formal education program. Because of the condition is still an emergency response, the learning carried out by the teacher cannot be implemented under the provisions that should be, but how can the children want and keep learning (Wulandari, K.D., 2018). In Tugu Village, Cibereum Village, there is an elementary school with 485 students. The initial step taken by the UKI PkM Team was to set up study tents and the necessary facilities. Lessons are held in a tent alternately twice a week. Learning tents with assistance from UNICEF, the Ministry of Education and Culture and UKI. The formal learning process is held in only one location guided by the teacher and the UKI PkM Team for 2 weeks.



Figure 3. The Study Tent is Ready to Use



Figure 4. Kindergarten Students Study Accompanied by the PKM UKI Team

Figure 3 shows the study tent set up on the residents' land. PkM activities are held during the rainy season so that the ground is slippery and muddy and turns out the road to the study tent is given hebel bricks as the road to the study tent to help students not be reluctant to come to the study tent. The psychological healing activities consist of stories-telling, ice-breaking, playing, coloring and playing games that train to think. In line with the opinion of Utami, F. B., Uswah, U., Kemal, F., & Nugraha, W. F. (2022) story-telling is an alternative to assist in dealing with trauma.

Figure 4 shows the kindergarten students are happily coming to the study tent to take part in lessons accompanied by the UKI PkM team. Children are invited to tell stories and are given the opportunity to tell what they want to say. In addition, ice-breaking activities make children happy to come and eager to learn. Games can train thinking and educate behavior, collaborate, and respect one another. Under these conditions, the teacher must be able to carry out learning that focuses on students (Sihotang, H., 2020). The results of interviews with school principals and teachers show that there are 485 elementary school students, so learning takes place twice a week.

## 2. The Role of Parents in Accompanying Children to Study While in Refugee Camps

After the Cianjur earthquake, on November 21st, 2022, children and their parents lived in evacuation tents. The school building was damaged and could not be used for learning activities. Due to these conditions, the children attended lessons in study tents with abnormal conditions. In the first week, the children experienced trauma. The children became gloomy, withdrawn and frightened. UKI also cares for and shares with the Cianjur people who were victims of the earthquake. On November 22nd, 2022 Faculty of Law went to the location to help evacuate residents and be transferred to evacuation tents. On December 1st, 2022 The UKI Academic Community and Alumni accompany children to play, tell stories and coloring, share foods and drinks, clothing and learning facilities.

Children study in tents without study tables and sit on tarpaulins. However, there is an integrated PkM incentive program MBKM Based on Key Performance Indicators (IKU) for Private Universities (PTS) Batch II 2022 Indonesian Christian University to oversee it. On December 12th-15th, 2022 The UKI Team accompanied the children to study and provided counselling to parents about the role of parents in accompanying children to study in refugee camps. UKI facilitates study tents, study tables, whiteboards, and other learning facilities which are distributed to all elementary school students. With this learning facility, the children can write and learn to use a study table at least.



Figure 5. Children Study without Study Tables Accompanied by Their Parents



Figure 6. Learning in Tents Using Tables Accompanied by Parents

Figure 5 shows that after the earthquake, with the assistance of the PkM team, the children were willing to learn coloring without a table. Seeing this condition, the UKI team, which is also PkM, provided study tables to make the children more comfortable. Figure 4b shows that the children are more enthusiastic to learn with a desk.

Parenting involvement is very important because it has a big influence on children so they are motivated to learn (Parapat, A., 2020). The involvement of parents while helping and accompanying children in learning will help the



enthusiasm for learning. So that, children's literacy skills are still motivated even when studying in a tent. Conversely, if parents do not accompany the child will play and do not want to learn. Most of the time children live in tents with their parents, so parental assistance is needed to provide an understanding that children must learn and continue to motivate their children. Parental assistance is needed as teacher coordination with parents when children learn from tents as homes (Epstein & Becker, 2018). Parents should teach their children how to solve their problems (Yulianingsih, W., Suhanadji, S., Nugroho, R., & Mustakim, M., 2020).



Figure 7. Grades 5-6 of Elementary School Students in the Study Tent



Figure 8. The Children are Close to the PKM Team and Enjoy Learning

Figure 8 shows the school principal and the UKI Team paying attention to students so that they are enthusiastic about learning, bearing in mind that the final semester assessment is delayed and will be held in January 2023. With study assistance from the PkM Team the children are happy, very close even already know and want to say hello first. In addition, Figure 5b shows the children who are very close to and know the UKI PkM Team.

## CONCLUSIONS AND RECOMMENDATIONS

### *Conclusions*

The Cianjur earthquake resulted in hundreds of deaths, minor to severe injuries, buildings destruction and landslides. Children studied in tents with appalling conditions. In addition, the impact of the earthquake that is even more serious is the emergence of trauma to children and adults. Before the earthquake happened, the children were cheerful and liked to play with their peers. The post-disaster turns the children's feelings to gloom, quiet and afraid of the aftershocks' potential. The Directorate General of Higher Education, Research and Technology, which is involving Universitas Kristen Indonesia (UKI), is also overseeing the integrated community service (PkM) Incentive Program MBKM based on Key Performance Indicators (IKU) for Private Higher Education (PTS). The aim of the activity is to provide strength learning activity in the study tents and psychological healing for early childhood, kindergarten and elementary school students. The activities carried out are providing study tents and learning facilities, accompanying children by telling stories, playing games and ice breaking.

Based on the data and information obtained as well as the description of the results and discussion it can be concluded as follows.

1. The earthquake in Cianjur resulted in fatalities, severe or minor injuries, the destruction of school buildings, houses, and other buildings, loss of jobs and more severely caused traumatized residents.
2. The study tents and learning facilities provided support the learning process.
3. Learning in study tents is used for 485 students so that learning is carried out in shifts twice a week.
4. The impact of the earthquake, children became traumatized so learning was disrupted. Hence, learning assistance was needed by educational observers, teachers and parents.
5. While in the study tent, the teacher is expected to carry out lessons according to the learning conditions in the tent by making alternating schedules. Teachers must be enthusiastic and keep motivating students to eager to learn even in difficult circumstances.
6. Parental assistance to children in evacuation tents is very necessary considering that children are entering a period of psychological recovery and children spend more time with their parents in evacuation tents.

### *Recommendations*

1. The PkM team suggests that this program does not stop until December 2022 but needs to be followed up and become a fostered village of Higher Education PkM. In addition, it is necessary to develop a learning model in study tents when an earthquake occurs.
2. Parents are expected to continue accompanying their children because study time in study tents is very short and children spend a lot of time with their parents.

3. Principals and teachers need to make a proportional study schedule and socialize it with students and parents.

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