

## Teenagers' Knowledge of Natural Disaster Mitigation

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**Abstract:** This study was conducted with the aim of determining adolescents' knowledge of disaster mitigation in Lere Village, West Palu District. In this study, the author used a qualitative research method with research procedures described descriptively. In relation to this, a methodological process was undertaken consisting of literature research and field research comprising observation, interviews, and documentation. Six informants were selected for this study using purposive sampling, consisting of the Head of Disaster Management for the City of Palu, the Secretary of Lere Village, and adolescents living in Lere Village. Based on the data findings in the field after the research was conducted, then analyzed and answered the research problems and related to the theory of knowledge proposed by Karl Mannheim, the results of the study showed that among the youth in Lere Village, there were those who understood and those who did not understand disaster mitigation. The reason for the lack of understanding among teenagers is due to a lack of education in schools and families about disaster mitigation. Teenagers who understand natural disaster mitigation know what to do before, during, and after a disaster. This knowledge of disaster mitigation was acquired by teenagers after the earthquake and tsunami on September 28, 2018.

**Keywords:** Adolescents, Disaster Mitigation

### 1. Introduction (Pendahuluan)

The island of Sulawesi is located between three major tectonic plates, namely the Eurasian, Pacific, and Indo-Australian plates, as well as a number of other smaller plates, resulting in the complex tectonic conditions of Sulawesi Island. The convergence of these three plates is convergent in nature, and the relative collision between them has caused Central Sulawesi and its surrounding areas to become one of the regions with a high level of seismic activity in Indonesia. According to the National Disaster Management Agency (BNPB), the Central Sulawesi region, particularly the city of Palu, is prone to earthquakes and tsunamis. This is because the city of Palu is located along the Palu Koro Fault line. (BNPB 2022)

The city of Palu is recorded as an earthquake-prone area because it has the highest tectonic activity in Indonesia. This is because the city of Palu has a fairly large crustal fault (fault) known as the Palu-Koro Fault. The Palu-Koro Fault stretches for about 500 kilometers from the Makassar Strait to the north coast of Bone Bay. In Palu City, the fault line crosses from Palu Bay into the mainland, cutting through the heart of the city to the Lariang River in the Pipikoro Valley (Hisbulloh et al., 2020).

The natural disaster that occurred in Palu City on September 28 consisted of three disasters: first, an earthquake; second, a tsunami; and finally, liquefaction. This natural disaster caused damage to supporting infrastructure and resulted in the deaths of thousands of residents. The high number of casualties illustrates that the preparedness and readiness of the community and local government authorities are still low, mainly due to a lack of knowledge and awareness of this natural phenomenon and its consequences.

Lere Village is one of the villages located in West Palu District, Palu City, Central Sulawesi Province. Lere Village is included in the red zone or disaster-prone area. The northern part of Lere Village, which is close to the coast and the phenomenal bridge of Palu City known as the Ponulele Bridge, was flattened by the tsunami. The impact of the disaster was devastating, with houses lining the Cumi-Cumi road, from the Palu IV bridge to the Taman Ria beach, completely destroyed by the waves. Due to its location facing Palu Bay, only the remains of buildings were left standing.

The author intends that knowledge in this study refers to the opinion put forward by Karl Mannheim in Herman Arisandi (2015:83), assuming that knowledge is the systematic study of knowledge, ideas, and general intellectual phenomena. Knowledge is defined as the belief that a phenomenon is real and has certain characteristics. Knowledge is a reality that exists in the realm of individual consciousness. In essence, Karl Mannheim says that a person's knowledge is closely related to their way of life, experiences, and living environment. Similarly, in this study, the knowledge of adolescents in Lere Village is closely related to their way of life, experiences, and living environment, where Lere Village is one of the areas that was severely affected by the earthquake and tsunami. In this case, adolescents who know that the location is prone to disasters can anticipate disasters by learning about disaster preparedness and steps to reduce disaster risk.

## **2. Method (Metode)**

In this study, the author used a descriptive research procedure, both verbally and in writing, from people who produced an objective picture of the situation. This is based on what Moleong (2000:11) described, so this study used a qualitative research method.

### **a. Research Location**

The location of this study was determined to be one of the villages in West Palu District, namely Lere Village. The selection and determination of this location was based on the fact that Lere Village was one of the villages that suffered severe damage due to the 2018 earthquake and tsunami. Lere Village itself is included in the red disaster-prone zone. In addition to Lere Village being included in the red disaster-prone zone, the author also wanted to find out the level of knowledge of teenagers in the Lere Village area about disaster mitigation. This was the motivation for the author to explore this topic and make it the subject of research.

b. Analysis Unit and Informants

The unit of analysis in this study is the object targeted in the study, namely "Adolescents' Knowledge of Disaster Mitigation," and the subject of the study, namely "Adolescents" in Lere Village, West Palu District.

The informants in this study were adolescents residing in Lere Village. However, the author simplified the selection of informants due to the large number of adolescents in the location. Therefore, the selection of informants was carried out purposively by selecting six informants, including the Head of Disaster Management as the key informant, four adolescents living in Lere Village, and the Village Secretary at the Lere Village Office. These informants were considered capable of providing the expected answers to the researcher's questions. The criteria for the informants in this study were as follows:

1. Head of Disaster Management at the Palu City Regional Disaster Management Agency office.
2. Teenagers affected by natural disasters.
3. Secretary of the Lere Village office.

c. Data Collection Techniques

Data collection is an important part of research. The data or information obtained determines the success of a study, whether it is qualitative or quantitative data sourced from primary or secondary data. Data collection in this research plan is carried out in two stages, namely:

1. Primary Data, data obtained from observations, interviews, and documentation conducted by the author based on the guidelines that have been made and direct observation of informants.
2. Secondary Data, data obtained from documents, notes, reports, and official archives, which can support the completeness of primary data.

The use of primary and secondary data together is intended to complement each other in accordance with the needs of the research. In addition, this can be done simultaneously to compare the data obtained.

#### d. Data Analysis Techniques

Data analysis is the final series of activities in a research study. The data analysis technique used in this study is qualitative data analysis, which involves clearly and thoroughly describing the data and facts obtained during field research activities and as answers to the research questions.

The stages of the data analysis process in qualitative research according to Sugiyono (2018: 247–249) are as follows:

- 1) Data Reduction Stage: To provide a clear picture and facilitate data collection, at this stage the author summarizes, focuses on important matters, selects key points, and looks for themes and patterns that are relevant to the research topic. From the large amount of data obtained, it is important to reduce the data, which requires intelligence and deep insight so that the selected data is relevant to the final objective.
- 2) The next stage after reducing the data is to present the data. In qualitative research, data is organized systematically and in an easy-to-understand manner so that conclusions can be drawn. Qualitative data can be presented in the form of narrative text (field notes), graphs, matrices, networks, or charts. Through this presentation of data, it can be organized into patterns of relationships so that it can be easily understood.
- 3) The final stage in analyzing qualitative research is drawing conclusions and verification. According to Sugiyono (2018: 252-253), conclusions and verification in qualitative research can answer the research questions formulated at the outset, but may also fail to do so. As previously mentioned, the problems and problem formulations in qualitative research are temporary in nature and will evolve once the research is conducted in the field. This stage aims to find meaning in the collected data by looking for relationships, similarities, or differences to draw conclusions as answers to the actual problems.

### 3. History of the Establishment of Lere Village

The name Lere itself is taken from the Kaili language, which means Tapal Kuda plant, a creeping plant with purple flowers that grows abundantly on the coast of the region. During the Palu Kingdom era, the Lere village area was called Panggona or Panggovia. According to the late Andi Alimudin Rauf, a descendant of one of the old village chiefs in Lere (Palimuri Yodjo Kodi), it was Pua Janggo who established the Panggona settlement.

Then in 1892, at that time, Magau (King) of the Kingdom of Palu, named Yodjo Kodi Toma Isiema, built the Royal Palace (now known as Banua Oge/Sou Raja) to replace the previous Royal Palace located in the Tangga Banggo/Siranindi area (now a cemetery complex for the royal family on Jl. Durian, Siranindi Village, West Palu District). Historically, the construction of Banua Oge involved workers from Banjar and Bugis, and

even the architect and supervisor were Magau Yodjokodi's own son-in-law, Amir Pettalolo. So it is not surprising that the style of Banua Oge resembles traditional houses in the Banjar region.

In 1907, during the reign of the Palu Kingdom under the control of Yodjo Kodi's son, Parampasi, he made Lere the center of the Palu Kingdom's government. At that time, the royal noble houses surrounding the King's Palace/Banua Oge began to be built. The supporting areas of Kampung Lere at that time were Kampung Baru, Bungi (the area along the Palu River), Tonggo (the coast of Taman Ria), and Panggeve (the area around Kabonena).

December 1, 1927, during the reign of Magau Djanggola Lapariusi (Cucu Yodjo Kodi), an earthquake followed by a tsunami struck Palu Bay. The Kaili people remember this event as "Kaombo Potomu Biromaru" (The Collapse of Biromaru Market). The Kaili people refer to the tsunami as "Bamba Talu." The same disaster occurred again in May 1938, which then triggered a massive relocation of residents in the area around the epicenter of the earthquake (Silae and Watusampu) to be placed around Kampung Lere and Kampung Baru. It is not surprising that today many people in Kampung Lere have kinship ties with the residents of Silae and Watusampu.

One of the famous historical sites associated with the story of the agreement between the Sea Lord and the King of Palu at that time is known as the Sou Nu Gusu Site. Unfortunately, the site was destroyed by the tsunami waves that struck the coast of Lere Village on September 28, 2018.

When it became the center of the Palu Kingdom, Lere Village automatically became one of the four cities (Patanggota)/Main Villages in the Palu Kingdom, along with Besusu/Pandapa, Kampung Baru/Boya Tongo, and Tangga Banggo/Siranindi. On May 6, 1950, the last King of the Palu Kingdom, Tjatjo Idjaza, who was inaugurated on February 14, 1949, read a proclamation stating that the Palu Kingdom had joined the Unitary State of the Republic of Indonesia (NKRI). Since then, Kampung Lere has become part of the West Palu district.

Lere Village is a portrait of the Palu Kingdom in the past. The philosophical layout of the area reflects the authenticity of Kaili culture, which is open and filled with values of tolerance and mutual respect.

### **3.1. Adolescents' Knowledge of Natural Disaster Mitigation in Lere Village**

Lere Village is one of the areas located in West Palu District, Palu City. The area was severely affected by the earthquake and tsunami disaster. It is located on the coast. The area is close to facilities and infrastructure such as hotels, schools, campuses, offices, mosques, and so on.

The Lere sub-district was designated by the government as a red zone due to the 2018 earthquake and tsunami disaster. This natural disaster caused damage to supporting

infrastructure and resulted in the deaths of thousands of residents. The large number of victims caused by this natural disaster highlighted that community preparedness and readiness were still very low, mainly due to a lack of knowledge and awareness of this natural phenomenon and its impacts.

Disasters are inevitable, but what can be done is to minimize casualties, property damage, and environmental damage. The high number of casualties and property damage in disasters that have occurred so far is often caused by a lack of awareness and understanding of potential disaster vulnerabilities and mitigation efforts.

In society, some people consider adolescents to be a group with unclear roles and see them as a group that does not yet have the capacity to play a role in society. Adolescents are often grouped as a group that is vulnerable to disaster risks.

Teenagers are often assumed to be one of the most vulnerable groups in disaster management efforts. As a result, teenagers are seen as playing a minor role in disaster management in society. However, if teenagers are given strong disaster management preparedness skills, there will be many benefits for the community when a disaster occurs. This is because teenagers will become effective agents for disseminating information to their surrounding communities. If they have sufficient knowledge, they will be able to provide important information related to disaster mitigation in the future.

Before the disaster struck in 2018, teenagers in Lere Village played a minor role in disaster management due to their limited understanding of the risks surrounding them, which resulted in a lack of preparedness in facing disasters. Based on data showing that teenagers are a group vulnerable to disaster risks, this highlights the importance of knowledge about disasters and disaster risk reduction from an early age to provide understanding and guidance on the steps that must be taken when a disaster occurs.

The phenomenon described above is consistent with Karl Mannheim's explanation that knowledge links ideas about groups to their position in the social structure. This relates to the issue examined by the researcher, which is to assess adolescents' knowledge of natural disaster mitigation.

In Lere Village, most teenagers still have minimal knowledge about natural disaster mitigation because the problem before and after disasters is the lack of knowledge among teenagers, which stems from insufficient internal and external socialization.

As stated by Mr. Gayus Novanto Pakan (40 years old) as follows:

"Teenagers' knowledge about disaster preparedness is still very lacking because parents do not provide their children with education about disaster mitigation, thinking that such knowledge is already taught at school. Parents should play an important role in

conveying everything, including preparedness in facing disasters" (Interview on March 2, 2023).

Based on the results of the interview above, Mr. Gayus Novanto Pakan (40 years old), Head of Disaster Management, stated that parents play an important role as the first educators of their children, especially teenagers, regarding the impact of natural disasters. Based on the results of this analysis, this is in line with the opinion expressed by Mr. Fitrian (42 years old).

According to Mr. Fitrian (42 years old), Secretary of the Lere Village Office, as follows:

"The influence of the family environment on disaster mitigation knowledge is very important, but if we look at the current situation, there are still many who do not understand what to do, because most parents do not know how to prepare for disasters, so they do not provide enough education to their children" (Interview on March 6, 2023).

The results of the interview conducted by Mr. Gayus with Mr. Fitrian are in line with their statements that the influence of teenagers who lack education about natural disaster mitigation is due to internal factors, particularly their parents' lack of understanding about natural disaster mitigation.

Apart from family factors, knowledge about natural disaster mitigation for teenagers can also be obtained from external factors, such as school. This is in line with the information provided by Naril (17 years old), a student at SMAN 4 Palu.

According to the information provided by Naril (17 years old), a student at SMAN 4 Palu, as follows:

"My school does not provide students with an understanding of disaster mitigation, so my friends and I do not really understand what disaster mitigation is" (interview on March 8, 2023).

This is in line with what Syarifa (16 years old), a student at SMAN 4 Palu, said:

"I don't really understand what disaster mitigation is, and at school we are not taught about disaster mitigation. Usually, when there is a disaster such as an earthquake, we are just told to leave the room." (interview on March 9, 2023)

Most teenagers in Lere Village still have minimal knowledge about natural disaster mitigation due to several factors, including schools that do not provide sufficient education and families that also lack understanding about natural disaster mitigation.

According to Risky (17 years old), a student at SMA 4 Palu, "What I understand about disaster mitigation is disaster management or preparation before a disaster. What I do when there is a disaster, such as an earthquake, is to get out of the house as quickly as possible or hide under a sturdy table." (Interview on March 8, 2023)

This is in line with what was conveyed by informant Zizi (16 years old), a student at SMA 4 Palu, as follows:

"What I understand about disaster mitigation is efforts to reduce the risk of disasters. Because my house is close to the beach, if there is a disaster, I try to stay away from the coast and go to higher ground" (Interview on March 9, 2023).

Based on the two interviews above, it is clear that teenagers' knowledge of disaster mitigation is still lacking, as they only know the basics.

This is in line with Karl Mannheim's concept of knowledge, which states that knowledge relates ideas about a group to its position in the social structure. This is consistent with the phenomenon observed among some adolescents in Lere Village, who have not received adequate education on disaster mitigation either from their families or schools, resulting in their lack of knowledge about disaster preparedness.

In Lere Village, teenagers' knowledge in dealing with natural disasters involves a series of efforts. For example, their efforts in overcoming floods include not littering, while their response to earthquakes is to save themselves by heading to open ground, and when a tsunami occurs, they flee to higher ground.

As stated by Mr. Gayus Novanto Pakan (40 years old) as follows:

"The dissemination of disaster mitigation knowledge to teenagers, such as the dissemination of the early warning system for disasters, is a measure to strengthen teenagers' response to the threat of disasters so that they are able to take responsive and anticipatory measures to reduce the number of victims and losses caused by disasters." (Interview on March 2, 2023)

This is in line with what Mr. Fitrian (42 years old), Secretary of the Lere Village Office, said:

"We are taking steps by holding an awareness program together with the Disaster Management Agency in Lere Village because most of these teenagers still do not understand what disaster mitigation is, because when a disaster occurs, the response from teenagers is mostly panic." (Interview on March 6, 2023)

Furthermore, as stated by Mr. Gayus Novanto (40 years old), Head of Disaster Management for the City of Palu:

"In addition to conducting awareness-raising activities, we are also forming a community of disaster management volunteers. The purpose of forming this community is so that they can be the first group to assist the community when a disaster occurs." (Interview on March 2, 2023)

Based on the results of the interviews above, the efforts made by the local government include conducting an awareness campaign and forming a disaster management community to increase young people's knowledge about natural disaster mitigation and what to do when a natural disaster occurs.

Based on the results of the analysis above, the socialization agenda carried out by the local government was attended by various groups, ranging from children, teenagers, adults, to parents. The socialization agenda was open to the public with the aim of increasing knowledge about disaster mitigation among the community in Lere Village. The agenda was attended by several teenagers from elementary to high school.

This is based on information provided by Risky (17 years old), a student at SMA 4 Palu, as follows:

"Some time ago, the local government held a socialization event on natural disaster mitigation efforts. My friends and I also participated in the socialization program. From what I understand about natural disaster mitigation, if an earthquake occurs while you are still inside a building, you should not panic, protect your head, immediately duck down, and find a safe place to take shelter, such as under a sturdy table" (Interview on March 8, 2023).

This is in line with the information provided by Zizi (16 years old), a student at SMA 4 Palu, as follows:

"My understanding is that when we are outside the house and an earthquake occurs, what we must do is stay away from tall buildings, power lines, and trees, then go to an open area or an open field." (Interview on March 9, 2023)

Then, as stated by Naril (17 years old), a student at SMA 4 Palu, as follows:

"When we are inside a car and an earthquake occurs, what we should do is immediately pull over to the left shoulder of the road because if we insist on continuing to drive while the earthquake is still ongoing, the driver will lose control of the vehicle." (Interview on March 8, 2023)

Based on the results of the interview above, which was then analyzed, when an earthquake occurs, there are several things that can be done. Among them are when we are inside a house or building and an earthquake occurs, if we do not have time to run outside to an open field, the best thing to do is to take shelter under a sturdy table. When we are outside a building and an earthquake occurs, we should avoid electrical cables, tall buildings or structures, and trees as much as possible, and immediately run to an open field. If we are still driving when an earthquake occurs, we should immediately stop and pull over to the left side of the road.

Natural disasters such as earthquakes, if they occur frequently and with high magnitude, will certainly trigger other natural disasters such as tsunamis. To deal with this, the local government has conducted a socialization program for the community regarding disaster mitigation. Several teenagers living in Lere Village participated in or attended a series of these programs. The teenagers' understanding of natural disaster mitigation has increased.

This is as stated by informant Zizi (16 years old) regarding the efforts made when the signs of a tsunami began to appear.

"What I understand about the characteristics of a tsunami is that when a tsunami is about to occur, we should turn on the radio or look for information to find out if a tsunami has occurred after an earthquake in the coastal area, and quickly move to higher ground and stay there for a while." (Interview on March 9, 2023)

In line with the information provided by Risky (17 years old), a student at SMAN 4 Palu, as follows:

"What I know is that if there are signs of a tsunami coming, such as a strong earthquake, we should immediately move away from the coast and never go to the coast to see the tsunami coming. If we see waves, what we must do is immediately move away or run from that place." (Interview on March 8, 2023).

Then, as stated by informant Naril (17 years old), a student at SMA 4 Palu, as follows:

"When a tsunami occurs, find the safety signs around us. Follow the evacuation routes and signs, if any. If a safe location is unknown, run as far away from the coast as possible and find a higher place" (Interview on March 8, 2023).

Based on the results of the interviews above, which were then analyzed, it was found that teenagers' understanding of disaster mitigation is that when a strong earthquake occurs and triggers a tsunami, the first thing to do is to turn on the radio to listen to information about whether there will be aftershocks that could trigger a tsunami. and when we are still on the beach and an earthquake occurs, we should immediately run

away from the beach, especially if we have seen waves, and leave the location as soon as possible, find a safe evacuation route or go to higher ground and stay there for a while.

Teenagers' knowledge of disaster mitigation in dealing with floods caused by high rainfall, resulting in river overflow where the river water rises to the surface of the road, flooding several houses located near the riverbank. Understanding of flood disaster mitigation among teenagers, especially teenage students in Lere Village. Based on the opinion expressed by informant Naril (17 years old).

According to informant Naril (17 years old), a student at SMAN 4 Palu, as follows:

"My understanding of mitigation after a flood disaster is that we must avoid areas that have just receded because the roads may be porous and subside. We must also avoid locations affected by disasters unless the authorities need volunteers or assistance" (interview on March 8, 2023).

The interview results above show that after a flood disaster, people should not approach areas or locations that are still affected by the disaster, avoid moving water, and avoid areas where the water has just receded. Regarding the information provided by informant Zizi (16 years old) on mitigation measures taken after the disaster.

According to informant Zizi (16 years old), a student at SMA 4 Palu, as follows:

"What I know is that after a flood disaster, we must avoid flood water that is contaminated with hazardous substances and the threat of electric shock, be aware of electric shocks, we must also be careful of buildings or walls that have been weakened by the flood, and be careful when entering buildings because of the threat of unseen damage, such as to the foundations" (interview on March 9, 2023).

Based on the interview results above, teenagers' understanding of natural disaster mitigation after a flood includes several things that must be done, including avoiding flood water contaminated with hazardous substances and the threat of electric shock, being cautious of buildings or walls that have been weakened by flooding, and being careful when entering buildings due to the threat of unseen damage, such as to the foundations.

Teenagers' understanding of natural disaster mitigation before it occurs or before a flood occurs. Based on the information provided by informant Syarifa (16 years old), a student at SMA 4 Palu, as follows:

"My understanding of pre-flood disaster mitigation or before a flood occurs is that we must understand evacuation routes and higher ground as much as possible, we must be

aware of the potential dangers and risks around us, prepare emergency bags, and understand early weather warning information" (interview on March 9, 2023).

This is in line with the information provided by the informant regarding pre-flood disasters. According to Risky (17 years old), a student at SMA 4 Palu, as follows:

"In my understanding, before a flood occurs, we must ensure that we have health protocol support. Before that, don't forget to scan valuable documents that you have. We must also avoid buildings in flood-prone locations and reinforce and elevate houses or buildings" (interview on March 8, 2023).

From the results of the above analysis, the author concludes that based on the issues studied, namely Adolescents' Knowledge of Disaster Mitigation, this is in accordance with Mannheim's statement in his Theory of Knowledge, quoted by Herman Arisandi in his book entitled "Smart Book of the Thoughts of Sociological Figures – Sociological Figures from Classical to Modern" (2015:83), which explains that knowledge relates ideas about groups to their position in the social structure. This theory is related to the issue raised, namely adolescents' knowledge of disaster mitigation in Lere Village, accompanied by several causes from the family and school environments that do not provide sufficient education about disaster mitigation. Schools also rarely hold events about natural disaster mitigation, At home, parents also rarely provide education on disaster mitigation because they assume that education on disaster mitigation is already taught at school, so parents of adolescents rarely provide education related to disaster mitigation to their children. This is a factor in why adolescents' knowledge related to preparedness for natural disasters is still very minimal or lacking.

Based on this phenomenon, there are some teenagers who understand how to prepare for natural disasters. For example, when an earthquake occurs, there are several things that must be done, such as not panicking when indoors, immediately protecting your head, and taking shelter under a sturdy table if you do not have time to escape from the house. When driving and an earthquake occurs, it is best to pull over to the left shoulder of the road. When outdoors, avoid tall buildings, power lines, and trees. Then, when a flood occurs, there are several things that must be done, including preparing a disaster preparedness bag, staying away from soil that has been weakened by flooding, staying away from walls or fences, and staying away from power poles. Furthermore, when a tsunami disaster occurs, there are several things that must be done, including finding an evacuation route, going to higher ground and staying there temporarily, not approaching the coastline, and always listening to the latest news on the radio about the tsunami disaster.

#### 4. Conclusion

Based on the findings from field data after conducting research and analyzing it to answer the research questions, it was concluded that teenagers in Lere Village had no knowledge of disaster mitigation, as no such education had been provided in schools or families. As a result, these teenagers did not contribute to helping the community around them, and parents and children became victims of the earthquake and tsunami on September 28, 2018.

Understanding of disaster mitigation among adolescents only emerged after the earthquake and tsunami because both the school environment, the family environment, and even the government only provided understanding and socialization regarding preparedness for disasters, such as what to do before, during, and after an earthquake, flood, and tsunami in Lere Village, West Palu District.

The suggestions that the author can include in the research results are as follows:

- 1) It is hoped that schools can be more active or frequently hold activities related to natural disaster mitigation so that students do not lack knowledge about the importance of knowing about natural disaster mitigation.
- 2) Parents are expected to educate their children about disaster mitigation.
- 3) Teenagers are expected not to be too negligent or indifferent in learning about natural disaster mitigation.

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