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The Influence of Education and Local Culture on Community Preparedness in Facing Disasters

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Abstract

This research is motivated by the awareness of the importance of community preparedness against disasters, especially for island communities living in disaster-prone areas. Maringkik Island, East Lombok Regency was chosen as the research location because it is included in the southern part of Lombok Island, which has the potential for megathrust (an earthquakes above 8 SR). The objectives of this study were to determine: (1) the level of community education and its effect on community readiness in dealing with current disasters, (2) the level of understanding of disaster preparedness in the community in patron-client relationships, and (3) the level of disaster preparedness in the local social system of community. The method used in this research was mixed methods, a combination of quantitative and qualitative research. The data were collected using in-depth interviews and surveys using a questionnaire. The results show that community preparedness in facing disasters wss influenced by several factors, namely the level of education and knowledge as well as existing socio-cultural values. In addition, the existing patron-client pattern contributed to the community's low understanding of disaster preparedness. Community behavior and preparedness in the event of a disaster were still traditional, instinctive and natural, not based on modern science. Therefore, this study recommended the importance of disaster-specific subjects in schools and routine disaster mitigation-related training from related institutions.

Keywords: Disaster education; disaster preparedness; archipelago community; Maringkik Island

INTRODUCTION

The Asia Pacific region is a region known to be vulnerable to natural disasters. Moreover Indonesian archipelago islands with more than 17,000 islands, stretching from the western tip of the island of Sabang in Aceh, to the east end of the province of Papua. The region is a group of islands that are constantly threatened by natural disasters, ranging from earthquakes, tsunamis, hurricanes, floods, and disasters caused by climate change. According to Taupo (2018), 75% of deaths due to natural disasters in the world come from the Asia Pacific Region. This can be understood if we know the condition of small islands in the Asia Pacific Region which in terms of economic life is still in the category of backward regions with relatively low levels of

education and the availability of infrastructure that is still not developed (Taupo, 2018; Kusumastuti et. al., 2014; Hallegatte et. al., 2017).

Indonesia as an archipelago has a high potential for disaster. The archipelago which is blessed with a series of active volcanoes and is traversed by a ring of fire and is in a tectonic zone makes Indonesia vulnerable to disasters (Nasruddin et al, 2016). Based on data released by the United Nations International Strategy for Disaster Reduction (UN-ISDR) as quoted (BNPB, 2011), Indonesia ranks first out of 265 countries as the country most prone to earthquakes in the world. In addition, there are various natural disasters including fault activities, eruptions, earthquakes, tsunamis, floods, landslides, drought and various other natural disasters (BNPB, accessed February 6, 2021). The existence of a potential disaster that cannot be predicted when it will happen certainly requires community preparedness in facing this potential disaster; both pre-disaster and post-disaster (Sayuti & Hidayati, 2020).

In the regional context, Lombok Island has the potential for an earthquake in the form of a megathrust measuring 8.5 SR to cause a tsunami in southern Lombok (Tempo.com, 6 February 2021). Thus, the government and the public should be aware of this potential disaster in an effort to reduce the risks that will occur. People living in the southern part of Lombok must have vigilance and preparedness. This is important to anticipate the worst possibility if at any time the potential disaster occurs.

Maringkik Island is one of the areas in southern Lombok. Based on data obtained from the Community and Village Empowerment Office of East Lombok Regency, it is stated that Maringkik is a small island with an area of only about 6 hectares which is territorially included in the East Lombok district. This island is located in the eastern part of Ketapang Raya Village and Tanjung Luar Village in the northeast part. The condition of Maringkik Island, which is also the outermost archipelago in East Lombok Regency, has made people in these islands have limited access to services provided by the government, especially those related to disaster response. This also affects the development process carried out by the East Lombok Regency government in developing the area; both during a disaster and after a disaster (DPMD Kab. Lombok Timur, 2019).

People who live in small islands like Maringkik have a high level of vulnerability to disasters, besides that there are limitations in their resources (Sayuti & Taqiuddin, 2020). Meanwhile, a high risk of disaster will arise when it hits people with low resilience. Community resilience in the face of disasters can be measured through two approaches, namely: (1) top-down approach, including climate and weather studies, spatial studies such as land use, topographic conditions, soil types, geology, and etc.; (2) the bottom-up approach is carried out by exploring the local wisdom of the local community where people have disaster preparedness and are engaged in disaster mitigation based on the local knowledge they already have (Ishak, et al., 2016).

Preparedness is an action taken by the community before a disaster occurs. The level of community preparedness in facing disasters will determine community behavior in anticipation and vigilance to minimize disaster risk. LIPI-UNESCO/ISDR (2006) explains that preparedness is a multi-stakeholder action; government, organizations, communities, communities and other parties to anticipate and respond to disasters quickly and responsively. Actions that can be taken in order to improve

disaster preparedness include the preparation of disaster management, maintenance of resources and personal training.

Preparedness is an important element in disaster management. Communities as part of disaster management should have preparedness to minimize disaster risk. Thus, the preparation of a disaster management plan is very important. Through this plan the community can find out what actions to take in dealing with potential disasters. This disaster management plan must be adjusted to the types of threats, vulnerabilities and disaster risks that are owned in each region. Each region does not have to be of the same character in dealing with disasters; both pre-disaster and post-disaster. This is closely related to the socio-cultural conditions, education and local knowledge (Hadi et al., 2019). Several previous studies explain that the factors that influence community preparedness for disasters include age, education level, and past experiences (Cutter et. al. 2003; Pricope et. al. 2019; Becker et. al. 2017; Ho et. al. 2008).

Unfortunately, Indonesia, which is surrounded by various potential disasters, does not yet have a disaster curriculum as a provision for dealing with disasters. Several studies have shown the importance of learning about disasters in shaping disaster preparedness. It is necessary to implement disaster mitigation education in elementary schools or educational institutions in Indonesia. Through disaster education, which is taught since a child enters basic education, it is hoped that it will build children's awareness of disasters. On a broader scale, children will become agents of change in society who provide learning for the wider community to form a culture of disaster preparedness (Hayudityas, 2020; Rahma, 2018). Meanwhile, Fitriningtyas (2014) said that people who have a high level of education partly understand the importance of disasters and disaster preparedness. This means that disaster education provided in schools will have implications for community preparedness; especially supported by high education and knowledge.

In disaster risk management, it is imperative that people be involved in various mitigation activities, because they are both the subject and the object of potential disasters that can occur at any time. The potential for disaster must be recognized and understood by the community as the main actor in disaster mitigation and the community who has the potential to experience losses due to the disaster. Therefore, this research is important to do to find out the current condition of the Maringkik people, knowledge and awareness and behavior of the community in facing potential disasters, and to know the extent to which existing government policies are beneficial to the local community. In order to understand and explore these issues, the Sociology of Knowledge becomes relevant as a theoretical basis.

The sociology of knowledge connects social reality with ideas, thoughts, and scientific buildings. There is no social reality that is separated from ideas, thoughts and scientific buildings. This belief became the basis for the sociology of knowledge pioneered by Karl Manheim. In an effort to build a sociology of knowledge, the role of previous figures such as Karl Marx, at a nearby time was also influenced by Weber, Scheler, Husserl, Lederer, Lukas and others, who became the pinnacle of the sociology of knowledge built by Manheim. Radical Manheimists emphasize that all aspects of culture are influenced by social conditions (Morley in Hamka, 2020). Mannheim's sociological thinking was also influenced by Simmel, as were the Hungarian sociologists at that time (Andrews, Hull, & Demeester, in Hamka 2020). Thus, the

sociology of knowledge examines the relationship between society and knowledge (Tamngidi in Hamka 2020).

The main thesis of the sociology of knowledge, according to Karl Mannheim, is that there are ways of thinking that cannot be adequately understood as long as their social origins are not clear (Manheim, 1954, in Hamka 2020). That is, a thought can only be understood properly if the social factors behind the birth of the thought are well understood. A statement or concept may have the same editorial but is meant for a different meaning just because it is born from a different social background.

The sociology of knowledge is a special study that links social life with knowledge. Among the figures discussing the sociology of knowledge were Karl Manheim and Peter L. Berger. Berger believes that social reality is strongly influenced by the reserves of knowledge they have (Berger & Luckman, 1990). It is this reserve of knowledge that determines social dynamics at the micro, mezzo and macro levels. This means that, first, the intensity of daily interactions has a contribution to the formation of new knowledge that can change previous knowledge or in other words, daily interactions are a means of cultivating reserves of social knowledge. Second, the content is used as an interaction material. Regarding the sources that are used as references, sources or references are very important in determining actions, decisions and so on after carrying out daily interactions. Those two things which determined by knowledge.

The sociology of knowledge is more dynamic in societies that have high vertical mobility. Vertical mobility allows one to see that other people think differently and even create skepticism about the mindset of their own group. In contrast to societies whose social mobility tends to be horizontal, differences in knowledge systems tend to be homogeneous so as not to cause them to question their group's knowledge system. Because people move horizontally, no group is better than any other group. In a homogeneous society, vertical mobility is less open or tends to be horizontal. They avoid competition which can disturb the cohesiveness of the social order. As a result, the community's knowledge system is less dynamic or tries to maintain collective knowledge that is passed down from generation to generation. In addition, the sociology of knowledge provides an important position for educated people who are referred to as "social groups whose main task is to provide interpretations of the world for these communities" (Manheim in Ritzer & Stenipsky, 2019). In a homogeneous or static society, the educated people is more oriented to their own need to stimulate ideas than to solve people's daily concrete problems (Ritzer & Stenipsky, 2019).

The potential for disasters that always threatens the people in the Maringkik Islands is an important problem. Therefore, it is necessary to increase the knowledge and capacity of the community in dealing with disasters. It is hoped that this knowledge and ability can emerge from awareness, knowledge, action or response which is then expected to form community resilience in dealing with disasters that may occur at any time. The existence of community resilience is very strategic in order to ensure the continuity of development in an area. To build the resilience of a community in the face of disasters certainly requires time and a certain process and stages. The resilience of the community is also influenced by various social and cultural factors. One of them is related to the level of education and the breadth of public knowledge. Therefore this research wants to know: (1) the level of community

education in Maringkik Island and its effect on community readiness in facing disasters at this time, (2) the level of understanding of disaster preparedness in the community in patron-client relations, and (3) the level of disaster preparedness in the local social system in Maringkik Island, East Lombok Regency. This research is different from previous research (Aida et. al., 2020; Appleby-Arnold et. Al., 2021; Cohen et. al., 2017; Hadi, 2019; Hayudityas, 2020; Nuraeni et. al., 2020). There has not been much research on disaster mitigation in small islands in Indonesia, especially in the Southeastern Region of Indonesia. Especially with regard to the role of education and client patron relationships in community preparedness for disasters. Disaster mitigation awareness is very important considering the level of vulnerability of regions and small island communities to disasters is very high (Becker et. al., 2017; Ferrol-Schulte et. al, 2014; Fitriningtas, 2014; Taupo, 2018; Yanuar, 2019)

METHOD

The method used in this research was a mix of quantitative and qualitative. According to Creswell (2014), mixed methods research is a research approach by combining qualitative research with quantitative research. Data was collected by conducting observations and interviews were conducted from September 2020 to October 2020 by interviewing 8 informants consisting of community, youth, and religious leaders, as well as local community members. Observations were made by observing the life of the people in the Maringkik Islands to see the interactions and livelihood patterns of the people who mostly work as fishermen. Furthermore, to determine the distribution of data, quantitative research was carried out by conducting face-to-face interviews using a questionnaire with the help of the *Kobocollect* application. The number of samples taken in this study amounted to 45 people. The collected data were analyzed using descriptive and qualitative statistics to obtain an overview of the preparedness of the Maringkik Island community in facing disasters.

RESULTS AND DISCUSSION

Various efforts to improve preparedness through education in schools can actually be done with various innovations. For example, through simulation; to give students an overview of what steps should be taken when a disaster occurs. It is important to familiarize yourself with skills in emergency response when a disaster occurs (Nuraeni et al., 2020). Based on research conducted by Wulandari (2018), it is known that learning activities using educational videos can at least increase student preparedness in dealing with disasters. This means that simulations can also be carried out by presenting learning in the form of educational videos to students to gain skills through the video that is played.

Unfortunately, the national disaster education that is expected to be one of the solutions to overcome these problems in its implementation has not been widely seen. Education experts, education practitioners and other parties also encourage all levels of local society to carry out disaster education with higher education assistance (Setyowati, 2019). This also seems to be fruitless. Based on the results of the survey conducted in this study, it is known that 86.7% of respondents have never received disaster mitigation training and only 13.3% of respondents said that they had received disaster mitigation training. This means that the community has not received much

disaster mitigation training. So that the results have not been significant in efforts to improve community preparedness in facing disasters.

The absence of implementation of a disaster education curriculum and involvement of external parties in disaster mitigation training has resulted in poor disaster preparedness for the Maringkik Island community. Based on the data obtained, it is known that the preparedness of the Maringkik Island community in facing disasters as much as 53.3% said they were ready, 20% were very ready, 13.3% were quite ready, 6.7% were not ready and 6.7% were very unprepared. Data related to community preparedness on Maringkik Island in the face of disasters can be seen in the following Table 1.

Table 1. Community preparedness on Maringkik Island for disasters

Information	Amount	Percentage (%)
Very ready	9	20
Ready	24	53,3
Simply ready	6	13,3
Not Ready	3	6,7
Very Unprepared	3	6,7
Total	45	100

Source: compiled from survey results

Likewise, in relation to the qualitative data obtained based on the results of interviews that have been conducted, it shows that the response of the Maringkik Island community when a disaster occurs cannot do much. Most of them said they could only run to the beach or field to save themselves. This means that people's behavior in responding to disasters is still very natural, based on panic and fear. This is due to the absence of disaster education taught in schools and mitigation training by related parties. Based on the data obtained, it is known that 75.6% of respondents have never received disaster mitigation assistance and only 24.4% of respondents said that they had received disaster mitigation extension provided by external parties.

Disaster Education and Community Preparedness

The main issue in coastal and marine communities is the problem of the quality of human resources which is still relatively low. According to La Sara (2014), it is stated that in general the quality of coastal human resources is relatively low due to the following: (a) Generally, members of coastal communities have a low level of education; did not complete primary school or even did not attend school; (b) The development of non-formal education has not been able to fulfill the community's specific needs and potentials; (c) There is still a lack of professional educational facilities and infrastructure in the maritime and fisheries sector as well as limited teaching staff; (d) The low income of the coastal community has resulted in the community being unable to send their children to a higher level of education; (e) The low level of public awareness to preserve the environment in coastal and marine areas; (f) There is still a lack of government priorities for improving the quality of human resources in coastal areas.

Like coastal communities in general, the level of education on Maringkik Island is still very low. The low level of education of the coastal community, in this case the Maringkik island community, affects many things. The cause of the problem correlates

with the problem of education (La Sara, 2014). Whereas education is one of the entry points to fix various problems; one of them is in building a culture of disaster preparedness (Desfandi, 2014). Research in Finland by Nikkanen et. al (2021) regarding community preparedness for disasters shows that the influence of their education level or employment status is not significantly related to their level of preparedness for disasters. This is of course very different from what is concluded in this study, where the education factor has a real influence. This difference in conclusion is suspected to be due to welfare factors. According to Nikkanen et. al. (2021), the level of welfare in Finland is relatively even. Meanwhile in Indonesia, including in the research areas, the level of welfare has not been evenly distributed. In fact, most of the population tends to be at the poverty line (Sayuti, 2020; Kusumastuti et. al, 2014; Hallegate et. el., 2017).

Building a culture of disaster preparedness in an integrative and permanent way can actually be done through educational institutions. Its purpose is to change a person's behavior; in this case is behavior in dealing with disasters (Setyowati, 2019). In 2011 the Ministry of National Education issued a disaster curriculum. However, in practice there are no specific lessons that specifically address behavior in dealing with and responding to disasters. The education curriculum on disaster is only inserted into other existing subjects to understand and anticipate natural conditions in an integrated manner (Karyono, 2011). Research on building a culture of disaster preparedness by Appleby-Arnold et. al. (2021) is very interesting because by building a culture, it will have an impact on the level of public understanding regarding natural disaster mitigation. This level of understanding will ensure its sustainability. Thus it will be easier to invite the community to increase their preparedness for disasters that may occur at any time (Cornia et. al. 2016; Cohen et. al., 2017).

The concept of disaster education in shaping disaster preparedness can be interpreted as the process of integrating disaster prevention into the educational curriculum. The learning process in relation to disasters is expected to form community preparedness to reduce disaster risk (Tahmidaten & Krismanto, 2019). Through disaster education, which begins to be taught from elementary school to tertiary education in a structured and sustainable manner will greatly assist in the process of disaster prevention and mitigation. Unfortunately this has not been done much in the Indonesian education curriculum.

As a country that is prone to disasters, Indonesia is known as a natural disaster laboratory. Unfortunately, the series of disasters that often hit Indonesia has not been matched by community preparedness in facing disasters. Disasters that recur almost every year are not accompanied by awareness and increased community preparedness; it seems panicked and unprepared for disaster (Setyowati, 2019). This is due to the limitations of the community in obtaining knowledge in minimizing disaster risk. So that the risks arising from the disaster have not been able to be minimized.

Cultural Capital

The cultural capital that is owned and developed in the Maringkik community in the form of politeness values, mutual cooperation culture and local knowledge is actually a characteristic of the island community. This fact confirms that disaster preparedness behavior of the Maringkik Island community is influenced by the tough

mentality of coastal communities and tends to syncretism or a mixture of understanding of religion and local culture (Sopiadi, 2014). This is based on information obtained through interviews with informants as follows:

> *"I say myth is more likely to be myth because there is a philosophy that says this island is floating. Because it's not just now, but in the past, if I'm not mistaken, the old man in the 1970s was also hit by the impact of the earthquake in Sumbawa, he said. The sea water seemed to be boiling but did not rise. The philosophical story here is closely related to religion in fact, but the history of this island is not as vulgar as the history of other villages. "*

The cultural background of the Maringkik Island community if it is strengthened by disaster education in schools will certainly be unique as well as an added value in terms of increasing disaster preparedness. Strengthening community preparedness should have been built from an early age through education in schools and through education in the community. There must be a learning model that is clear and sustainable, with clarity in methods and all matters related to improving community preparedness. The hope is of course that it will further improve community preparedness in the face of disasters. Thus the risk of disasters such as loss of life, damage and loss of property and other impacts can be minimized as little as possible (Sonjaya, 2020). Increasing community preparedness for disasters on Maringkik Island should involve local wisdom; such as preserving the house on stilts, the culture of mutual cooperation and developing local knowledge so that it has preparedness characteristics that can be more easily accepted and understood by the community.

Understanding Disaster Preparedness in Patron-client Relations

Patron-client relationships are characteristic of coastal and small island communities. This characteristic is commonly found in coastal communities as social solidarity that supports community life. The patron-client relationship of the coastal community is strong. Establishing patron-client relationships for fishermen is important to maintain the continuity of their activities because the patron-client pattern is a social security for economists (Satria 2015). Especially when fishing takes days, sometimes months. At that time, the patron-client pattern is profitable for fishermen and their families who wait at home, they can continue their lives through social security provided by their patrons.

Koentjaraningrat (1975) saw the patron-clients pattern in the framework of social networks is a reciprocal relationship pattern based on the principle of reciprocity. Meanwhile, Scott in Satria (2015) explains that client patron relationships are a phenomenon that is formed on the basis of inequality and the nature of flexibility that is spread as a personal exchange system. In the exchange, there is a flow from patron to client and vice versa. Patron flow to clients according to Scott in Satria (2015) is (1) basic subsistence livelihood, in the form of providing permanent jobs, providing study programs, marketing services and technical assistance; (2) subsistence crisis guarantees, in the form of loans when clients face economic difficulties; (3) protection, in the form of protection for clients from both personal and public threats; and (4) providing collective services, in the form of assistance to support local public facilities and sponsoring village festivals and celebrations.

Meanwhile, the flow of relationships from clients to patrons is difficult to categorize, because clients are the "people" of the patron who provide their manpower and expertise for the benefit of the patron. The client's position is under the control of the patron so that what client does shows a sense of obedience or does not have a significant effect. A relatively high level of dependence between clients and patrons is also found in fishing communities in the Aru Islands, Maluku (Aida et. Al., 2020). The fishermen are greatly helped by the presence of patrons who provide the fishing facilities and tools needed by the fishermen. In exchange, the fishermen hand over their catch to the patron to be brought to the market. Besides that, the patron also provides loan funds needed by the fishermen.

The patron-client relationship pattern that characterizes the Maringkik community determines the level of knowledge the client has. The number of patrons is limited while clients are the majority who need patron assistance. The patron-client relationship tends to be an economic relationship without leaving social values and norms. If it is related to the daily life of people who work as fishermen, the focus of its activities to maintain patron client relationships is to try to get a large catch of fish so that the patrons can trust them and get capital assistance to catch fish and family life at home.

Research by Maniarro (2020) concluded that the productivity of fishermen who are involved in the patron-client system is higher than those who carry out their activities independently. However, it is unfortunate that from his research it was also found that the cooperation of client patrons in the research area also contributed to fishing activities using illegal methods. In this case the patron provides protection to clients, in this case the fishermen.

With this pattern of patron-client relationships, people will have very little time to interact with other people who are outside the patron-client relationship. The indirect impact of this kind of patron-client relationship is the lack of interaction regarding disaster mitigation. Apart from that, it is also rather difficult to establish social relationships with other parties who have different interests, such as government and non-government organizations that carry out disaster mitigation education. In the context of the sociology of knowledge, the stock of knowledge owned by the Maringkik community is about how to survive being a fisherman. That is the background of people's knowledge. Coupled with the lack of opportunities and time for social interaction, it also contributes to the lack of public understanding of natural disasters.

The general characteristic of coastal and island communities is that they have the characteristics of a strong patronage relationship, besides that they also have strong family ties. The daily social relations of the people of Maringkik Island are protected by the authority of patron-client relations and family solidarity. Ferrol-Schulte et al. (2014) also concluded that the influence of patron-clients in coastal areas and small islands is evident in natural resource management. The influence of patrons in helping clients is also evident in the economic life of fishermen. The research confirms that the patron-client relationship in the coastal area is sustainable because the patron helps procure fishing gear needed by clients as fishermen.

Disaster Preparedness in Local Social Systems

Like the general public, the people on the island of Maringkik have a system of values, norms, structures and social functions that serve as the safeguard for social life. This value system becomes a collective consciousness that has strong historical ties from generation to generation. According to Durkheim, the type of collective consciousness can be divided into two, namely mechanical solidarity and organic solidarity (Ritzer and Goffman, 2019). Mechanical solidarity is synonymous with homogeneity, strong emotional ties, little division of labor, and very strong traditional norms, and the role of public figures is very centralized and passed down from generation to generation. Whereas organic solidarity has the characteristics of a diverse division of labor, the relationship between people is professional, and legal rules are very dominant, the dominant figures are those who have certain qualifications and are selected through jointly made rules. Social solidarity determines discourse and knowledge transformation to members of society. Society with the mechanical solidarity type tends to be centered, meaning that the source of knowledge and value comes from people who are figures in society, both religious leaders, traditional leaders and the rich who control resources.

Referring to the explanation above, the type of solidarity is closer to mechanical solidarity. The majority of Maringkik Island people work as fishermen or their work is related to fishing. There are not many other types of work, so the division of labor by sector and expertise is minimal. Meanwhile, the source of public values and knowledge is centered on figures who are the heirs to guard and distribute the moral and social values of society. The consequence of the central role of community leaders is that the sources of knowledge are concentrated in community leaders and are somewhat closed to external knowledge that is different from the values that are followed (Hidayat, 2014).

Regarding public knowledge and awareness of disaster issues and their mitigation, it also depends on the main value sources within the community and community leaders. There is a very strong social value that can be seen from the habit of helping each other when building houses and when landing fishing boats. The people of Maringkik Island who just landed their ships were assisted by people who did not go to sea even though they only landed the ship and lowered their catch. Things like that can also be seen when there are community members who build houses, other community members help.

In dealing with natural disasters, the community also cares for and helps each other in the evacuation process and post-disaster activities. This reflects the strong social values of the Maringkik island community, which have become knowledge of disaster preparedness which has been passed down from generation to generation. On the one hand, a centralized knowledge system has implications for the static nature of public knowledge regarding disaster preparedness because there is no specific education in the social values of society that regulates disaster-related matters. Community leaders as value centers, have not received intensive education which actually have an important role as agents of value distribution and knowledge to members of their society. The participation of community leaders in making change is very necessary, because they are the ones who understand society and have authority over the truth, so that it will be very effective and easy for members to

follow. Management and protection of coastal and marine resources will not be effective if it does not involve local communities, especially community leaders (La Sara, 2014). On the other hand, formal educational institutions as an authoritative source also do not present a disaster preparedness curriculum so that public knowledge is very limited. On the island of Maringkik, there are school facilities for Elementary School and Junior High School as a place to gain knowledge for the children of Maringkik Island. As previously explained, the curriculum structure does not provide special subjects regarding disaster. Formal education, which is expected to be a channel for distributing knowledge about disasters, is unreliable.

Education is not only fixated on exclusive formal education. On the contrary, education is identical with the transfer of knowledge in all domains. So that education becomes a means of reflection on daily experiences and developing knowledge. Education then is not only limited to a certain space and time and to a certain generation, but is open to anyone, anywhere and anytime. In line with Freire's critique of education that education should not act like a customer, the task of education is to recognize the mentality of the people involved (Muttaqin et al., 2020).

Seeing these conditions, public understanding and awareness regarding disaster preparedness is hampered because authoritative institutions are not used as agents for the distribution of public knowledge. In addition, non-governmental organizations can be an alternative that can carry out disaster education specifically, but it will be difficult to run effectively if it is not done seriously and consistently. It will be very different if disaster preparedness education is included in the formal education curriculum and simultaneously involves community leaders as agents of disaster preparedness knowledge, it can be predicted that public knowledge and awareness regarding disaster preparedness will increase.

CONCLUSION

The main conclusions of this study are detailed as follow. Firstly, the educational factor affects community preparedness in facing disasters. Another factor is the cultural capital owned by the local community. The low level of education is the main factor in the low level of community preparedness in facing disasters. Secondly, the patron-client pattern affects the community's low knowledge of the importance of disaster preparedness. The main motive of the client patron pattern is economy, namely how the client can get capital to catch fish and support his family. The third, the level of community preparedness for disasters is also influenced by the local social system factor. The existing social system is very helpful for community preparedness, even though it is done traditionally, instinctively, not based on knowledge and or skills obtained from the training that has been carried out.

RECOMMENDATION

Some recommendations to improve community preparedness on Maringkik Island in the face of disasters are as follows. (1) There is a need for special subjects regarding disasters in schools or formal educational institutions. (2) Cultural capital and social capital of the community must be able to synergize in the framework of increasing public awareness and knowledge of disasters. (3) The involvement of non-governmental organizations in providing disaster mitigation training to the community should be improved and carried out on an ongoing basis.

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FINAL GRADE

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GENERAL COMMENTS

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CLAIM

Take an arguable position on the scientific topic and develop the essay around that stance.

ADVANCED	The essay introduces a precise, qualitative and/or quantitative claim based on the scientific topic or text(s), regarding the relationship between dependent and independent variables. The essay develops the claim and counterclaim fairly, distinguishing the claim from alternate or opposing claims.
PROFICIENT	The essay introduces a clear, qualitative and/or quantitative claim based on the scientific topic or text(s), regarding the relationship between dependent and independent variables. The essay effectively acknowledges and distinguishes the claim from alternate or opposing claims.
DEVELOPING	The essay attempts to introduce a qualitative and/or quantitative claim, based on the scientific topic or text(s), but it may be somewhat unclear or not maintained throughout the essay. The essay may not clearly acknowledge or distinguish the claim from alternate or opposing claims.
EMERGING	The essay does not clearly make a claim based on the scientific topic or text(s), or the claim is overly simplistic or vague. The essay does not acknowledge or distinguish counterclaims.

EVIDENCE

Include relevant facts, definitions, and examples to back up the claim.

ADVANCED	The essay supplies sufficient relevant, accurate qualitative and/or quantitative data and evidence related to the scientific topic or text(s) to support its claim and counterclaim.
PROFICIENT	The essay supplies relevant, accurate qualitative and/or quantitative data and evidence related to the scientific topic or text(s) to support its claim and counterclaim.
DEVELOPING	The essay supplies some qualitative and/or quantitative data and evidence, but it may not be closely related to the scientific topic or text(s), or the support that is offered relies mostly on summary of the source(s), thereby not effectively supporting the essay's claim and counterclaim.
EMERGING	The essay supplies very little or no data and evidence to support its claim and counterclaim, or the evidence that is provided is not clear or relevant.

REASONING

Explain how or why each piece of evidence supports the claim.

ADVANCED	The essay effectively applies scientific ideas and principles in order to explain how or why the cited evidence supports the claim. The essay demonstrates consistently logical reasoning and understanding of the scientific topic and/or text(s). The essay's explanations anticipate the audience's knowledge level and concerns about this scientific topic.

PROFICIENT	The essay applies scientific reasoning in order to explain how or why the cited evidence supports the claim. The essay demonstrates logical reasoning and understanding of the scientific topic and/or text(s). The essay's explanations attempt to anticipate the audience's knowledge level and concerns about this scientific topic.
DEVELOPING	The essay includes some reasoning and understanding of the scientific topic and/or text(s), but it does not effectively apply scientific ideas or principles to explain how or why the evidence supports the claim.
EMERGING	The essay does not demonstrate clear or relevant reasoning to support the claim or to demonstrate an understanding of the scientific topic and/or text(s).

FOCUS

Focus your writing on the prompt and task.

ADVANCED	The essay maintains strong focus on the purpose and task, using the whole essay to support and develop the claim and counterclaims evenly while thoroughly addressing the demands of the prompt.
PROFICIENT	The essay addresses the demands of the prompt and is mostly focused on the purpose and task. The essay may not acknowledge the claim and counterclaims evenly throughout.
DEVELOPING	The essay may not fully address the demands of the prompt or stay focused on the purpose and task. The writing may stray significantly off topic at times, and introduce the writer's bias occasionally, making it difficult to follow the central claim at times.
EMERGING	The essay does not maintain focus on purpose or task.

ORGANIZATION

Organize your writing in a logical sequence.

ADVANCED	The essay incorporates an organizational structure throughout that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. Effective transitional words and phrases are included to clarify the relationships between and among ideas (i.e. claim and reasons, reasons and evidence, claim and counterclaim) in a way that strengthens the argument. The essay includes an introduction and conclusion that effectively follows from and supports the argument presented.
PROFICIENT	The essay incorporates an organizational structure with clear transitional words and phrases that show the relationship between and among ideas. The essay includes a progression of ideas from beginning to end, including an introduction and concluding statement or section that follows from and supports the argument presented.
DEVELOPING	The essay uses a basic organizational structure and minimal transitional words and phrases, though relationships between and among ideas are not consistently

clear. The essay moves from beginning to end; however, an introduction and/or conclusion may not be clearly evident.

EMERGING   The essay does not have an organizational structure and may simply offer a series of ideas without any clear transitions or connections. An introduction and conclusion are not evident.

LANGUAGE

Pay close attention to your tone, style, word choice, and sentence structure when writing.

ADVANCED   The essay effectively establishes and maintains a formal style and objective tone and incorporates language that anticipates the reader's knowledge level and concerns. The essay consistently demonstrates a clear command of conventions, while also employing discipline-specific word choices and varied sentence structure.

PROFICIENT   The essay generally establishes and maintains a formal style with few possible exceptions and incorporates language that anticipates the reader's knowledge level and concerns. The essay demonstrates a general command of conventions, while also employing discipline-specific word choices and some variety in sentence structure.

DEVELOPING   The essay does not maintain a formal style consistently and incorporates language that may not show an awareness of the reader's knowledge or concerns. The essay may contain errors in conventions that interfere with meaning. Some attempts at discipline-specific word choices are made, and sentence structure may not vary often.

EMERGING   The essay employs language that is inappropriate for the audience and is not formal in style. The essay may contain pervasive errors in conventions that interfere with meaning, word choice is not discipline-specific, and sentence structures are simplistic and unvaried.