

# Disaster Literacy based on local wisdom to instill Disaster Response in Selo, Boyolali Regency

Mukhlis Mustofa<sup>1⊠</sup>, Goddess Liesnoor Setyowati<sup>2</sup>, Juhadi<sup>3</sup>, Suwito eco Pramono<sup>4</sup>

1,2,3,4 Unnes , Semarang , Indonesia

⊠sincere.mustofa@students.unnes.ac.id

**Abstract.** The planting of early disaster education in the Merapi area is a must in the midst of the great potential for disaster in it. This awareness planting can be strengthened by literacy-based learning by paying attention to the local wisdom adopted by the people who live in it. This study aims to determine the understanding of elementary school teachers about disaster literacy in social studies learning associated with understanding local wisdom in preparing learning and disaster response attitudes on the slopes of Merapi. This study uses a descriptive qualitative research approach by taking the location at SD Jrakah 3 Selo, Boyolali Regency. Based on the results of the research that has been carried out, it can be concluded as follows:

1) Social studies learning by planting disaster literacy based on social studies teaching materials and local wisdom has not fully used the latest learning media in improving students' skills for developing disaster response attitudes. 2) Teacher understanding and interest in disaster literacy and understanding local wisdom in the development of disaster education affects the growth of disaster response for students

**Keywords**: Disaster literacy, response, local wisdom

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#### INTRODUCTION

Characteristics of the Indonesian region with diverse pattern span natural inside it keep diverse potency as implication condition geographic . Potency disaster Becomes reality real in span nature in Indonesia . Disaster is incident or Suite threatening and disturbing events \_ life and livelihood society caused , both by factors \_ natural and or factor nonalam nor factor man so that resulted casualties occur \_ man , damage environment , loss treasure objects and impacts psychological (UU No. 24 of 2007). Incident eruption Mount Merapi that occurred and followed with eruptions on days next resulted various problems in the region this

Mount Merapi as one \_active volcano Merapi in the world has potency disaster for society and environment around . kindly administrative Mount Merapi is located in the district area Sleman, Special Region of Yogyakarta, and the rest is at within the province Central Java, that is Regency Magelang on the west side, Regency Boyolali on the side north and east, as well Regency Klaten on the side southeast . General overview of Indonesia Based on fact about position geographically Indonesia above, then Indonesia is located in the area vulnerable the world's most active disaster. At least there are 12 threats grouped disasters \_ in disaster geology ( earthquake earth, tsunami, mountain fire, movement land / land landslide), disaster hydrometeorology ( flood, flood flash, drought, weather extreme, wave extreme, fire forests and land), and disasters anthropogenic (epidemic plague disease and failure technology-crash industry). Indonesia is part from The Pacific Ring of Fire (Ring Fire Pacific) (BPN.go.id, 2019), which is track Suite Mountain fire active in the world. Indonesia has Mountain fiery with amount not enough over 240 pieces, almost 70 of them still active The variety potency disaster this no regardless from Indonesian code included in line volcano active in the world. In terms of volcanic is location Mountain the most active fire in the world and is meeting plate potential tectonics in the world raises disaster eruption volcanoes, earthquakes and tsunamis.

one  $\_$  very part  $\_$  important to pick up from results Conference Earth in Rio is about education , awareness Public general clan training . With so , already recognized and agreed upon together that education aware environment very needed for expand awareness Public to environment live . Conscious education environment this is one  $\_$  means for form Public aware environment . Through education aspect psychological man could changed . Through education



aspect psychological man could changed . Sujarno (2009) stated that education aware environment aim for grow aware and caring society  $\underline{\ }$  to appreciate problem environment and own knowledge , attitude , motivation , commitment , and skills for work individually .

Complexity Merapi problem becomes uniqueness with pattern think that is in the people who inhabit this area of Merapi show density high . Research M. Nur Budi Prasojo , 2015 states Based on Theory Reality The Social Construction of Berger and Luckmann , explore construction social people living on the slopes of Merapi. Population villages living in Merapi build system religious beliefs . Population village see Merapi as friend no threat . They construct knowledge and traditions as local wisdom . As wisdom local , system religious belief , knowledge , and Tradition have the place special in life daily Public Tlogolele . Local wisdom is based on the concept culture Java " melayu hayuning congenital ", ie applied in a number of tradition slametan

Attachment Among element wisdom locale and activities mitigation disaster is also related about knowledge as well as inherited habits  $\_$  in a manner down hereditary from grandmother ancestor as well as ancestor . Samson, Erwina , & Lusiana (2021) in his research about draft local knowledge and strategies Sunda in facing the disaster . Knowledge local about mitigation inherited disaster  $\_$  grandmother ancestors , supposedly our use in our homeland  $\_$  alone . Because custom will more year his village , compared the other party is coming late . Next , obedience based Customs , Religion and State should be realized with action real

Mitigation alone is series effort for reduce risk disaster , fine through development physique nor awareness and improvement ability face threat disaster (Reg Government Republic of Indonesia Number 21 of 2008 concerning Administration Countermeasures Disaster , 2008). Mitigation disaster usually conducted for reduce consequent risks  $\_$  to Public as well as Increase knowledge Public in face as well as reduce impact / risk disaster , so Public could live and work with safe

Mitigation patterns in society related tightly with aspect wisdom local , custom customs , and trust from Public local . Aspects of local wisdom or wisdom local appear in form systems and bonds strong social  $\_$  in something the community within characteristic tie as well as trusted by society . There is binding rules  $\_$  this in a manner no direct raises suggestion or method view Public in address something events , incl in address exists disaster nature .

Development thought and science Becomes important for consider espoused belief \_ Public local in the era of development technology which is getting Sophisticated , a lot view starting society \_ deny existence of local wisdom or wisdom local . Many people are watching aspect culture and wisdom local as something static or method old look . \_ Though , both is something dynamic . \_ Culture and wisdom local no is variable single in effort mitigation disaster . Existence technology as well as aspect policy Becomes other variables in effort mitigation disaster (Hoffman, 2015).

Experience empirical man through interaction with environment will produce knowledge local about connection nature – tradition – man . However moment this , various knowledge locally owned by various  $\_$  Public tradition in Indonesia slowly start extinct because no documented in a manner good as source knowledge knowledge . The practice , knowledge and wisdom local could synergized in a manner empirical and rationalistic , so could utilized for mitigation disaster natural with empower participation local community .

Planting early education disaster in the Merapi area is something must in the middle magnitude potency disaster in it. Planting awareness this could strengthened with learning based literacy with notice wisdom local community adhered to by the people who live in it. Study this aim for knowing understanding of school teachers base about literacy disaster in social studies learning is linked with understanding wisdom local in prepare learning and attitudes responsive disaster on the slopes of Merapi. Study this use approach study qualitative descriptive with take location at SD Jrakah 3 Selo Regency Boyolali

#### **METHOD**

This study used a qualitative descriptive research method, according to Suharsimi Arikunto, descriptive research (Sugiyono, 2011). The purpose is to describe the state or status of the event. This research took place at SD Jrakah 3 Selo, Boyolali Regency donation big in



development future disaster education. The instruments used in this research are 1) questionnaire validation for expert and questionnaire legibility for student for know the application of literacy disaster , 2) sheet observation for observing the learning process and implementation disaster education based literacy , 3) teacher and student interviews for knowing implementation literacy disaster . 4) documentation as well as document support other.

The analytical technique used in study this covers analysis results review disaster -based learning materials Social Sciences . Analysis results review based material disaster education in the form of suggestions and comments based on results review learning disaster for repair to based learning materials developed disaster \_ before conducted validation . Data analysis technique used in study this is analysis review Theory based wisdom local.

The third most important analysis activity is drawing conclusions and verification. From the beginning of data collection, a qualitative data analyzer starts looking for the meaning of things, noting regularities, patterns, explanations, possible configurations, causal flows and propositions. Data that has been collected by researchers through interviews, and studies and literature documentation are grouped according to research problems and presented in reduced data. Furthermore, to facilitate the discussion of research, the researcher made the presentation of the data in accordance with the data collected and grouped according to the problem.

#### **RESULTS**

## 1. Description of the research location

Description SD Jrakah 3 is one of the educational institutions at the elementary level in Selo District Boyolali district . \_ This SD is in the Jrakah Village Selos District Boyolali Regency. The number of study groups is 6 classes with a total of 6th grade teachers and a total of 120 students. The sample in this study was taken from lower -upper class teachers consisting of 3rd and 5th grades with a total of 2 people. Jrakah 3 Elementary School is one of the schools which is located close to the peak of Merapi as far as 5 km. Jrakah 3 Elementary School As one of the schools that has implemented the 2013 curriculum in its entire learning process. With the condition of the school area, disaster-based education is urgent to be implemented.

Class III - Class V teachers as the sample of this study are due to the fact that in class V the upper class learning begins so that the understanding of higher class education begins. The emphasis on social studies subjects as research subjects was carried out with the hope of knowing how social studies learning patterns are . Class III - Class V teachers as the sample of this study are due to the fact that in class V the upper class learning begins so that the understanding of higher class education begins. The emphasis on social studies subjects as research subjects was carried out with the hope of knowing how the main social studies learning patterns were related understanding literacy based wisdom local to students . The selection of class teachers as research subjects was carried out with the hope of knowing how the learning pattern of disaster literacy is based wisdom local implemented for increase preparedness student face potency disaster volcanology through enhancement teacher 's ability prepare learning especially in learning classic . Optimization dish learning and Problematics Preparation Educational Teaching Materials disaster based lietarsi based wisdom local as the focus of this data reduction requires upper grade teachers to perceive how the optimization process takes place .

Ramani (1998:2) reveals error communication in PBM caused by several factor following: teacher as communicator not enough capable convey message, there is difference power catch students  $\_$  as communicate. understanding Theory principal by the teacher, availability means infrastructure until Characteristics of the teacher to be component main must  $\_$  noticed completely. understanding disaster from the class teacher over the US and HSW have perception different in address potency disaster Mount Merapi based wisdom local. understanding teacher disaster  $\_$  general originated from wisdom formed in the population in the region in address problem eruption volcano. Signs  $\_$  adopted nature  $\_$  in trust residents in the area the a little many influence attitude of the teacher in see phenomenon disaster .

# a) Literacy disaster

The inculcation of disaster awareness starting from basic education is proportionally carried out by class teachers and leaves an imprint on students' understanding in the future.



Septian research Aji Permana , and Supri Hartanto Mythology As Disaster Education In Understand eruption Mount Merapi ( 2019 ) stated that the connection between natural disaster management in several incidents in Indonesia requires a connection with the beliefs held by the people living in the area. Local wisdom that is formed in the area will become a sustainable pattern if linked to community education in it. Mythology that emerges every volcanic eruption event must get support from the pattern of public education either through formal education or informal education.

#### DISCUSSION

Condition geographical ward limited distance  $\_$  valley with center districts Cello in a manner no direct effect on attitude pattern facing evacuation  $\_$  population area the . When the eruption merapi occurred in the village area jrakah already on stage emergency while in the village cello impact not yet served completely . Perception toughness disaster take effect in the learning process in planter attitude responsive teacher disaster .

## 1) Learning disaster

Administration Learning at Jrakah 3 Elementary School is essentially emphasize pattern think proportional in realize completeness learn . The curriculum implemented at SD Jrakah 3 uses 2013 curriculum approach thematic and coherent learning . The 2013 curriculum has not fully used in the learning process in Jrakah 3 is associated with conditions of the area and the surrounding factors . Implications use curriculum 2013 in IPS learning is demanding deep teacher creativity convey message learning in cultivate intelligence spatial student . Learning patterns based literacy disaster not yet fully seen in activities learning in SD Jrakah 3 with utilise literacy disaster based wisdom local volcano . Condition this really unfortunate remember the location of SD Jrakah 3 is very close with pust disaster ie peak Merapi , but the learning process disaster based literacy not yet found .

Interview process with party district school superintendent cello showing that for module learning disaster especially disaster consequence volcano not yet is in the district boyolali . implementation learning is also constrained with not yet exists Standard competence learning disaster. In line with the agreement stipulated by the Hyogo Framework for Action in 2005, that disaster risk reduction priorities need to be implemented in the education sector. If this continues to happen, it will be difficult to create disaster-resilient generations and schools if children do not have good disaster preparedness. Children have a lower disaster vulnerability compared to adults. Disaster education in primary and secondary schools. According to A Dariyo (2013), elementary school (SD) students are in middle childhood. Students in middle childhood are psychologically vulnerable and have the possibility to experience stress due to disaster events (Peek, 2008). Disaster education should start early. This is based on the fact that every year it is estimated that around 66 million children worldwide are affected by disasters (F Herdwiyanti & Sudaryono, 2013). To reduce the risk of a disaster, increasing understanding through knowledge has an important urgency. One way to increase awareness is to change one's knowledge of something (Duval, et al, 2000). If children's knowledge of disasters is good, they can create a generation that is disaster resilient and has good disaster preparedness.

Children are one of the most vulnerable groups at risk of being affected by disasters (PP No 21, 2008). Children's vulnerability to disasters is triggered by the limited understanding of the risks around them, which results in a lack of preparedness in dealing with disasters. Based on data on disaster events in several areas, many victims due to disasters are school-age children, both during school hours and outside school hours. This shows that the importance of knowledge about disasters and disaster risk reduction from an early age to provide understanding and direction of steps that must be taken when a threat occurs in the vicinity to reduce disaster risk (Sunarto, 2012). Losses to school elements, such as teachers and students, learning processes, property, and provision as a result of disasters result in the future of millions of young people being threatened (Lesmana and Purobrini, 2015).

# 2) Teacher ability in prepare learning

The role of teachers in the region vulnerable disaster one of them grow awareness about vulnerable areas disaster at a time anticipation potential disaster \_ appears . Consider area on the



slopes Mountain merapi properly demand that the teacher provide stock literature sufficient for no raises diverse impact sustainable . For teachers at SD Jrakah 3 in general duah knowing danger eruption merapi however narrative as well as strategic programs growth awareness disaster not yet fully appears . Meaning disaster limited edification emerging myths  $\_$  no strengthened with novelty learning .

Fundamentally, social studies learning is related to human life which involves all their behavior and needs. IPS is related to the way humans fulfill their needs, both the need to fulfill their material, cultural and psychological needs, utilize existing resources on the surface of the earth, regulate welfare and governance as well as other needs in order to maintain the life of human society. IPS based learning wisdom local in mitigation Merapi disaster can conducted with

Education no only *transfer of knowledge*, but also as a medium for providing natural harmony with the environment. The development of education does not only provide knowledge but also provides habituation for environmental harmony with the surrounding environment. Development of disaster education by utilise Local wisdom in the Merapi region in the future is expected to be able to provide cultural inheritance for a society that is responsive to disasters and aligned in studying the natural environment in the area where students live. Elementary Teacher 's understanding of Analysis understanding of disaster in elementary school teachers IPS -based learning literacy disaster urge enforced for optimization intelligence spatial student through enhancement teacher 's ability prepare disaster learning and disaster response attitudes on the slopes of Merapi.

Development IPS- Based Teaching Materials Spatial from the Elementary School Teacher in grow legibility to be realized by synergistic cooperation in compiling teaching materials. Spatial-based teaching materials can be specified in improving the quality of learning. Teaching materials that are prepared with high accuracy actually review the teaching materials that students already have by applying spatial-based teaching materials so that the humanization of social studies learning can apply in accordance with the rules of natural law

Molas Warsi Nugraeni's Research (2021) Tale of the Five Mountains is story people a type of legend that developed in the Karisidenan region Second . The Five Mountains in question is Mountain Sumbing , Sindoro , Merbabu , Merapi, and Telomoyo . Development technology and information has erode the legends replaced by soap operas and social media . Temporary that , the speakers who have carry on age no have facility for return forward stories the . perspective usage fairy tale could conducted in understanding of school teachers base about literacy disaster in social studies learning is linked with understanding wisdom local in prepare learning and attitudes responsive disaster on the slopes of Merapi

## **CONCLUSION**

Based on results research that has done , then could taken conclusion as following 1 ) Social Studies learning with planting literacy disaster based IPS teaching materials and wisdom local not yet fully using learning media latest in increase ability study student . Skills for develop attitude responsive disaster . 2) The teacher 's understanding and interest in literacy disaster and understanding wisdom local in development education disaster take effect to growth responsive disaster for student.

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