

## The Effect of Disaster Information in Online Media

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**Abstract**

*This research aims to measure the level of disaster preparedness and analyze disaster information in the online media on the level of preparedness Jakarta Capital City. This study uses a mix methods. Data were obtained from questionnaires and interviews. The results showed that the average level of disaster preparedness in teenagers were categorized medium, i.e. 63.78. Qualitative analysis of the results of the data collection is known that online media affect the improvement of disaster preparedness, but teenagers at State Junior High 3 Jakarta online media as a tool not optimally used.*

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Penelitian ini bertujuan untuk mengukur tingkat kesiapsiagaan bencana dan menganalisis pengaruh informasi bencana di media online terhadap tingkat kesiapsiagaan bencana remaja dalam menghadapi bencana di DKI Jakarta. Penelitian ini menggunakan metode gabungan kuantitatif dan kualitatif. Data penelitian diperoleh dari kuesioner dan wawancara. Hasil penelitian menunjukkan bahwa rata-rata tingkat kesiapsiagaan bencana pada remaja tersebut berada dikategori hampir sedang, yaitu 63,78. Analisis kualitatif dari hasil pengumpulan data diketahui bahwa media online sesungguhnya berpengaruh terhadap peningkatan kesiapsiagaan terhadap bencana, akan tetapi pada remaja di SMP Negeri 3 Jakarta keberadaan media online sebagai sarana meningkatkan kesiapsiagaan masih belum digunakan secara maksimal.

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## **Introduction**

Disaster preparedness is a major factor in creating an effective disaster risk reduction. All layers of society are expected to have a disaster preparedness at the level of very prepared, including teenagers in Indonesia. Data UNISDR (United Nations International Strategy for Disaster Reduction) said that disaster risks facing Indonesia is very high. This is related with several existing humans in areas that might lose their lives due to disasters (BNPB, 2016).

Head of Data Information and Public Relations of Disaster Management National Agency (BNPB) Sutopo Purwo Nugroho stated that Indonesia disaster trends from 2002 to 2015 are likely to increase to 95 percent are hydro-meteorological disasters such as floods, landslides, tornados, and extreme weather and drought. In 2002 Recorded 143 disasters happen in Indonesia. While in 2015 the number reached 1,681 disaster. Special 2016 BNPB recapitulate start from January 1 to February 8, 2016 has been noted that happen 103 floods and 63

landslides (Nabilla, February 2016).

The situation when there is a potential disaster are very related to preparedness, early warning and disaster mitigation (Nurjanah, et al., 2011 in Pungky, 2015). Preparedness is the actions that allow governments, organizations, communities and individuals in responding to disaster situations effectively and rapidly (Carter, 2008), with self-preparation by the equipment effectively (Coppola, 2007) to reduce impact of the disasters (Sugeng, 2014). According to UNISDR (2013), the Framework of Action (Hyogo Framework) from 2005 to 2015 to build the resilience of nations and communities toward disasters adopted five priority actions, one of them is strengthen disaster preparedness for effective response at all levels.

A high level of preparedness that certainly be reduce exposure to disaster threats that exist in the region so needs assessment and measurement of the level of preparedness of teenagers in Jakarta as a base material evaluation the results of measuring the level of preparedness can be used as a

basic to determine what measures are appropriate to improve the preparedness of teenagers in Jakarta as part of disaster risk reduction.

There are three stakeholders who role in community preparedness that individuals and households, government & school communities (LIPI-UNESCO / ISDR, 2006). Individuals and households is spearheading the subject and object of preparedness that direct impact on disaster risk (LIPI-UNESCO / ISDR, 2006). preparedness Individual and household is the first step in the defense community, especially in the field of disaster. Disaster preparedness efforts on individuals or groups is not equal, it depends on a variety of factors including information obtained related to disasters.

Disaster information can be obtained from many resources and media. Based on the survey results revealed that the awareness of disaster including preparedness aspects that influenced by individual access to disaster information in mass media (Al, 2016). It can be seen from the number of disaster information

conveyed by the mass media, especially during emergency response.

Indonesian society, average access online media higher than the television media. As a part of society, an age groups recognized are very often access the online media was teenager. This is in accordance with the opinion Fine, et.al (Santrock, 1998, p.299) which states that teenager spent a third or more of their waking hours was surrounded by the mass media (including online media), as interlude.

According Sheck, et.al (Santrock, 2012) explains that teenagers all over the world depend on the internet or online media. Teenage social environment includes chat rooms, e-mail, instant messaging, blogs, websites popular websites, social networks such as Facebook, etc. Preparedness is based on the theory of disaster management into the purpose of the use of the mass media. Mass media including online media in disaster management, especially in the preparedness phase has a role as public educator, which means the media has an influence on the dissemination of disaster information. Based on this we

can see the role of online media in teenagers face increasing disaster preparedness.

### ***Online Media as Part of Communication***

Understanding about online media can be started by communication as part of daily activities (Tommy, 2009), delivery attempts of interpersonal message (Dani, 2005). Online media is a kind of mass communication as the process of media organizations to create and disseminate the messages to public (Littlejohn & Karen, 2014) formulated with the elements communication model of Harold D. Lasswell (Wiryanto, 2000). Media provide information to heterogeneous audience that makes the media as part of strength of public institutions (Littlejohn & Karen, 2014)

In broad outline the mass media consists of traditional media and new media. Traditional media is television media, radio, and newspapers (Peter, 2012). While the new media or digital media by Dewdney & Ride (Ido, 2009) exclusively refers to computer

technology that emphasizes form and context cultures by using Internet technology as the process of information dissemination. This is according to the opinion of Lindsay (2011), which states the term “social media” refers to internet-based applications that enable people to communicate and share resources and information.

### ***Media Effects Theory***

According to the theory of media effects, media presence consciously or not has become a part of human life. The media environment in ways significant and unwittingly forming experience in humans (Littlejohn & Karen, 2014). The effect of media includes cognitive, affective and behavioral (Rachmat, 2005).

Departing from this, there is a theory proposed by Marshall McLuhan. This theory known as the theory of media: media regardless of the content being presented, giving effect to individual or society (Littlejohn & Karen, 2014). McLuhan viewed every media as an extension of human minds (Littlejohn & Karen, 2014). However, when using media,

people tend to be concerned with the content of message and do not realize that the media could affect the message (Morissan, 2010).

Media has a simple model in the preparation of agenda (Littlejohn & Karen, 2014). Agenda-setting could form a picture or critical issue in the public mind (John, 1989). Agenda setting function refers to media capability with news coverage that are repeated to lift the importance of an issue in the public mind (Severin & Tankard, 2005).

The agenda-setting function consists of three processes: first, set the priority issues to be discussed in the media agenda. Second, the media agenda can influence the minds of the public to create a community agenda. Third, the public agenda can influence policy makers or policy agenda. In simple terms, the media agenda can influence the public agenda and the policy agenda. (Littlejohn & Karen, 2014).

### ***Media as Public Educator in Disaster Management***

In disaster management, the media has a significant role both

before and after the disaster. According to Burkhart (Coppola, 2011) at the stage before the disaster (preparedness), the media play a role as a public educator.

Many studies have shown a positive correlation between the use of media and increased knowledge and behaviors being promoted. Behavioral changes and implementation of preparation shown by the recipient of the information related to the threat of natural educational media and technology (Coppola, 2011).

Romo-Murphy (2014) also stated that the disaster risk communication has an important role because the public would not be aware of the risk of disaster in the vicinity. Therefore, risk communication are things to be considered, especially in disaster preparedness. In Indonesia, risk communication of disaster use the online applications disaster created by the government as Indonesian National Board for Disaster Management (BNPB), Regency Disaster Mitigation Agency (BPBDs), Indonesian Red Cross Society (PMI), Indonesian Agency for Meteorology,



technological and social changes, urbanization and suburbanization, materialism and poverty, communication (media) mass, social pressures and emotional, chaotic family, life events and stress (Rice, 1996). According Santrock (2012) stated the teenager developmental did not only influenced by the cultural values, socio-economic status, and ethnicity, but also influenced by a media.

According to research Rideout, et.al (Santrock, 2012) is known that current teen be surrounded media. Teenagers spent a third or more of their time surrounded by the mass media, as the main focus or interlude. While the opinion Sheck, et.al (Santrock, 2012) a teenager worldwide is increasingly dependent on the internet such as chat rooms, e-mail, instant messaging, blogs, websites popular websites, social networks such as facebook, etc.

### **Research Method**

This study uses a mixed-methods (quantitative and qualitative approaches). Data collection method conducted with surveys technique and

questionnaires. Research population is all teenagers at Jakarta where are included of early teens category aged 12-15 years (Monks et.al, 2004). Research population is student at state junior high school 3 in Jakarta with Slovin formula (Noor 2011 cited by Pungky, 2015).

Processing and analysis of data obtained from the field using questionnaire distributed and interview would through several procedures (Burhan, 2005), are the examination (editing), coding, and tabulating. Descriptive of statistical data analysis would be used to process data on the level of disaster preparedness a teenager. While score of the influence of disaster information on online media toward disaster preparedness obtained from t test. Scores are inserted into five categories LIPI-UNESCO / ISDR (2006). The role of online media usage to increase disaster preparedness of respondents using qualitative analysis model of Miles and Huberman (Sugiyono, 2015): data reduction, data presentation (display data), and conclusions or verification.

## **Result and Discussion**

### ***Level of Teenagers Disaster Preparedness***

Disaster is nonmilitary threats against life of the state and nation could interfere of state defense. Susceptibility to disasters could be caused by the lack of appropriate disaster management, environmental impact, or human.

Disaster management is a dynamic process of the operation management functions, for example functions of planning, organizing, actuating, and controlling. All functions are implemented in the preparedness phase. Preparedness was knowledge and capacities developed by governments, professional organizations, communities and individuals to could anticipate, respond, and recover from occurrence hazard major of effectively (UNISDR, 2014). Thus, the preparedness of disaster-prone areas could bring people to the level of readiness/preparedness in facing disaster (Nurjanah et al., 2011; Pungky, 2015).

Individuals and households are

part of smallest unit of analysis to preparedness. According to LIPI-UNESCO / ISDR (2006) individuals and households was one of stakeholders who play an important role in the community preparedness besides the government and school community. The results of data analysis can be known four parameter preparedness index according to LIPI-UNESCO / ISDR (2006):

*First*, knowledge and attitudes towards disaster risks. Knowledge component of the dangers include preparedness components. Individuals required to have high knowledge as it can help individuals to know the potential threats disasters in the region. The results of data analysis showed an index of respondents have knowledge and attitudes that did not too high because more than half of the respondents had a level of under prepared and very well prepared. An average value of the index was 62.35 and had a level was almost ready. Parameter of knowledge and attitudes have a great load in determining the individual's preparedness, i.e. by 45%. Their knowledge of and attitudes towards disaster expected high risk

respondents could take preparatory action when disasters occur. Therefore, this component becomes a crucial component of efforts to improve preparedness in teenagers, but the results showed the average respondent is at a level was almost ready.

*Second*, plan for disaster emergency. The aim of preparedness according to IDEP (Pungky, 2015) is to reduce the suffering of a threats, people should have the preparation to be able to act quickly in disaster case. Disaster emergency plan aimed at protecting vulnerable members of society such as children and old people. Implementation of protection, safety and protection possessions requires the ability to help (FEMA, 2009; Pungky, 2015). Based on the survey results revealed an average index of plans to emergencies amounted to 63.00 and is at a level was almost ready. The highest percentage is at a level very well prepared (amounted to 34.29%). This shows that a third of respondent have a plan for emergencies with the preparation. But rest are below the level of prepared, so that the average index

became almost ready.

Third, disaster warning system. The results of measurements index parameter disaster warning system, mostly had a level of very prepared (48.57%), and prepared (28.57%). While the average value of the index was 78.75 and had a level of prepared. An average this being the average value of the highest compared with other parameters. Weighting parameter disaster warning system is only 5% in determining the preparedness of individuals, but most respondents knew disaster warning system only through mass media such as television and online media well as information from the environment such as local community leaders.

*Fourth*, ability to resources mobilization. The results of index measurements ability to mobilize resources shows that the average respondent had a level of less prepared (44.29%) and is not yet ready (43.57%). Only 5.71% level, prepared and 6:43% level was well prepared. While the average value of the index is 37.32 and are at levels not ready. In fact, the ability to mobilize resources

parameter has a weight that is large enough in the determine the preparedness of individuals, are 15%. Therefore, it should be required that high mobilization ability to carry out safety measures and the protection of property and supplies. Besides relatives, siblings or friends who was

willing to help increase a person's ability to mobilize resources.

After conducting measurements of each parameter index above, preparedness index measurement results can be seen on the table below:

**Tabel 1 Level of Preparedness Respondents**

No.	Preparedness Index	n	Percentage	Average
1	Not ready (<40)	4	2.86%	63.78
2	Less ready (40-54)	24	17.14%	
3	Almost ready (55-64)	40	28.57%	
4	Ready (65-79)	61	43.57%	
5	Very ready (80-100)	11	7.86%	

On tables 1, can be seen that the respondents are spread across all categories of preparedness index. The average value of index amounted to 63.78 or preparedness respondent had a level of was almost ready. Most respondents were in index prepared are 43.57% or 61 people. This was followed by 40 respondents who are was almost ready level (28.57%). The next level is less prepared as many as 24 people or 17.14%. Only 11 respondents who are very prepared level (7.86%). Recently at levels not ready as much as 4 or 2.86%

teenagers, Bronfenbenner explained that teenagers growing depending on various things in families, community and country. They are strongly influenced by contact to friends, relatives, and other adults, organizations, social groups, and school in which they are located. They are also influenced by the media, culture in which they grew, a community leader, as well as certain events.

Teenagers are a product of a social and environmental influences (Rice, 1996). Santrock (2012) states that teenager developmental did not only influenced by the cultural values,

***Online Media and Teenagers***

Based on the view of ecology

socio-economic status, and ethnicity, but also be influenced a media.

In this study, the focus of this research was early teens (aged 12-15 years) according to Monks, Knoers & Siti (2004). Based on the results data collection and analysis is known that respondent was in the age range of 13-15 years are categorized as early teens. The data obtained in accordance with the title of the study was the use of online media. The media are divided into social media and websites, but both media is still considered online media because network-based internet.

The results of data processing showed that overall online media most frequently used by respondent was Line, Instagram, fuel, Youtube, Facebook, search tools such as Google and Yahoo, Online Games, WhatsApp, Twitter and Snapchat. This is consistent with the results of research sheck, et al (Santrock, 2012). Sheck, et al stated social environment includes teenagers on the internet chat rooms, e-mail, instant messaging, blogs, popular sites, social networks such as Facebook, etc.

Based on the results of data analysis, known average length of respondent access online media per day was 1-12 hours / day. The average was 4 hours per day. When compared with the results of a survey conducted by wearesocial.net (2015) there was little difference of average time that the Indonesian people per day. If taken an average use of online media (social media and websites) from computers and mobile phone, then averaged to 3.7 hours per day.

While if compared with the results research Rideout, *et.al* (Santrock, 2012) is known that the average teenagers spend time with the media as much as 6.5 hours a day and when the media multi-task reckoned children aged 8-18 years can use the mean media average of 8 hours per day. Research by Rideout et al combines the use of mass media as a whole, did not focus on online media so that average value of media use survey becomes lower compared with the research result Rideout *et.al*

Respondent Reasons use online media is to get necessary information and information update.

In addition, they also use online media to communicate and entertainment (free time) like playing games. Another reason is online media easily and efficiently because can be used anywhere. This is according with the opinions Arnett (Santrock, 1998), describes function of the media for teens used for entertainment, information and seek sensation.

Most respondents considered the existence of online media is very important (40%) and important (27%). These results are according with the opinions shek, et.al (Santrock, 2012) stated teenagers worldwide are increasingly dependent on the internet. The internet access differs substantially in their use in many countries and by various socio-economic groups. In this study, its use is not being divided into social groups, but still there is a percentage of how important online media for respondent.

### ***Online Media and Teenagers Preparedness***

Generally, the media cannot be separated of three phases of the disaster management, i.e. pre-disaster,

disaster and post-disaster, at the stage of pre-disaster preparedness are phases (preparedness) media role as community educators (Burkhart (Coppola, 2011)).

The role of media as an effective channel of information education have been studied, particularly in the field of public health. Many studies have shown a positive correlation between the use of media and increased knowledge and behaviors being promoted. Behavioral changes and implementation of preparation shown by the recipient of the information related to the threat of natural educational media and technology (Coppola, 2011).

This is according with the opinions Romo-Murphy (2014) are states that disaster risks communication has an important role because without communication, public would not aware of any risk of disaster in the vicinity. Therefore, risk communication are things to be considered, especially in the disaster preparedness.

At the time of disaster, the role of media becomes significant in

spreading disaster information. Use of online media and social media websites such as two-way could be more value during emergency response compared to the traditional mass media (television, radio, newspapers and magazines), which is one way.

Social media (online) for emergencies and disasters on an organizational level could conceived of a as two categories. First, social media can be used to disseminate information and receive feedback from users through incoming messages, postings and opinion polls.

The second approach involves the use of social media as a tool of of systematic management of emergencies, such as: using the media to communicate emergency and issued a warning; using social media to accept the victim requests for assistance; oversee the activities of users and posts to build situational awareness; and upload images to damage estimates.

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In this study, the media focus was online media. Based on results of data processing, it is known that mostly respondent rarely use online media to seek information on disaster (68.57%). A high result became a question because as it has been known that the average respondent access online media every day was 4 hours and mostly respondents stated that online media was media are important to them. According data processing result, this can be due to several factors such as a lack of interest and ignorance of respondents to disaster information

in the online media, disaster information provided are still lacking or socialization is lacking, as well as the other media are more frequently used by respondent in seeking disaster information, media eg television, newspapers, information from the surrounding environment etc.

Most of respondents stated are online media could be a source of disaster information was Line (Line Today), Facebook, BBM, Instagram, Twitter, Whatsapp, Google, Detik.com, Liputan6.com, Kompas.com, Youtube, and Yahoo.com. Based on data processing result, overall respondents did not know the existence of sites or application that become source of disaster information.

And in Indonesia there has been disaster applications in playstore and can be downloaded through computer or mobile phone. Respondent respond the online media news as a tool of disaster information was positive. According to them the online media is an excellent medium to provide disaster information because it is easier and can be accessed

anywhere. Respondents also stated that the use of online media to disaster information should be published (socialization in teenagers at school or in the neighborhood) because the media would be helped in the search for information and can be accessed anywhere without having to watch television or read newspapers.

In Jakarta, teenagers who are attracted towards disaster problems has not been so big. Teenagers who were respondents in this study tended to use online media only to get general information and communicate through social media such as Line, Instagram, BBM, Facebook, WhatsApp, Twitter and Snapchat or as a means of entertainment through Youtube, Online Game, webtoon and sites music. In addition, the scope of disaster information dissemination are still needs to be broadened.

## **Conclusion**

Based on the results of data analysis and discussion, the conclusions of this research are:

1. The level of preparedness in facing of disaster teenagers at Jakarta categorized was almost ready. It

can be seen from the average level of disaster preparedness amounted to 63.78. The value is in the range (55-64) with test level 5%

2. Teenagers in Jakarta has not been use the online media optimally. It can be seen from the lack of understanding of respondents on disasters and disaster information is available in the online media such as: website BNPB or other disaster agencies both government and NGO, android application (DIBI BNPB, first aid, BMKG Info, etc.) less be obtained.

### Recommendation

BNPB, BPBD, Red Cross and NGOs, and other private parties to maximize the potential of online media as a public educator among early teens. In addition, for further research can viewed the influence of the mass media to disaster risk reduction efforts or the influence of online media as a public educator in disaster management.

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