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# Introduction to Flood Disaster Mitigation for Early Childhood through Digital Media Learning Videos in 2023

Dimas Taufiq Arif[1a*], Rizky Bachtiar[2a]

[a]*Civil Engineering, Faculty of Civil Engineering and Planning, ITATS, Indonesia*

**Abstract**. Flooding is a natural hazard that occurs frequently in many locations in Indonesia. Flood catastrophe mitigation must be completed as a preventative measure before the disaster occurs. Flood disaster knowledge is an important learning activity for youngsters. Children can learn about flood catastrophe mitigation activities by using digital video as a learning medium. The lack of flood mitigation learning for children aged 5–6 years, as well as the children's lack of understanding of catastrophe mitigation, motivated this study. This study's data was gathered through interviews and questionnaires. The subjects of this study were five Kindergarten B students from Surabaya. The participants in this study were five Kindergarten B students from Surabaya. The study's findings indicate that digital media in the form of video can be used as a learning tool to teach early childhood flood catastrophe management. By watching digital educational video media, children are becoming more familiar with flood disasters and associated risk factors. The construction of a flood disaster management program in the form of digital instructional video media has been shown to boost early childhood knowledge and attitudes toward disaster response.

***Keywords:*** early childhood, mitigation, floods, digital media, tutorial video

## 1. Introduction

Indonesia own potency disaster Which different depends geography And form territory (Amri et al., 2017). According to data from the National Disaster Management Agency (BNPB), there were 1711 incidentsnatural disastersin Indonesia in the first week, namely the period from 1 January to 7 June 2023. Of these, floods occurred most often with a total of 651 incidents. This of course causes losses both tangible and intangible for the wider community, including children.


**Fig. 1** Indonesia disaster on 2023
(Source: BNPB/could/DiBi in 2023)

Prevention And control flood can be done through preparation before flood come, on moment flood, And on moment evacuation and settlement return post flood. Disaster flood is disaster Which must handle and anticipated. get used to behavior friendly environment must taught as early as Possible. Subtraction risk disaster will Better If integrated to in sector education. Education role important in push participation active and awareness general (Hapsari & Zenurianto, 2016). Institution education can design, obtain, and look after facility institution with consider vulnerability and vulnerability to disaster (Purwani & Nurfadilah, 2018). Application subtraction disaster flood can increase preparedness And Power responsive child to management risk disaster. Mitigation is series effort for reduce risk disaster, Good through development physique nor enhancement awareness And Skills face disaster, nor development physique and enhancement awareness and ability face threat disaster (UU No. 24 Year 2007). Program Demonstration Preparedness Disaster also beneficial for develop habit protection environment Which Good And teach children for understand step beginning rescue self If happen disaster flood.

* Corresponding author: dimastaufiqarif22@gmail.com

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Implementation mitigation disaster flood can minimize impact psychological If be prepared appropriate time. Implementation action prevention disaster flood give information to children so that they can alert and responsive with appropriate If happen disaster flood. Mitigation disaster natural Which taught since early increase ability child for aware will disaster natural, save self, as well as know What Which must done And What Which No can done after happen disaster (Qurrotaini & Nuryanto, 2020). Intensity And impact disaster natural in Indonesia can minimized with knowledge, so that every inhabitant country can ready face disaster natural (Raheem & Widiastuti, 2020). Information This is effort for minimize loss disaster. Various instrument can used for mitigation disaster flood for children. Digital learning video media has characteristics in the form of animated images equipped with sound and the storyline played by the characters who play the story in the video. Interventions using learning videos in conveying disaster information will encourage children to provide feedback and improve interaction skills.

This research is focused on the introduction of flood disaster mitigation by using digital learning video media. The researcher did an in-depth look at how the appearance and content of the learning videos looked and asked parents to provide their views regarding the use of digital learning video media to introduce flood disaster mitigation to children, and to differentiate children's views this year from previous years. It is hoped that through this research, children can be prepared and know the right response when faced with a disaster situation that knows no time and can happen anytime and anywhere.

## 2. Methodology

This study uses a descriptive qualitative research method to examine the main issues regarding flood disaster mitigation using digital learning video media. This research method was chosen in order to further explore in depth the role of digital learning video media in introducing flood disaster mitigation to children. The subjects in this study were children aged 5-6 years who had the subjects of this study were chosen with several considerations, namely children aged 5-6 had more developed abilities than children under their age. Data collection techniques were carried out through observation, interviews, and documentation. Observations used by researchers using participating observation techniques. The research stages are as follows:

a) Study of literature

The first stage with a literature study is carried out with the preparation of a search related to children's initial understanding of the flood disaster through related supporting journals.

b) Data collection

The second stage is the implementation of research by conducting information gathering, interviews and observations as well as documentation using digital video learning media for the introduction of flood disaster mitigation in children. Data collection techniques are illustrated by figure 2.

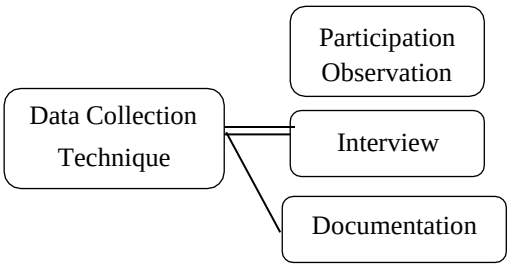


**Fig.2** Data collection technique

Researchers carried out data processing techniques and data analysis after observing, interviewing and documentation. Data analysis techniques are the process of systematically searching for and compiling the data obtained and organizing the data into categories, describing them into units, synthesizing them, compiling them into patterns, choosing which ones are important and will be studied, and making conclusions so that they are easily understood by students. themselves and others (Sugiono, 2012).

c) Data analysis

Third step done through collection data, interview, observation, and documentation sharpening research analysis to understand children's flood disaster preparedness through digital educational video media. Steps taken the researcher analyzed the data and reduced the data by summarizing and summarizing the important points to give the researcher a clearer picture of the written record. In addition, the selected data was displayed in tabular form and added narrative text. Researchers must code to make this possible information coordination more complete and details. The researcher triangulated to ensure the validity of the research data. The researcher triangulated to ensure the accuracy of the research data. an investigator Uses triangulation of sources and theories to ensure valid and accurate information analyze with Correct. Information Which collected checked with careful and continuously following research guidelines.

## 3. Results

Researcher do activity mitigation flood with use media videos education digital and study perspective children for now more Far about success videos education. Researcher ensure children use face mask and guard distance during activity going on. Researcher start make circle as exercise cognitive and prepare children for watch videos animation For Study about disaster flood. Videos animation Which used give knowledge to children about disaster flood, reason disaster flood, method protect self-moment happen disaster and method prevent disaster flood. In videos from Zahra Ciawi Kindergarten explained visually by using dolls as figures Which explain about flood and method prevention. served scene song Which teach ways countermeasures flood and make it easy children remember material Which used. Researcher previously has prepared series question interview for children.

Videos animation education prepared for shown to children. After videos animation broadcast, researcher interview and analyze reaction children to videos Which aired. Researcher study How response child to knowledge and attitude about disaster flood after child watch videos. After get answer, researcher explain with use technique descriptive How videos preparedness disaster used for add knowledge children about disaster flood. To explore the extent of children's knowledge about flood disasters, the researcher gave several questions to the 6 children who were the research subjects regarding the extent to which they knew about flood disasters. The researcher asked several questions before showing the learning video to the 6 children who were the research subjects. Some of these questions include:
Question 1: Have you ever seen a flood disaster?
Based on these questions, 6 children answered that they had seen it

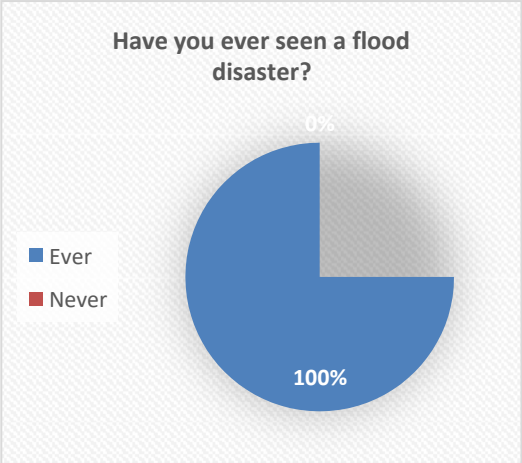


**Fig.3** Distribution of question number 1 responses

Question 2: Where have you seen a flood disaster?
Based on these questions, 4 children answered that they had seen the water overflow in their house, while the 2 children claimed to have seen it through the media (books, television, and the internet).

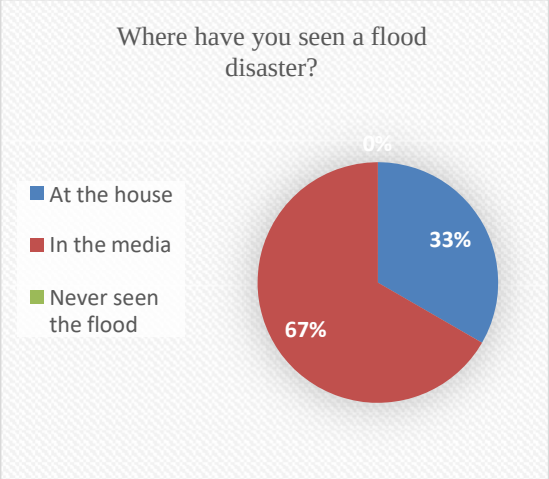


**Fig.4** Distribution of question number 2 responses

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Question 3: Do you know what caused the flood?
Based on this question, 5 children answered yes, and 1 child said nothing.

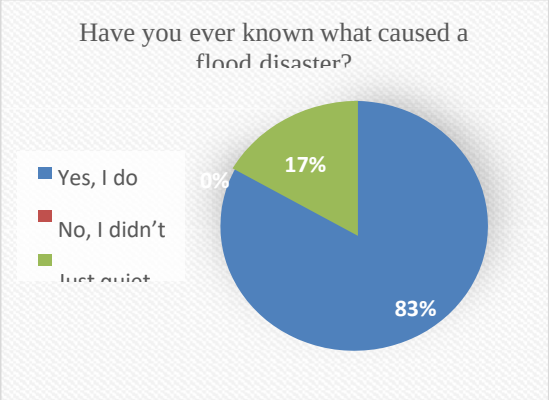


**Fig.5** Distribution of question number 3 responses

Question 4: What do you think caused the flood?
Based on these questions, 3 children answered "throwing garbage carelessly", "disposing of trash in the wrong place", while 2 children answered that it was raining very hard, and 1 child was silent.

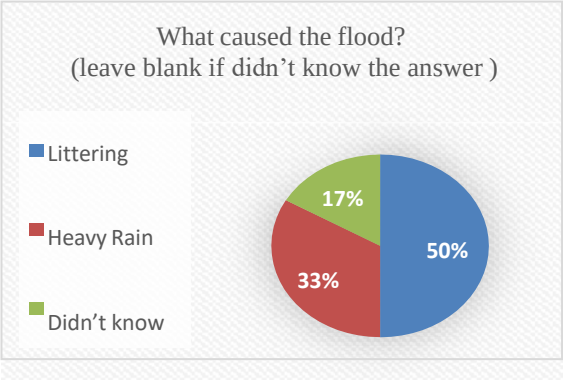


**Fig.6** Distribution of question number 4 responses

In interviews conducted by researchers regarding children's initial understanding of flood disasters, most children already understand flooding and some have even experienced it firsthand. However, some children do not know the causes and efforts that need to be made as a prevention of the disaster. In the second stage the researchers carried out a series of activities to introduce flood disaster mitigation with digital learning video media.

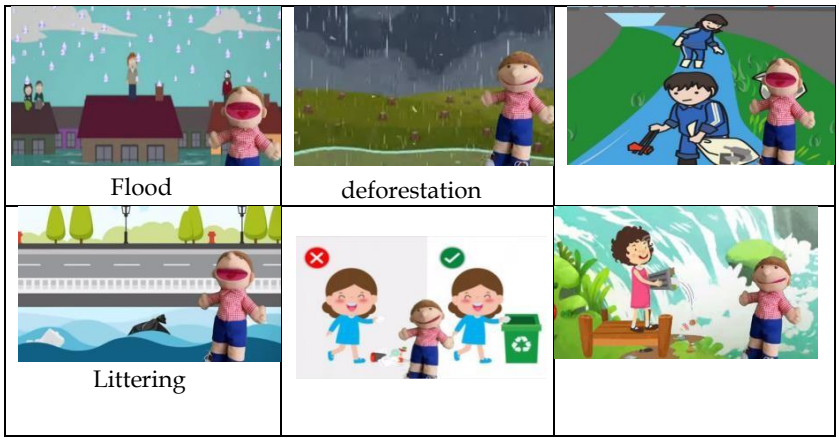


**Fig.7** Animated video scene introduction to the flood disaster

This introduction was carried out inthe core learning activities after previously being opened with an apperception regarding flood disasters in children. Researchers conducted observations and in-depth interviews to find out to what extent the learning videos provide knowledge to children about flood disasters. Researchers get answers that children's knowledge about flood disasters increases after watching learning videos. Some of the questions and answers the children gave included:
Question 1: Do you know the cause of the flood after seeing the video earlier? What are the causes?

Based on these questions, 5 children answered that people litter, while 1 person said nothing or did not know.

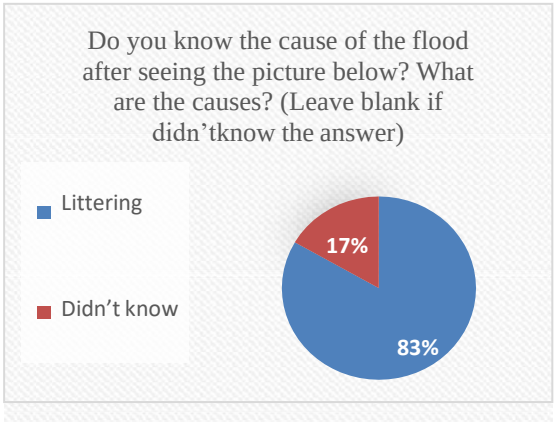


**Fig.8** Distribution of question number 1 responses after watch the media

Question 2: Do you know the impact of the flood? What if the flood continues?
Based on this question, 3 children answered "difficult to carry out activities" and there were also those who answered "school was closed", for which 2 children answered that things were washed away, while 1 child was silent or did not know.

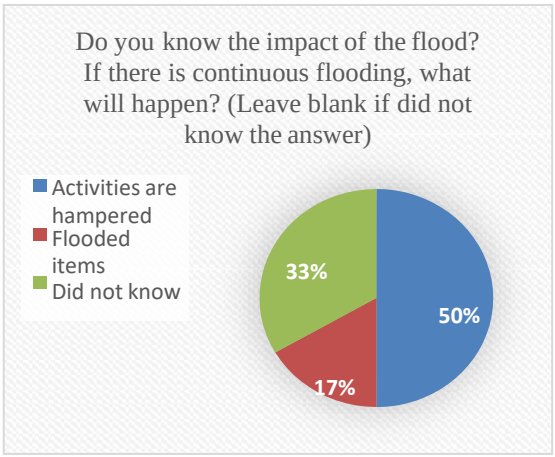


**Fig.9** Distribution of question number 2 responses after watch the media

Question 3: How do you feel when there is a flood?
Based on the following questions, 2 children answered sad, afraid because they could not swim yet, 2 children answered that they were happy to be able to play in water, while the other 2 children were silent or did not know.

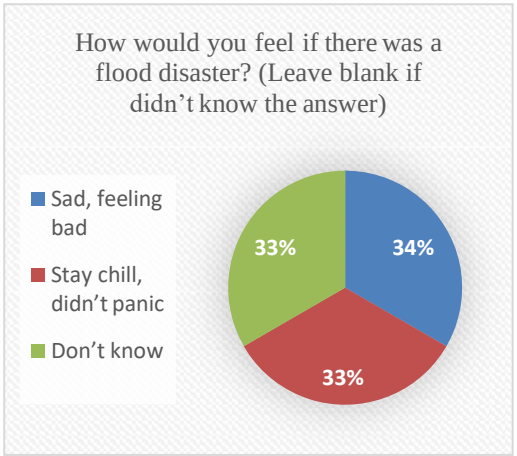


**Fig.10** Distribution of question number 3 responses after watch the media

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Question 4: Do you know how to prevent from happening? And what will your friends do if a flood occurs?
Based on the following questions, 4 children answered throwing trash in its place, while 2 children were silent or did not know.

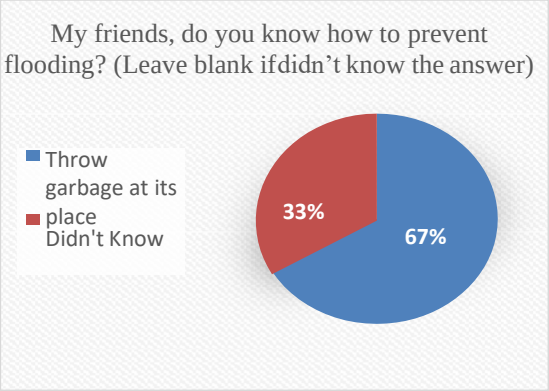


**Fig.11** Distribution of question number 4 responses after watch the media

Children's understanding of flood disasters is increasing after children see digital media for the introduction of flood disaster mitigation. Based on this, it can be concluded that digital media in the form of videos can be used as a learning resource to introduce flood disaster mitigation to early childhood. The development of a flood disaster mitigation program in the form of digital learning video media has proven to foster knowledge and attitudes of early childhood so that they can respond to disasters from an early age. The implementation of disaster mitigation programs through learning videos has several benefits including being easily accessible, easy to use, general in nature, and can be used in many places.

## 4. Discussion

Flood disaster mitigation learning is an integrated learning that involves children directly starting from an explanation of flood disaster mitigation then actions that need to be taken when a disaster occurs and the things that cause the disaster. This also supports the characteristics of early childhood in general, namely children expressing their behavior relatively spontaneously, with the nature of children who have a relatively spontaneous attitude when a disaster occurs it will be dangerous for children if knowledge is not given to children, children will act where they do not know it is dangerous or not the actions they take when they are in situations they do not know (Ariyanti, 2016).

The country of Indonesia, which is prone to disasters, makes knowledge about disaster mitigation not only for adults but also for children to understand. Unfortunately, attention and disaster risk reduction initiatives in preschool-aged children are still lacking and neglected (Proulx & Aboud, 2019). In fact, when viewed from a greater risk factor, the effects of a disaster will be more severe if it is felt by children. Consequence factors that will be received such as trauma to the environment, loss of parents, witnessing the death of loved ones, fear of disasters that might occur again, make children highly vulnerable when exposed to disasters (Mohamed et al., 2017).

Learning videos are useful as an effective medium in helping the process of transferring knowledge to children. The use of learning video-based digital media is more in demand by children so that children's learning outcomes and understanding will increase after using learning videos. Animated video learning about floods makes children active in expressing opinions and knowing what factors influence floods. The role of learning videos in the introduction of flood disaster mitigation in early childhood provides several advantages when applied by teachers and parents. The use of learning videos is proven to be more verbally stimulating and shows positive results for increasing social emotional support in children (Fukkink & Tavecchio, 2010). The use of learning videos has several advantages because in general video content contains learning messages. Animated video as an audio-visual medium that displays animated images and has elements of motion can attract the attention and motivation of early childhood in learning (Maranatha & Putri, 2022). The development of disaster mitigation programs through learning videos can be conveyed in a way that is easy for children to understand and integrates developing aspects of early childhood development. This is also in accordance with research conducted by Mardhian Ningrum et al (2021) which states that the use of instructional video media will have a good effect on increasing the learning motivation of children aged 5-6 years. Besides that, Children train guard environment, know factors reason disaster, and participate in protection environment since early.

Every inhabitant country, including children, must get introduction preparedness disaster, not only imagine how flood to be occurred, but also more general in matter What Which must done If happen disaster flood (Kurniati et al., 2020).

Development media learning form videos animation Also can used for embed discipline on child age early (Muntiani et al., 2021). Videos education about method mitigation disaster flood can posted in a manner on line, so that make it easy Teacher, person old, And public. Videos learning about learning based problem can become recommendation for used on child age early (Styowati & Utami, 2022). Method access tutorials on cell phone with various account media social Which currently used. Based on matter the, expected implementation program countermeasures disaster flood can transmitted to children. Use videos education in implementation disaster flood can used Where just, when just for grow culture care water and environment on child since early. Matter This in accordance with opinion Cherrington & Loveridge (2014), Which found that the implementation of flood disaster management through digital educational video media facilitates the delivery of disaster material to children by parents and teachers. The use of video tutorials can be a tool for articulating and reflecting on ideas so that they can be developed and understood together. The development of teaching materials in collaboration with information technology must continue to be developed to create advanced teaching materials in accordance with the times without losing the nature of absorbing student information (Rosmiati et al., 2020). As a country prone to disasters, program subtraction disaster must developed since early. Knowledge and attitudes about disasters that children need to understand, such as what needs to be done before a disaster occurs, how to save themselves, and after a disaster occurs. Knowledge about disaster is base most important for form culture sustainable in period front.

## 5. Conclusion

Based on process study and analysis researcher can said that media videos learning digital can expand knowledge child about implementation countermeasures disaster flood on child age early. Videos learning media digital animation related vigilance disaster flood available through various application smartphones, make videos learning This easy accessed by person old, Teacher, And public general. The learning video- based introduction to disaster mitigation program can be used by educators in PAUD institutions and parents to teach disaster education as well to continue with a series of creative play activities to help improve aspects of early childhood development.

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