

# The Design Of Covid-19 Disaster Mitigation E-Module For Students Of Grades 1 in Primary School

Arwin Arwin<sup>1</sup>, Ary Kiswanto Kenedi<sup>2</sup>, Yesi Anita<sup>3</sup>, Ciptro Handrianto<sup>4</sup>

<sup>1</sup>Elementary School Teacher of Education , Universitas Negeri Padang,

<sup>2</sup>Elementary School Teacher of Education, Universitas Samudra,

<sup>3</sup>Elementary School Teacher of Education , Universitas Negeri Padang

<sup>4</sup>Faculty of Human Development, Sultan Indris Education University Perak, Malaysia

Email: [arwin62@fip.unp.ac.id](mailto:arwin62@fip.unp.ac.id)

## ABSTRACT

The development of the Covid-19 disaster mitigation e-module for elementary school students is crucial, so it requires a design that takes elementary school children's characteristics into account. The purpose of this research was to design a Covid-19 disaster mitigation e-module for elementary school students in the first grades based on the needs analysis. This research is a qualitative research. Observation sheets, interview sheets, and documentation were utilized to collect data. According to the findings, the developed e-module includes a cover, preface, table of contents, learning objectives, material description, observing activities, discussion activities, and do-you-know activities, summaries, exercises, answer keys, feedback, and follow-up. This research implies and will serve as the foundation for the development of a Covid-19 disaster mitigation e-module for elementary school students particularly to the students in the first grade or students of ages 7 to 8 .

**Keywords:** Design, E-Module, Disaster Mitigation, Covid-19, Elementary School Students

## 1. INTRODUCTION

Almost every country in the world has been hit by the COVID-19 epidemic [1], [2],[3]. The transmission of disease outbreaks by the coronavirus is known as the COVID-19 pandemic [4]. This virus can cause mortality if it infects the respiratory system. On June 24, 2021, a total of 2.03 million persons in Indonesia were infected with the coronavirus, with 55,594 deaths. This indicates that coronavirus is still a serious threat in Indonesia. As a result, actions must be made to limit the transmission of this coronavirus.

Coronavirus is a virus that can be transmitted from person to person [5]. This virus can be passed from person to person via saliva splash [6]. A person who has been exposed to COVID-19 can transfer the virus through saliva splashes or things splattered by the saliva. As a result, keeping a safe distance between humans is one option. However, there are still many Indonesians who do not get this. As a result, the coronavirus spreads more widely.

Based on the needs analysis, one of the causes of the increasing spread of the coronavirus is the lack of public

education about the dangers of covid-19 and ways to prevent covid-19, especially for elementary school-aged children. Children are one category of persons who are more likely to be exposed to COVID-19 [7]. The reason for this is a lack of information about covid-19's development in elementary school students. The information presented is abstract. As a result, children are unable to comprehend COVID-19 and its prevention completely.

Elementary school-aged children are in the concrete operational period [8], [9] and [10]. That is, the process of students' cognitive thinking abilities is based on real objects, direct experience, and processes of everyday life. So, innovation is needed to educate elementary school students about the process of preventing the spread of COVID-19. Based on a needs analysis, one way to educate elementary school students is to develop an e-module for the COVID-19 disaster mitigation.

E-module is an electronic module that contains information about the concept of disaster and the covid-19 pandemic. Students can access it anywhere and anytime via smartphones and computers. The e-module developed is related to the COVID-19 disaster

mitigation. Disaster mitigation is an effort to raise public awareness in dealing with and reducing the impact of a disaster [11]. Based on the literature review, there are no e-modules related to the COVID-19 disaster mitigation for elementary school students. Thus, the development of this e-module is very crucial.

However, a product design is needed so that the developed e-module can be used. This design aims to make the e-module developed following the needs analysis. This is supported by the statement that product design is necessary before being developed to achieve the goal. From this, we need an e-module design before being developed. So, the purpose of this research is to find out the design of the e-module for the COVID-19 disaster mitigation for elementary school students.

**2. RESEARCH METHODS**

This research is development research using a 4-D model consisting of define, design, develop, and disseminate. This research is at the design stage, namely planning and designing the product to be developed. The design is in the form of cover design, systematic design, and content design. This research study is limited to the defined stage. The design of the research is qualitative. The participants of the research were students in the first grade ( the ages 7 to 8 ). Data collection tools are observation sheets and documentation.

**3. RESULTS AND DISCUSSION**

This research focuses on three main discussions as follows:

**3.1. Cover Design**

The cover is an important thing in the process of making a book, module, or teaching material [12]. The cover serves as a poster in advertising a book [13]. In essence, a cover has 3 main functions, namely the identity function, communication function, and marketing function [14]. The cover serves as an identity because it gives an identity to the book. The cover serves as communication by indicating the type of book and providing a summary of the contents. The cover serves as marketing to assist in the sales process. So, the cover in a book has many functions.

There are various factors to consider when designing the cover, including:

**3.1.1 Typography.**

Typography is related to the artistic process of letters to make it easier for someone to understand the meaning of the information [15]. Typography can make it easier for someone to understand the content contained in the discourse [16]. Based on interviews with graphic design

experts, the e-module cover developed must use large and attractive fonts. Its goal is to attract students to read the e-module. This is in line with the statement that letters used in learning books for elementary school students should be big and appealing [17]. As a result, the cover should be made with big letters to appeal to elementary school students.

**3.1.2 Picture**

The picture on the cover is very essential. Pictures on the cover can be in the form of illustrations and photos. An illustration is the art of drawing that explains a meaning visually [18]. Illustrations can also serve as story support and fill in the blanks on the cover. Meanwhile, the picture is a photographic activity [19]. Photos on the cover can be used to attract readers. Based on the interviews with graphic design experts, the process of making the cover on the e-module must be attractive and describe the contents of the e-module in general. The cover is expected to have interesting illustrations. This is following the opinion which states that illustrations are indispensable in elementary school teaching materials so that students can understand the information presented visually [20], [21]. Therefore, this development uses pictures and illustrations that can attract elementary school students.

**3.1.3 Color**

Color is also an essential component in the cover design process. Color can give character and perfect the shape of the cover. Color can also affect a person's emotions in reading the book. [22] Based on the interviews with graphic design experts, teaching materials for elementary school students should be in full color and not monotonous. This is supported by the statement that the use of color in elementary school students aims to attract students to read the book [23]. Therefore, in this study, the cover was designed in full color.

Overall, the cover design must use big and attractive letters. Illustrations and photos must use attractive colors. Meanwhile, the design of the cover can be seen in the image below.



Figure 1. E-module cover design

### 3.2. Systematic Design

Based on the interviews and literature review, this e-module systematic consists of:

*a. Cover*

Cover is the outer face of a book that functions as a poster in advertising a book. In this study, the cover designed must use big and attractive letters, illustrations, and photos and use attractive colors

*b. Preface*

The preface is the initial part of a teaching material [24]. The preface in this e-module contains acknowledgment, criticism, and suggestions for the perfection of this e-module.

*c. Table of contents*

The table of contents is a part of the book that helps students find the page they're looking for.

*d. E-module description.*

A description of the ins and outs of e-modules may be found in e-modules description.

*e. Learning objectives.*

The learning objectives indicate the accomplishments that students must make by the end of the activity.

*f. Material description*

The material description contains an explanation of information. In the material description section, there are activities that contain understanding activities, observing activities, discussion activities

*g. Do you know*

Do-you-know contains additional information about the material presented

*h. Summary*

The summary contains conclusions from the material developed

*i. Exercise*

The exercise aims to test students' understanding of the material presented

*j. Answer key*

The answer key contains the answers to the exercises presented

*k. Feedback and Follow-up.*

Feedback and follow-up contain information on what to do after students reach the indicator.

According to the findings, the developed e-module includes a cover, preface, table of contents, learning objectives, material description, observing activities, discussion activities, and do-you-know activities, summaries, exercises, answer keys, feedback, and follow-up

### 3.3. Content Design

Content design aims to find out what materials are developed in this e-module. Based on the analysis, the material to be developed can be seen in the following picture:

The concept broadly contains information about the concept of disaster, the concept of disaster management, the concept of covid-19, and the concept of disaster management of covid-19

Overall, this design pays attention to cover design, systematic design, and content design adapted to the characteristics of elementary school students. This concept will be developed in the next stage of development.

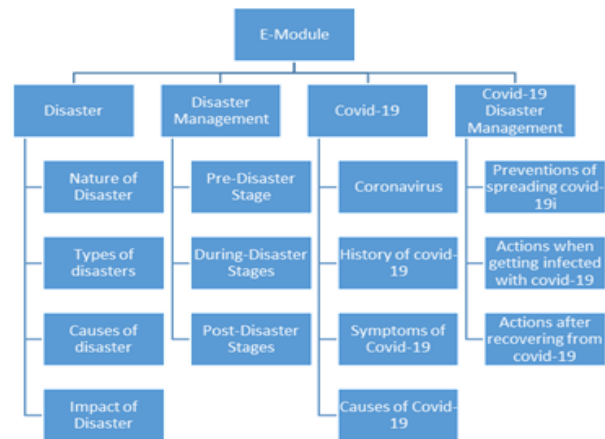


Figure 2. Image of E-module Concept Map

## 4. CONCLUSION

The design of the COVID-19 disaster mitigation e-module consists of designing the cover, systematics and content of the e-module. So, the developed e-module includes a cover, preface, table of contents, learning objectives, material description, observing activities, discussion activities, and do-you-know activities, summaries, exercises, answer keys, feedback, and follow-up.

## ACKNOWLEDGMENT

The authors would like to thank to The Institute of Research and Community services Universitas Negeri Padang (*Lembaga Penelitian dan Pengabdian Masyarakat Universitas Negeri Padang*) for funding this

work with a contract number: 958/UN35.13/LT/2021. We also would like to thank Universitas Samudra for the collaborative research.

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