Development of Pictorial Card “Kencana” (Disaster Preparation) as a Media of Group Guidance Services in SMP N 1 Wonosari

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Abstract. This study is aimed to develop a product called the Kartu Kesiapsiagaan Bencana “KENCANA” (Disaster Preparedness) pictorial card which can be used as a media for group guidance services in junior high schools. The material theme of this card is physical, psychological, social, and spiritual disaster preparedness. This research is an R&D (Research and Development) research by adopting the Borg and Gall development model. The stages of this research consisted of: 1) the data collection stage, 2) the product planning stage, 3) the product development stage and 4) the validation and testing stages. The research subjects were 8th grade students of SMP N 1 Wonosari, Gunungkidul. The results showed that the pictorial cards KENCANA (Disaster Preparedness) were suitable for being used by the counseling teacher as a media for group guidance services and also used as a media for evaluating student understanding of the preparedness material that had been previously presented with good criteria based on all aspects that have been validated and tested.

Keywords: pictorial cards, group guidance services

1. Introduction

Indonesia is a country that has a lot of cultural, ethnic, racial and religious diversity. Indonesia is known as a beautiful country for its natural beauty. But in reality, Indonesia also has a high risk of natural disasters. Based on its geographical location, Indonesia is located between the junction of three active tectonic plates, namely the Indo-Australian Plate in the southern region, the Eurasian Plate in the northern region and the Pacific Plate in the eastern region. The three plates move and collide with each other, so that the Indo-Australian Plate plunges under the Eurasian plate and causes earthquakes, volcanic routes, and faults or faults. The subduction of the Indo-Australian Plate which moves relative to the north and the Eurasian Plate which moves relative to the south creates an earthquake route and a series of active volcanoes along the islands of Sumatra, Java, Bali and Nusa Tenggara. (Kurniawan, et al 2011: 1). There are approximately 5,590 watersheds (DAS) in Indonesia. This has resulted in Indonesia becoming one of the countries with a high risk of natural disasters, such as earthquakes, tsunamis, volcanic eruptions (129 active volcanoes), and ground movements. (Supartini, et al 2017: 10)

Everyone has a risk of potential disasters, so disaster management and management is the business of all parties (everybody's business). Therefore, it is necessary to carry out various roles and responsibilities (shared responsibility) in increasing disaster preparedness for all levels, including children, adolescents, adults and the elderly. (Supartini, et al 2017: 11).
Victims of natural disasters experience very complex situations and conditions in dealing with natural disasters both physically, psychologically and socially (Rusmiyati & Hikmawati 2012: 98). Likewise for children who very clearly have a negative impact on the psychological and social fields of disasters in their lives (Mondal, et al., 2013; Uemoto, Asakawa, Takamiya, Asakawa, & Inui, 2012; Kilic, Ozguven, & Sayil, 2003; Kar, 2009; Yonekura, Ueno, & Iwanaka, 2013), it requires an adequate spiritual level for psychological strengthening caused by disasters (Dew et al., 2010; Hernandez, 2011).

According to the disaster-prone index of Indonesia, the disaster threat in the Special Region of Yogyakarta includes natural disasters in the form of floods, earthquakes, tsunamis, droughts, extreme weather, landslides, volcanoes, abrasion, social conflicts, epidemics and disease outbreaks, with all districts included in the class. disaster-prone (Kurniawan, et al 2011: 86). According to the National Disaster Management Agency (BNPB), one of the districts in the Special Region of Yogyakarta, Gunungkidul Regency, has a high potential for disaster, this is evidenced by a score of 76 which is included in the disaster-prone class according to data from the disaster-prone index in the Special Region of Yogyakarta (Kurniawan, et al 2011: 86). With these disaster-prone conditions, Gunungkidul is one of the districts that has often experienced natural disasters. In fact, almost part of the villages in Gunungkidul are prone to potential disasters. For this reason, it is deemed necessary to raise awareness of the dangers of natural disasters, so that people can anticipate and be aware of these occurrences.

In an effort to overcome various possible disasters that are prone to occurring, it is necessary to have knowledge and awareness of facing disaster preparedness. This can be given to all components of society, including school students. Moreover, in the Education System Law number 33 of 2019 concerning the Implementation of the Disaster Safe Education Unit Program, it is stated:

a. That in order to provide protection and safety to students, educators, and education personnel from disaster risk, it is necessary to improve disaster preparedness and mitigation in education units;

b. That in order to ensure the continuity of education services in education units affected by disasters, it is necessary to handle emergency and post-disaster situations;

c. Whereas based on the considerations as referred to in letters a and b, it is necessary to stipulate a Regulation of the Minister of Education and Culture concerning the Implementation of the Disaster Safe Education Unit Program.

Based on the law, teachers or educators can provide material related to disaster preparedness to students, by means of socialization or by simulation or can also use media that can cover various ways of learning students. This can be provided with group guidance services to students using existing media, namely by using picture cards to provide convenience in understanding school children about disaster preparedness awareness both physically, psychologically, socially, and spiritually.

Various ways can be done as a form of disaster preparedness easily and efficiently. One of the efforts that can be done is by developing learning media. The development of instructional media in group guidance services is determined by the ability of the teacher to analyze the needs of students with the media to be used. Group guidance services will be easy to run if the supervising teacher uses media or methods by utilizing tools, materials and facilities in schools that can support group guidance services.

Picture cards as a media for group guidance services because they are guided by the percentage of human absorption ability, which according to Daryanto (2010: 14) that the sense of sight has a big role to absorb information. The description of the percentage of human absorption capacity is; taste 2.5%, touch 3.5%, smell 1%, hearing 11%, and vision 82%. The large percentage of human absorption capacity on sight is one of the reasons for the development of this picture card as a media for group guidance services. Because the accuracy of media selection will greatly affect the learning outcomes of students (Daryanto 2010: 13). The ability to receive visual messages includes reading visuals correctly, understanding the meaning contained therein, connecting elements of the content of visual messages with verbal messages or vice versa (Nana 2010: 11). The visual messages on picture cards are thought to enhance the teaching and learning process, because picture cards can maximize the sense of sight.

The appropriate picture card is given to seventh grade junior high school students because at the level of cognitive development they are 12 years old on average in the formal operational phase, which is the phase where the child can think of something that might happen (hypothesis) and something abstract,
this phase children can think critically and think at a high level (Bujuri: 2018). Picture cards can also train students to analyze the pictures given. The importance of understanding each level of children's cognitive abilities is also a priority guide in the process of education delivery. Given that BKan services will be effective and children will get maximum information if the materials and service methods used are in accordance with the child's cognitive abilities, starting from the concrete thinking stage to the formal thinking stage (Bujuri: 2018).

While the method used by most teachers is the lecture method, where the lecture method according to Widayati (2004: 68) tends to educate children to memorize a lot, children who have a visual learning style will have difficulty accepting the material given, for its use the cramah method tends to be boring when used. For activities that are relatively long, the teacher also finds it difficult to conclude that students understand and are interested in what is being conveyed, and students become more passive because of the lack of interaction.

This research is aimed for developing picture card media to provide information related to disaster preparedness and to find out the feasibility of the picture card media being developed. Picture cards are expected to provide practical benefits for students, which can help provide information related to disaster preparedness through picture cards, then for teachers it can be used as a model for activities in providing material related to disaster preparedness for students, and for schools as a material for consideration of policy making, implementation of BK services in an effort to improve the quality of educational services for students in order to know or be aware of disaster preparedness.

2. Method

This research used Research and Development (R&D) by adopting Borg and Gall's development model. The final result of this research is the KENCANA (Disaster Preparedness) picture card suitable for use as a media for group guidance services at SMP N 1 Wonosari. This development research was conducted at SMP N 1 Wonosari which is located on Jl. Colonel Sugiyono No.35 B, Wonosari Gunungkidul Yogyakarta Special Region 55801. Limited trial data collection for students was carried out for 6 months in 2020. The limited trial subjects in this study were 23 students of class VII SMP N 1 Wonosari.

The Borg & Gall development model was chosen because it is in accordance with the research that will be developed where the researcher wants to produce a certain product and it takes research that is needs analysis and can test the effectiveness of a product. Due to the limitations of researchers, the development design used in this study was simplified into only four stages. The stages of development carried out by researchers, namely: 1) the search and data collection stage, 2) the product planning stage, 3) the product development stage, 4) the validation and testing phase.

Data collection techniques in this study used interviews with teachers and students, observation, and questionnaires to material experts, media experts. The instrument used in this study was a validation questionnaire for material and media experts and a user questionnaire.

The data analysis used in the picture card development process as a media for group guidance services is descriptive analysis in accordance with the development procedures that have been carried out. Descriptive analysis is a form of data analysis to test the generalization of research results based on one sample. This descriptive analysis was carried out through descriptive hypothesis testing. The data analysis used is the quantitative descriptive analysis technique which will determine the tendency of the research findings to be in the very good, good, enough, less or very poor category.

The KENCANA (Disaster Preparedness) pictorial card developed in this study is applied one level of feasibility of group guidance service media with a minimum assessment criterion when it has a mean score> 2.6 - 3.4 from the results of the assessment by material experts, media experts, teachers guidance and counseling, and class VII junior high school students.

3. Result and Discussion

Based on the results of information and literature studies that have been carried out, it is necessary to provide information media related to disaster preparedness for students. One alternative media that
can be used is a card with the picture KENCANA (Disaster Preparedness) as a media for group guidance services for grade VII junior high school students.

The initial product design of the KENCANA (Disaster Preparedness) pictorial card is a two-dimensional media included in printed media. This picture card creation uses the inkscape application, where the pictures taken before editing are from the freepick.com page. The initial product of pictorial cards is in the form of rectangular cards measuring 200.5 x 300.5 in the size section of the application, but for a print size of 11 x 14 with the assumption of the researcher so that it can be seen clearly for grade VII junior high school students. The typeface used as an explanation for the bottom part is Poor Richard with a size of 36, while for the typeface used as an explanation on the back of the card is sans-serif with a size of 60.5. The KENCANA (Disaster Preparedness) picture card is also equipped with a manual for how to use it, and is equipped with a container for storing picture cards.

The picture card contains material on disaster preparedness physically, psychologically, socially and spiritually. This picture card product is validated by material experts and media experts who are competent in their respective fields. The validator of this material expert is a Counseling Guidance Lecturer who is competent in the field of group guidance services and material on disasters and disaster preparedness. Validators are media experts, namely Educational Technology Lecturers who are competent in the field of media and learning resources. While the product assessment lember was carried out by counseling teachers, and seventh grade students of SMP N 1 Wonosari.

Planning for the manufacture of card products with the KENCANA (Disaster Preparedness) picture requires several stages, namely; determine the objectives of group guidance services to be achieved by students using the media, reviewing material on the subject of disaster preparedness, determining design equipment and making designs from cards with the picture KENCANA (Disaster Preparedness)

3.1. Material Expert Validation

Material expert lecturers conduct assessments related to the KENCANA picture card material. Material expert validation was carried out twice by material expert validators. Assessment data by material experts can be seen in Figure 1 below.

![Figure 1. Bar chart of average material validation scores](image)

Based on the results of the data from the material expert validation stage II, it can be obtained that the mean score is 4.10 which is in the score range > 3.4 - 4.2 in the "good" category. So based on the validation of phase II material experts, cards with the picture KENCANA (Disaster Preparedness) can be categorized as a good and feasible medium for field trials without revision.

3.2. Media Expert Validation

The media expert lecturer conducted an assessment related to the appearance aspects, the quality of the materials, the KENCANA card packaging, and the suitability of the media used. Media expert validation was carried out three times by media expert validators. Assessment data by media experts can be seen in Figure 2 below.
Figure 2. Chart of mean media validation scores

Based on the results of the data from the stage III media expert validation, it can be obtained a mean score of 4.3 which is in the score range > 4.2 in the "Very Good" category. So based on the validation of stage III media experts, the KENCANA (Disaster Preparedness) pictorial card can be categorized as a good and feasible medium for field trials without revision.

After the product developed was declared feasible for the trial without revision by material experts and media experts, then the product was assessed by the counseling teacher as users and grade VII students of SMP N 1 Wonosari as limited trial subjects.

Based on the results of data from users (BK teachers), it was obtained a mean score of 4.3 which was in the score range > 4.2 in the "Very Good" category and was suitable for use as a trial without revision.

Limited trial implementation was carried out on 23 students. Subject selection was carried out randomly with the school's considerations. The implementation of this limited trial was carried out online by making a video demonstration of the KENCANA picture card, this was carried out because learning activities were still being carried out in their respective homes, so the researchers changed the research plan that had been carried out face-to-face to online. Then later the students will evaluate the KENCANA picture card demonstration video through the google form that has been made by the researcher.

Of the 23 students who rated the KENCANA card, the mean score was 3.99 which was in the score range > 3.4 - 4.2 with the "Good" category.

4. Discussion
4.1 Development Procedure
The development procedure used in this research is a procedure adapted from the Borg & Gall development model with the following research procedures:

4.1.1 Search and Data Collection Stage
In this stage, the researcher measures and collects relevant data that will be used as material for media development planning through observation and literature study.

4.1.2 Product Planning Stage
The product to be made is a card with the picture KENCANA (Disaster Preparedness) as a media for group guidance services. The material on the card with the KENCANA picture is disaster preparedness physically, psychologically, socially, and spiritually. The software used in the manufacture of this product is Inkscape and the image support software used is freepick.com.

4.1.3 Product Development Stage
In order to produce the desired product in this study, the researcher made several stages, namely:
1) Determining the Material
The material used as material for making the product is based on the needs of the students, then the researchers then collect material on disaster preparedness physically, psychologically, socially and spiritually.
2) Determining the Media
This study used software which is used in the manufacture of this product and supporting the pictures taken is using freepick.com. Additional software in this research is Adobe Premier Pro which is used to create a video demonstration of the KENCANA (Disaster Preparedness) Picture Card, as well as Google Drive and Google Forms as storage places that can be accessed by students for product assessment.

4.1.4 Validation and Trial Phase
The researcher made several stages, namely:
1) Creating a product assessment grid for material expert validation, media expert validation, counseling teacher validation as a user, and limited trials for students.
2) Making expert validation instruments and limited trials based on a grid with very good (SB), good (B), adequate (C), poor (K), and very lacking (SK) criteria for assessing the feasibility of group guidance service media.
3) Validation of material experts, media experts, and counseling teachers as users as well as limited trials for students

4.2 Feasibility of the KENCANA (Disaster Preparedness) Picture Card as a Media for Group Guidance Services is as follows:
1) The material on the KENCANA picture card was deemed feasible to be tested without revision by the material expert obtaining a mean score of 4.10 in the good category.
2) Based on the validation of media experts, the KENCANA (Disaster Preparedness) pictorial card can be categorized as a good and feasible medium for field trials without revision obtaining a mean score of 4.3 which is very good.
3) Based on the results of the validation by the BK teacher on the KENCANA picture card as a media for group guidance services, the average score was 4.3 which was categorized as very good and suitable for use as a media for group guidance services.
4) The limited trial was given to class VII SMP N 1 Wonosari as many as 23 students and the mean score was 3.99 in the good category, so that the KENCANA picture card was suitable for use as a media for group guidance services.
5) Based on the assessment of material experts, media experts, counseling teachers and students, the card with the picture KENCANA (Disaster Preparedness) as a media for group guidance services gets a mean score of 4.1725 which is in the "good" category. So that the card with the picture KENCANA (Disaster Preparedness) is declared appropriate as a media for group guidance services for class VIII students.

Conclusion
This research resulted in a product in the form of a card with the picture KENCANA (Disaster Preparedness) as a media for group guidance services. The development procedure used in this study is a procedure adapted from the Borg & Gall development model with research procedures; 1) The stage of searching and collecting data, 2) The stage of product planning, 3) The stage of product development, 4) The stage of validation and testing.
Based on the assessment of material experts, media experts, counseling teachers and students, the card with the picture KENCANA (Disaster Preparedness) as a media for group guidance services gets a mean score of 4.1725 which is in the "good" category. So that the card with the picture KENCANA (Disaster Preparedness) is declared appropriate as a media for group guidance services for class VIII students.
The KENCANA (Disaster Preparedness) pictorial word card can be developed again with a wider scope of material and can be added by adding a larger number of picture cards, so that students do not easily memorize the pictures that have been seen.
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