

Development of interactive powerpoint media about careing around animals in elementary school

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Abstract

Learning media is one of the important components in the process of teaching and learning activities. In the current new normal era, teachers are required to make changes from conventional learning to digital learning. However, the reality on the ground shows that teachers are not prepared to learn media according to the needs of students. The learning media used by the teacher is still in the form of images and text only. Therefore, there is a need for innovation in making learning media that can meet all the needs of students. This study aims to improve the quality of learning and student participation, and develop interactive PowerPoint media that is suitable for use by elementary school students. The research method used in this research is Research and Development (R&D) with the DDD-E development model (Decide, Design, Develop, and Evaluate). Data collection techniques, namely observation, interviews, and questionnaires. The data analysis technique used descriptive qualitative analysis. This research was conducted in four elementary schools. The subjects of this study amounted to 84 students of class II on the sub-theme of Caring for Animals Around Me. The research data shows that the percentage of the feasibility level of interactive PowerPoint media according to subject matter experts is 100%, according to learning design experts is 92%, and according to user trial results is 96% with very good qualifications, and according to learning media experts, it is 85% with good qualifications. Based on the results of this study, it can be said that interactive PowerPoint media is appropriate to be used in the learning process for grade II elementary school students.

Keywords: decide; Design; Develop; Evaluate; Interactive Media; Power point

INTRODUCTION

The education curriculum in Indonesia often changes according to the times. In the current curriculum, namely the 2013 curriculum, the implementation of the 2013 curriculum has not run optimally. One reason is the absence of learning media that supports integrative thematic learning in accordance with the learning styles and characteristics of students. Based on this, teachers are expected to be able to develop learning media that suit the needs of students. Teachers must be able to design learning in accordance with currently developing technology. So as to create learning that is interesting, effective, and fun for students.

Learning media has an important role in learning activities. Learning media serves to improve the quality and success of learning. Learning media can stimulate stimulus and bring psychological influence, thereby

encouraging students' learning motivation. Learning media can also act as a learning resource. Students get messages, information, and learning experiences through the use of a learning media. The use of learning media aims to enable students to learn independently according to their interests and talents.

Because of the important role of learning media in the teaching and learning process, it is necessary to make efforts to develop learning media. Teachers are expected to be able to package learning in an interesting way so as to increase students' learning motivation. One example is through the development of technology-based learning media, information and communication.

Learning that is packaged creatively will increase student participation in the learning process, so that learning will take place effectively and enjoyably. Learning will feel boring without the teacher's creativity in

packaging the learning process. When the learning process feels boring, students tend to do other activities, such as going to and fro or chatting with friends.

Thus, it is necessary to develop digital-based media and learning resources that are able to facilitate and maximize the learning process. Ediyani et al., (2020) stated that learning media is a tool used in the teaching-learning process that can arouse interests and desires, student motivation, and can even bring psychological influences on students. Media is anything that carries information between sources and recipients. The purpose of the media is to facilitate communication and learning (Russell, 2014). Meanwhile, digital resources for learning can be described as technology-based multimedia content specifically designed for educational purposes. Digital resources for learning are designed with learning goals in mind and not for any other informational purpose. Therefore, the design of digital resources includes how people learn to use media in their learning activities and how these resources can be designed, developed and managed for educational purposes (Churchill, 2017).

Interactive media is needed especially for elementary school students. Because according to Piaget, the age of elementary school students is at the concrete operational stage of cognitive development (Marinda, 2020). This means that students in learning are able to think with scientific concepts but are limited to what they experience in everyday life. Learning cannot be abstract directly but must use assistance in the form of media and concrete explanations in accordance with the real situation of students. It aims to make students easy to understand the learning material.

One of the interactive media that can be developed in the learning process in elementary schools is using interactive PowerPoint media. In the field of education, PowerPoint can be used as a medium for channeling information to students. PowerPoint can put text, objects, graphics, audio, video, animation, and other objects on one or several pages or slides. (Warkintin &

Yohanes, 2019). Interactive powerpoint media besides being easy to use can also attract students' interest and learning motivation. The average powerpoint application is owned by every computer user. Interactive Powerpoint apart from facilitating delivery of material, can also increase student participation, so that communication is formed between teachers, students, and computers (Kudsiyah, 2017). PowerPoint can also be developed without always having to be online.

Research on the development of interactive PowerPoint media is supported by research (Warkintin & Mulyadi, 2019) that the results of the feasibility assessment of material experts on interactive PowerPoint media are very feasible criteria, namely with an average percentage of 79.8%. In line with this, (Purwanti, Widyaningrum, & Melinda, 2020) shows that the feasibility assessment of media experts averages a percentage of 87.2%, including the very feasible criteria. In addition, interactive PowerPoint media can effectively create a conducive learning atmosphere, so that it can be used as an alternative media to assist the learning process. Research result (Dewi & Manuaba, 2021) in the science subject of class VI SD, it shows that the appropriateness level of interactive powerpoint media for material experts is 100%, instructional design experts are 95%, learning media experts are 89.2%, and individual test results are 91.66%.

In the field, the development of interactive PowerPoint media is still not optimal because it only displays images and text, so it is not sufficient for all students' learning needs. The development of this interactive PowerPoint media has a difference from previous research, namely there is an aspect of learning identity which includes learning objectives, material in the form of text, audio, and video, as well as evaluation in the form of quizzes which can display the correctness of the answers to the results of the quiz work. Apart from attracting attention, this media can be used by various types of learning styles, such as visual, audio, audiovisual, and kinesthetic, so that it can meet all the learning needs of students. This research aims to improve the

quality of learning and student participation, as well as to develop media powerpoint interactive about caring for animals around that are suitable for use for grade II elementary school students.

Based on the description above, the formulation of the problem in this study is as follows: (1) What are the stages of developing interactive powerpoint media about Caring for Animals in the Neighborhood? (2) What are the results of the feasibility validation test for interactive powerpoint media about Caring for Animals in the Neighborhood? (3) Is interactive powerpoint media about Caring for Nearby Animals appropriate for use in elementary schools?

The objectives of this study are as follows:

(1) Describe the stages of developing interactive powerpoint media about Caring for Animals in the Neighborhood. (2) Analyzing the results of the feasibility validation test of interactive powerpoint media about Caring for Animals in the Neighborhood. (3) Knowing the feasibility of using interactive powerpoint media about Caring for Animals in the Neighborhood in elementary schools.

RESEARCH METHOD

The research method used in this research is Research and Development (R&D) with the DDD-E development model (Decide, Design, Develop, and Evaluate). The development model applied in this research is DDD-E (Decide, Design, Develop, Evaluate). According to (Sudaryono, 2013), this development model is used to produce a particular product and test the effectiveness of the product. (Tegeh, Development Research Model, 2020) explains that development using this model goes through the following stages.

- Decide* is the stage where the researcher determines the goals of developing the media to be developed as well as several media components such as material selection and others.
- Design* is the stage of making the design of learning media.
- Develop* is the stage of developing or manufacturing the media that has been designed.

- Evaluate* is the stage of checking the feasibility and success of the resulting media.

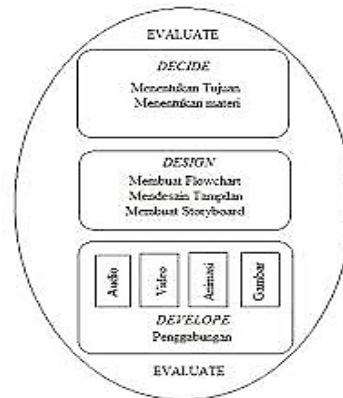


Image 1

DDD-E Development Model

The choice of the DDD-E Model in developing interactive learning media is because this development model is simple but has systematic, clear, and easy development stages. In addition, this development model can also provide opportunities for developers to evaluate and revise continuously in each phase or step that is passed. So, it is hoped that the development of learning media is able to support the learning process so that learning objectives can be achieved. This is in line with the opinion of (Tegeh & Kirna, 2018) that the DDD-E model provides an opportunity to evaluate development activities at each stage in order to obtain quality and effective products.

In this study, the data obtained using the method of observation, interviews and questionnaires on research subjects. The instruments used to collect research data in this development research were observation sheets, interviews, and questionnaires. The results of this recording sheet are formed in the form of a brief interactive learning media product development report. The questionnaire sheet in this study was used to measure the validity of the product which was developed from the results of reviews of learning content experts, learning media experts, learning design experts, and students' responses during individual and/or small group trials. The validation instruments

and questionnaires were analyzed using the Likert Scale presented in Tables 1, 2 and 3.

Table 1
Rating Category Likert Scale
(Sukardi & Rozi, 2019)

Score	Information
Score 1	Strongly Disagree
Score 2	Don't agree
Score 3	Agree
Score 4	Strongly agree

Table 2
Learning Media Development Category

Eligibility Percentage	Category	Information
90 - 100 %	Very good	No need to revise
75 - 89 %	Well	Little revision
65 - 74 %	Enough	Many things revised
1 - 64 %	Not enough	Repeated product creation

Table 3
Evaluation Category Assessment
Question
Media Use
(Purwanto in
(Tarigan & Siagian, 2015))

Score	Category	Predicate
81-100	Very good	A
61-80	Well	B
41-60	Enough	C
21-40	Not enough	D
0-20	Very less	E

RESULTS AND DISCUSSION

The results of this study were in the form of interactive powerpoint media on Theme 6 Caring for Animals and Plants Sub-theme 2 Caring for Animals Around Me which was conducted for class II students at the UPI Laboratory Elementary School Tasikmalaya Campus, SDN 1 Sindangkasih Ciamis Regency, SDN Cipari Tasikmalaya Regency, and SDN Pandawa Tasikmalaya Regency .

Stages of Development of Interactive Powerpoint Media

The type of development model used is DDD-E including the following stages: 1) *decide*, namely determining the objectives and subject matter; 2) Design, namely

making a design or media design, 3) Develop, namely developing the media design into a multimedia display, 4) Evaluate, namely evaluating the entire media development process. Each stage is carried out to improve media development products which include material content, media design, media interactivity, implementation and user response to media. The stages of developing the DDD-E model in this study are as follows.

The first stage is decide or set goals for media development. This stage includes the selection of learning themes, lesson content, student prerequisite abilities, and supporting resources in media development. This activity aims to make media development products in accordance with the scope of the curriculum and the needs of students. This stage begins with the interview process with the class II homeroom teacher. Based on the results of the initial interviews, information was obtained that most of the students still had difficulty understanding the learning material on theme 6 Caring for Animals and Plants Around Me. This is shown from the results of the class average test scores of students in theme 6 which is 68, which means it is still below the KKM set, namely 70. The next step is the researcher determines the theme, sub-theme, and scope of content from media development. *powerpoint* interactive. The theme chosen for development media *powerpoint* This interactive theme is Theme 6 Caring for Animals and Plants, Sub-theme 2 Caring for Animals Around Me with Indonesian Language, Mathematics and SBdP lessons. This prerequisite ability relates to the ability of students to understand the animals around me, to recognize standard units of weight in everyday life, to recognize children's songs about animals, and to recognize animal movements.

The second stage is the design or media development plan. This stage starts with making an outline of the contents of media development, including Basic Competencies, indicators, learning objectives, scope of learning materials, quizzes, and evaluation questions. The main material in the

development of this media, namely the use of capital letters, determining the weight of an object in everyday life, determining the long and short sounds in children's songs, and getting to know the movements of animals around me. The design stage is carried out by selecting the layout or display of the PowerPoint media, layout location, font type and size, storyboards or instructions for using PowerPoint media, and compiling a flowchart or sequence of PowerPoint media displays. At this stage, research instruments and media development validation instruments were also made.

The third stage is develop or media development. At this stage, the product will be developed according to the design sequence that has been previously designed. The applications used in making this interactive PowerPoint media are Microsoft PowerPoint, Canva, and Filmora applications. At this development stage added text in the form of instructions, hyperlink buttons, animations, audio, and video. The videos contained in interactive PowerPoint media are modifications and combinations of music from YouTube, text and images made from Canva which are edited in the Filmora application. The merging of these elements into a unified whole that is integrated with one another. The main PowerPoint media product is converted into PPSX format so that when the file is opened to a presentation without opening the PowerPoint editor. As for the selection of text, animation, audio,

The fourth stage is evaluate or evaluate the media development process. The evaluation stage is carried out by experts which include material experts, learning design experts, learning media and communication experts, and users, namely teachers who have used learning media in the teaching and learning process. Before conducting media trials on students, a media feasibility test validation was carried out by a team of experts and users. The learning media trial aims to allow the team of experts and teachers to check the appropriateness of the material content, animation, audio and video used, the learning design and the accuracy of the selection of

media, as well as the correctness of the content of the material used through the assessment rubric. The assessment rubric is used as a reference for revising the product at each stage. Learning media trials also aim to obtain responses or feedback from students and teachers after using the media. The feedback was obtained from the results of the analysis of observational data, interviews, and questionnaires.

Interactive Powerpoint Media Feasibility Validation Test Results

The results of the validation of the feasibility test for the development of interactive PowerPoint media are as follows.

Table 4
Media Development Feasibility Test Validation Results

Aspect	Results	Category	Information
Test the subject matter	100%	Very good	No need to revise
Test the learning design	92%	Very good	No need to revise
Test learning media	85%	Well	Little revision
User trials	96%	Very good	No need to revise

Based on the results of the validation of the media feasibility test conducted by subject matter experts, the results obtained a feasibility percentage of 100% in the very good category and did not need revision. The subject matter contained in interactive PowerPoint media is very relevant to the daily lives of students, the depth of the material is good, and the reference material is adequate, so that it attracts students' interest in the learning process.

Furthermore, the validation results of the media feasibility test conducted by learning design experts obtained a feasibility percentage of 92% in the very good category and did not need revision. Media developed according to the characteristics of students. This can be seen in the attractive PowerPoint interface for second grade elementary school students.

Then the validation results of the media feasibility test conducted by learning media experts obtained the results of the feasibility percentage of 85% in the good category and slightly revised. The selection of display colors, animation, audio and video in PowerPoint is good. However, it is hoped that the audio settings in the song and video sections will have an on and off option, so that the audio in the song and video does not clash with the background. If possible, the items or menu buttons on PowerPoint can be made 3D to make it look alive.

As for the validation results of the media feasibility test carried out by learning media users, in this case the teacher obtained the results of the eligibility percentage of 96% in the very good category and did not need revision. The material content on powerpoint is related to the daily life of students, the language used is simple, so that it is easy for students to understand. The material presented in powerpoint attracts students' interest and learning motivation, so as to encourage critical thinking skills.

Feasibility of Interactive Powerpoint Media

After conducting a media feasibility validation test, the next step is to test the development of interactive PowerPoint media for students. In testing the development of interactive powerpoint media, it was obtained student response data and an evaluation of the use of interactive powerpoint media.

As for the results of questionnaire data on trials of interactive powerpoint media conducted in four elementary schools, namely SD Labschool UPI Tasikmalaya Campus, SDN 1 Sindangkasih, SDN Cipari, and SDN Pandawa, the following student response data were obtained.

Table 5
Student Response Questionnaire Data Results

Aspect	Percentage	Category
convenience	99%	Very good
suitability	93%	Very good
attractiveness	95%	Very good

Questionnaire results data of student responses on the aspects of convenience, suitability, and attractiveness are in the range of 90 - 100% with very good category. It can be said that students are easy to operate interactive PowerPoint media, the material in interactive PowerPoint media is relevant to the needs of students, and can attract students' interest in the learning process. The results of the data from observation and interviews explain that students and teachers are comfortable using interactive PowerPoint media. Interactive PowerPoint media is very helpful in the learning process. It only takes time beforehand to explain to students about the tools in the media, the appearance of the media is quite attractive and the colors are striking, so that it makes students interested in learning. Besides that, Writing in the media is easily understood by students. However, there are parts of the song that clash with the PowerPoint background. In addition, even though the media developed is only PowerPoint media, this PowerPoint media can be used interactively. Furthermore, the results of the assessment data on the evaluation of the use of interactive PowerPoint media are as follows.

Table 6
Results of Assessment Data on Media Use Evaluation Questions

Score	Percentage	Category
81-100	10%	Very good
61-80	34%	Well
41-60	35%	Enough
21-40	21%	Not enough
0-20	0%	Very less

The results of the evaluation data on the evaluation of the use of interactive PowerPoint media show that the number of students who obtained very good and good scores was 44%, so that the use of interactive PowerPoint media can be said to be effectively used by students in understanding the subject matter. Based on the results of the validation results of the media feasibility test, student response data, user response data, and data from students' evaluation of the media, it can be concluded that interactive powerpoint media about Caring for Animals

Around Me is suitable for use in the learning process for class II elementary school students.

Discussion

Based on the results of the validation and trials on 84 students in four elementary schools, it can be seen that the interactive PowerPoint media on Caring for Animals Around Me is categorized as feasible to use in the learning process. This is shown in the validation results in the aspects of material, design, and media that are valid and practical for use by students.

Product development research is carried out with the aim of producing products in the form of learning media that can improve the learning process and student competence. Therefore, in the media development process, it begins with a preliminary study, designing learning media, conducting product validation, then revising and improving the product based on validation data from material experts, design experts, and learning media experts. Furthermore, field trials were carried out so as to produce learning media that were suitable for use according to the characteristics of students as users of learning media.

The benefits obtained from using interactive PowerPoint media are that the material presented is easily understood by students, attracts interest in learning, trains student learning independence, trains students to think critically through the questions presented, so that the quality of the process and student learning outcomes increases. This is in accordance with the results of research by Tarigan & Siagian (2015) who reported that the benefits of using interactive learning media are that the concepts presented are systematically arranged, easy to learn, and understood by students. Interactive learning media provide opportunities for students to learn faster, independently, and not get bored easily, because they display pictures, animations, and various practice questions.

Meanwhile, aspects that need to be revised and refined based on data analysis and comments from material experts, design

experts, media experts, and users aim to explore various aspects in the product development process. This research develops a product in the form of learning multimedia which is a combination of several media. The development of learning multimedia consists of visual media (images and animation), audio media (songs and background), and audiovisual media (video). The aspects that need to be revised in this interactive PowerPoint media product are the audio settings so that they are given an on and off option on several PowerPoint slides so that there are no sound clashes between songs, videos, and PowerPoint backgrounds. Based on the data from the results of the material validation test and the media design has a very good value, while the media validation test has a good value. The aspects of material assessment include the correctness of the material, the updating of the material, and the depth of the subject matter. In the aspect of learning design, it includes the suitability of media delivery strategies with the characteristics of students, ease, speed of understanding and mastery of material, contextuality, and accuracy of media selection compared to other media. In addition, the aspect of media assessment includes the clarity of narrative, audio, video and animation, as well as the suitability of language style, the attractiveness of the overall learning packaging. Meanwhile, the aspects of user assessment include ease of use, level of interest and motivation of students, media references and learning aids, encouraging critical thinking skills, and the level of contextuality of the media developed. The aspects of material assessment include the correctness of the material, the updating of the material, and the depth of the subject matter. In the aspect of learning design, it includes the suitability of media delivery strategies with the characteristics of students, ease, speed of understanding and mastery of material, contextuality, and accuracy of media selection compared to other media. In addition, the aspect of media assessment includes the clarity of narrative, audio, video and animation, as well as the suitability of

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This research develops interactive powerpoint media. PowerPoint media was chosen because it is flexible, practical, and comfortable to use. PowerPoint media is easy to operate and integrated with many other applications. In line with the results of the study (Andriani, 2016) who stated that Microsoft Powerpoint is an application that is quite easy to use because it is integrated with other applications, namely word, excel, and others. In addition, PowerPoint media content can be added, subtracted, or changed as needed. This is in accordance with

research(Sugiyarto, Wulandari, & Casworo, 2020)which explains that PowerPoint media is equipped with tools or controls that can be used by users according to their needs. Based on the discussion above, information is obtained that the use of interactive PowerPoint media has many advantages that can help improve the quality of the process and the quality of learning outcomes. The development of interactive powerpoint media on Caring for Animals in the Neighborhood is suitable for use in the learning process. This can be seen from the results of validation tests by experts and users who show results that are in accordance with predetermined criteria. The results of these findings can have implications in the learning process, especially in thematic subjects.

CONCLUSION

Currently the learning process can be carried out face-to-face and online by utilizing technology. In this study interactive powerpoint media was developed using the DDD-E model which includes the decide, design, develop, and evaluate stages. Interactive powerpoint media about Caring for Animals Around is said to be appropriate to be implemented in elementary schools. After going through several stages of validation tests by material experts, design experts, media experts, and user trials. Suggestions from this study are that it is hoped that the development of interactive PowerPoint media can be a reference for teachers in the use of learning media that can help attract students' interest in learning, as well as a reference for future researchers to continue to develop more interactive, interesting, and relevant PowerPoint media to use in the learning process. learning.

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