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Development of Interactive Multimedia Based Procedure Learning Media for Class Vii Students

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Abstract
Background*: The lack of use of learning media makes students not enthusiastic about the learning process. This is due to the limitations of teachers in creating and using media, so that teachers only use textbooks as learning media. Based on this, this research produces instructional media products, describes the feasibility of instructional media products and the attractiveness of the procedural text instructional media products for grade VII students.*
Materials and methods:*The research design model used to develop multimedia learning DDD-E. Data collection techniques were carried out by interviewing and giving questionnaires to class VII students.*
Result: *The results of the study were in the form of interactive multimedia based procedural text learning media for seventh grade students, the feasibility of learning media products and the attractiveness of interactive multimedia based procedural text learning media.*
Conclusion: *The product of interactive multimedia based procedural text instructional media developed in this study can be used as one of the instructional media for procedural text in class VII.*
Keywords*: Learning Media, Interactive Multimedia, Junior High School, Procedure text.*

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I. Background

Technology has become a part of social life, one of which is in the world of education. The role of technology is needed in the learning process not only as a literacy medium for students, but as a medium to support teachers in delivering learning materials so that the learning process is not monotonous.

Based on the 2013 Curriculum which is based on the 21st century learning paradigm, in its design it states that in the structure of the SMP curriculum, computers will be a means for all subjects. The implementation of the curriculum is carried out using a multistrategic and multimedia approach, adequate learning resources and technology, and utilizing the surrounding environment as a learning resource. Therefore, the role of technology in education is very important and needs to be used as well as possible.

Based on this statement the teacher must use the right strategies, methods and media so that the learning objectives can be achieved properly. Teachers as educators in schools are required to master many competencies, such as the competence to plan the implementation of learning and create appropriate media.

Media is one of the factors that support the success of the learning process in schools, because it can help the process of conveying information from teachers to students or vice versa. Meanwhile, the National Education Association in America defines media in the scope of education as all objects that can be manipulated, seen, heard, read or discussed along with the instruments used for these activities (Kristanto, 2010).

One of the media that is rarely used by teachers in the learning process, namely media that uses information and communication technology (ICT). Teachers find it difficult to use various software (software) as a computer-based learning media processor to create learning media. Even though by using a computer the teacher can show things that are not in the classroom, so that learning is not abstract.

Learning media that use computers as a supporting tool, namely interactive multimedia. Interactive multimedia is a medium that combines text, images, video, animation, and sound equipped with a controller that can be operated by the user so that the user can choose what he wants for the next process.

Supporting software tools to create unique and creative interactive multimedia-based learning media are now widely available with easy use. Macromedia Flash is a software from a variety of available software. Macromedia flash is the right software for creating visual presentations that can interpret various media, such as video, animation, images and sound.

Based on the needs analysis carried out by conducting interviews and filling out questionnaires by teachers and students. The basic competence that students cannot understand is the structure and linguistic of the procedural text. There were 70% of students who could not understand, 6.7% of students could not understand

the material structure and the language of the procedural text. 56.67% of students felt quite bored with the procedural text material, 10% of students felt normal and 26% of students felt bored. In accordance with the results of the needs analysis, it can be concluded that the development of interactive multimedia-based multimedia-based learning media for grade VII students needs to be developed.

Similar research was also carried out by Ardha, et al. (2015) that interactive learning media developed using Macromedia Flash 8 and Borg and Gall's development models were suitable for use as learning media to improve understanding of concepts. Based on this, the researcher is interested in developing interactive multimedia-based procedural text learning media for class VII students.

II. Research methods

This research is development or R&D (Research and Development). The research design model used to develop this learning multimedia, namely the Decide, Design, Develop, and Evaluate model, hereinafter abbreviated as DDDE. The research and development procedure was adapted from Borg & Gall, namely, (1) preliminary study; (2) determine specific goals to be achieved in relation to the production of instructional media to be developed; (3) compiling the material; (4) Creating instruments to measure the feasibility and attractiveness of the developed learning media; (5) compiling a text for learning media to be produced; (6) conducting trials on the media; (7) Make revisions to find out whether the media needs improvement or not; (8) Production The stages of the DDD-E model.

Data collection techniques were carried out by interviewing teachers and filling out questionnaires by teachers and students. The test subjects in this study were material experts, media experts, practitioner experts, students and teachers from MTsN 1 Pesawaran, MTs Daarul Ikrom and MTs Matlaul Anwar.The data analysis technique was conducted using qualitative descriptive and quantitative descriptive analysis. The qualitative descriptive analysis technique was used to process the data from the evaluation of material experts, media experts, students, and class VII Indonesian language teachers. This data analysis technique was carried out by grouping information from qualitative data in the form of criticism and suggestions for improvements contained in the questionnaire. The results of this data analysis are then used as a reference for revising the product development.

Data analysis from the results of expert trial questionnaires and product attractiveness was obtained through a scale 4 assessment instrument. Furthermore, these results are described and used as the basis for assessing the quality of learning media products. Analysis of expert test data and product attractiveness tests is managed in the form of a percentage (Sugiyono, 2011: 329). The formula used to calculate the percentage of each subject is as follows.

Percentage = $\frac{\sum x}{SM\ I}$ X 100%

Information: = Total score$\sum x$

SM I = Maximum Ideal Score

Furthermore, the results of the assessment are averaged, then in order to provide meaning and decision making, the following provisions are used.

Table 1 Conversion of Achievement Rate by percentage

No.	Score Range	Criteria
1.	21% - 40%	Not worth it
2.	41% - 60%	Pretty decent
3.	61% - 80%	Well worth it
4.	81% - 100%	Very Worth it

(Source: modification from Riduan & Sunarto, 2009: 23)

III. Results and Discussion

Results and discussion contain preliminary research, product trial development process, and product attractiveness.

1) Preliminary Research

The results of preliminary research conducted by research in three schools by conducting interviews and giving questionnaires showed that the curriculum used was the revised 2013 Curriculum. School facilities such as computer laboratories are quite adequate. Learning media commonly used by teachers are textbooks and pictures. Teaching of procedural texts is still less than what is expected, most students tend to feel normal when Indonesian language learning takes place. Based on the results of interviews and questionnaires that have been given to teachers and students. Instructional media based on interactive multimedia text procedures need to be developed so that they can be used in the learning process and can improve student understanding.

2) Development Process

The product development process carried out in this study uses the DDD-E model. The DDD-E model has the following four stages.

a) Decide (set goals and materials) the stage that is carried out, namely setting goals, determining the scope of multimedia, determining knowledge and assessing the availability of computers.

b) Design (designing or structuring the program) the stages that are carried out, namely making an outline of the material, creating a flowchat and making a storyboard or storyboard There are six menus presented, namely, instructions for use, KI and KD, indicators and learning objectives, building context, material , and competency test. In the description of the image and animation contains the image and animation that will be displayed. Then, the display caption contains the display location (such as the university logo location) and contains an explanation of the required buttons on the display;

c) *Develop* (product development) at this stage the researcher develops products and makes learning media products.

d) *Evaluate*(evaluating products). Product evaluation is carried out by material experts, media experts and practicing experts.

Table 2 Results of Product Evaluation by Material Experts

No.	Aspect	Total score
1	Material Feasibility	4
2	Linkage of competency standards / basic competencies / curriculum	8
3	Material accuracy	11
4	Presentation of Learning	23
5	Communicative and interactive	8
6	Language	7
Total score		**61**
Percentage		**95.31%**
Category		**Very Worth it**

Table 3 Results of Product Evaluation by Media Experts

No.	Aspect	Total score
1	Software engineering	18
2	Audio visual communication	26
3	Another aspect	4
Total score		**48**
Percentage		**85.71%**
Category		**Very Worth it**

Table 4 Results of Product Evaluation by Expert Practitioners

No.	Aspect	Total score
1	Media Display	31
2	Contents	7
3	Convenience	19
Total score		**57**
Percentage		**95%**
Category		**Very Worth it**

Based on the results of research from material experts, media experts and expert practitioners. It can be concluded that the learning media products developed are in the very feasible category to be tested in schools.

3) Product Trial

Product trials are carried out in two stages, namely limited-scale product trials and wide-scale product trials. A limited scale trial was conducted at MTs Daarul Ikrom with 10 respondents. Large scale trials were carried out at MTsN 1 Pesawaran, MTs Daarul Ikrom and MTs Matlaul Anwar with three teachers and 60 students as respondents. The following table presents the results of the trial.

Table 3 Limited Scale Trial Results (10 Students)

No.	Aspect	Score
1	Program View	274
2	Interactivity	70
3	Ease of program	175

Table 4 Wide-scale Trial Results (Teacher Assessment)

No.	School	Percentage	Category
1	MTsN 1 Pesawaran	91.7%	Very Worth it
2	MTs Daarul Ikrom	90%	Very Worth it
3	MTs Matlaul Anwar	95%	Very Worth it

Table 5: Wide-scale Trial Results (Student Assessment)

No.	School	Percentage	Category
1	MTsN 1 Pesawaran	86.5%	Very Worth it
2	MTs Daarul Ikrom	95.4%	Very Worth it
3	MTs Matlaul Anwar	89.7%	Very Worth it

Based on the results of limited-scale and wide-scale trials, it can be concluded that the developed interactive multimedia-based instructional media products are categorized as very suitable for use in the process of learning procedural texts.

4) Product attractiveness

The attractiveness of learning media products was measured using a questionnaire. The questionnaire used in this study was a questionnaire adapted from Sulatra (in Anita, 2016: 73) and has been validated. The questionnaire contains two aspects, namely aspects of attractiveness and aspects of use. On attractiveness there are three sub-aspects that must be assessed, namely (1) students' interest in learning to use the program; (2) students feel happy when using the program; (3) the feeling of wanting to repeat learning using the program. In terms of usage, there are two sub-aspects that must be assessed, namely (1) ease of navigation; and (2) ease of understanding the procedural text material with the instructional media program. Following are the results of testing the attractiveness of instructional media products by 60 students.

Table 6 Results of Product Attractiveness Trials

No.	School	Percentage	Category
1	MTsN 1 Pesawaran	87%	Very interesting
2	MTs Daarul Ikrom	84.75%	Very interesting
3	MTs Matlaul Anwar	85.5%	Very interesting

Based on the results of the learning media product attractiveness trial, it can be concluded that the learning media product developed is very interesting.

IV. Conclusion

Based on the results and discussion of the research, it can be concluded as follows.

1. The development of instructional media products for interactive multimedia-based procedures has been successfully developed and has characteristics, namely the media contains several components (text, audio, video and animation), the media is independent, meaning that students can use this learning media independently after guidance by the teacher, the media can be used individually using a computer or displayed using a projector screen with teacher guidance.
2. The instructional media for interactive multimedia-based procedural text that was developed was declared feasible based on the results of trials carried out in four stages, namely product testing conducted by material experts, media experts and practitioner experts as well as limited-scale product trials and large-scale trials in three schools with the average percentage is 95% with very feasible category.
3. The instructional media for interactive multimedia-based procedural text that was developed was stated to be very attractive by students at the three schools which were the location for product trials.

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