

DEVELOPMENT OF *MULTIMEDIA FOCUSKY*-BASED COMIC MEDIA ON NATURAL SCIENCE LEARNING FOR STUDENTS CLASS V IN ELEMENTARY SCHOOL

Siti Fatimah^{1*}, Masrurotul Mahmudah², & Nurul Aisyah³

¹Faculty of Education and Teacher Training, UIN Sunan Kalijaga Yogyakarta, Indonesia

^{2,3}Faculty of Education and Teacher Training, IAI Ma'arif NU Metro Lampung, Indonesia

*Correspondence address: fatimahsiti18084@gmail.com

Abstract

This research study about development of *multimedia focusky*-based comic learning media in natural science learning. This type of research is research and development (RnD). The development model in this study refers to Borg and Gall theory which consists of 10 stages. However, in this study, researcher uses 7 stages such as potential and problem, data collection, product design, design validation, design improvement, product testing, and product revision. Data collection methods consist of interviews, observations, and instrument to media experts, material experts, and students. The results of this study include firstly, based on the validation by material and media experts, it can be seen that the validation result by material experts is obtained score of 35 in the very decent category, and validation results from media experts is 38 by a very decent category. Secondly, in the trials conducted on students, it is obtained score of 36 by a very decent category. From the overall validation, it shows very good results so that the *multimedia focusky*-based comic learning media on natural science learning is decent to be used as a media so teachers are more creative in delivering material, and can support the learning process to be effective, efficient, and fun.

Keyword: Learning Media, Comic, Multimedia Focusky.

Abstrak

Penelitian ini mengkaji tentang pengembangan media pembelajaran komik berbasis Multimedia Focusky pada mata pelajaran IPA. Jenis penelitian ini adalah penelitian research and development (R&D). Model pengembangan dalam penelitian ini mengacu pada teori Borg and Gall yang terdiri dari 10 tahap, akan tetapi dalam penelitian ini peneliti menggunakan 7 tahapan yaitu potensi dan masalah, pengumpulan data, desain produk, validasi desain, perbaikan desain, uji coba produk, revisi produk. Metode pengumpulan data terdiri dari wawancara, observasi, dan instrumen kepada ahli media, ahli materi, dan siswa. Hasil dari penelitian ini yaitu pertama, berdasarkan validasi oleh ahli materi dan media, dapat diketahui hasil validasi oleh ahli materi memperoleh hasil sebesar 35 dengan kategori sangat layak, dan hasil validasi ahli media sebesar 38 dengan kategori sangat layak. Kedua, hasil uji coba yang dilakukan kepada siswa memperoleh nilai sebesar 36 dengan kategori sangat layak. Dari keseluruhan validasi menunjukkan hasil yang sangat baik, sehingga media pembelajaran Komik Berbasis Multimedia Focusky Pada Mata Pelajaran IPA layak untuk digunakan sebagai media agar guru lebih kreatif dalam menyampaikan materi dan membantu proses pembelajaran menjadi efektif, efisien, dan menyenangkan.

Kata Kunci: *Media Pembelajaran, Komik, Multimedia Focusky.*

INTRODUCTION

The application of digital systems related to the use of information technology has had an impact on all sectors of people's lives such as the management of information system, communication, transportation, and marketing to the education system (Putri & Syafril, 2020). This impact is also influenced by the current development of the times which bring changes to various aspects of life including educational, social, economic and cultural aspects. Therefore, the educational development is always accompanied by the science and technology development (Subkan & Winarno, 2020). Education must run in harmony with the times and the digital world as an effort to renew to prepare graduates who are capable in the field of technology who are also of good character.

Education is sought to include the process of transferring knowledge and providing examples of good behavior carried out by educators to students. Education is a lifelong activity which should be taken seriously, especially the process of teaching and learning activities in the classroom. The process is an interaction between two parties, namely educators and students which is also called learning.

Good interaction and communication between teachers and students in the learning process is a process for students to develop the potential which exists within themselves so that the educational goals to be achieved can be carried out properly according to shared expectations (Machin, 2014). In addition, in the learning process the development of teaching materials or materials, it can be done by various methods, one of which is the development of teaching materials or materials by optimizing the media as a complement in teaching and learning activities (Haryoko, 2012). Media is one of the tools or methods used by educators to make the delivery of material easier, more effective, efficient, and fun.

Natural Science (IPA) is a science which studies natural phenomena which is a collection of generally accepted observations and experiments (Nurdyansyah, 2016). The main purpose of real natural science learning is for students to understand natural science concepts and their relevance to everyday life, have process skills to deepen knowledge about the natural environment, be able to use scientific methods, and be scientific to solve problems faced by being more aware of the greatness and the power of the creator of the universe (Dewi et al., 2014). Therefore, natural science learning in elementary school emphasizes on providing direct learning experiences or can use learning media to be able to develop students' understanding of the natural surroundings so that they can be applied in everyday life.

Based on the results of a pre-survey conducted at MI Maarif 18 Trimurjo, it can be seen that the problems which occur in V class in understanding natural science learning on the subject of how the body processes food students have difficulty. One of the factors which caused the participants to experience difficulty are because educator do not utilize the learning media optimally so that students lack interest in the learning process. Educators explain more than involve directly in learning activities so that learning is centered on educators (Teacher Centered).

An educator in delivering material needs to choose learning media which is in accordance with the teaching material so that students feel interested in participating in learning. Therefore, it is necessary to use a learning media that can place students as subject (actor) of learning and educator only acts as facilitator in the learning process. Learning media in general are tools for teaching and learning processes or everything in the form of physical and technical in the learning process which

can help teacher to make it easier to convey subject matter to students so as to facilitate the achievement of learning objectives which have been formulated (Tafonao, 2018).

In addition, learning media is everything which can be used to stimulate the thought, feeling, attention, and ability or skill of students so that they can encourage the learning process (Ekayani, 2017). This limitation is quite broad and in-depth covering the understanding of sources, environments, people, and methods used for learning/training purposes. Therefore, the learning process is a communication process and takes place in one system so that the learning media occupies an important position as one of the components of the learning system. Without the media, communication will not occur and the learning process as a communication process will also not be able to take place optimally (Annisah, 2017).

Teacher as educator and teacher must be able to create interesting learning in the classroom so that students are able to concentrate and take an interest in the learning process. So in this case, the teacher must design learning strategies and bring up creativity to achieve learning goals, one of which is creating interactive learning media in learning activities in the classroom. According to the author, there is one medium that can visualize the material to make it easier to understand and interesting for students. In a previous study by Nurwahyuni, she explains about focusky presentation as one of the new media which has a unique, attractive appearance, and has sophistication in zooming in and out (Nurwahyuni & Bahri, 2019). In contrast to this research, the focusky which will be used is color images and there is reading text called comic.

Based on the background described above, the problem can be formulated "How is the development and feasibility of *multimedia focusky*-based comic media. The purpose of this research is to find out the feasibility of Multimedia Focusky Based on Comic Media. Furthermore, in addition, this research is expected to: a) be able to develop creativity and new knowledge in using *multimedia focusky*-based comic media in other subjects, b) be able to improve the facilities and infrastructure of each institution/school so that the implementation of the learning process becomes more leverage by optimizing media, c) can add learning media and references in the learning process which is expected to support learning activities.

RESEARCH METHOD

This research method uses *Research and Development (R and D)*. *Research and Development (R&D)* is a process or steps to develop a new product or improve an existing product that is used to obtain or produce a product and test the product to determine its effectiveness (Sugiyono, 2019). The purpose of this study is to determine the development and feasibility of learning media for *multimedia focusky*-based comic learning media for V class in MI Ma'arif 18 Trimurjo of Central Lampung.

The research and development steps in the use of the Research and Development method in this study are up to seven steps, namely: 1) Potential and Problem, 2) Data Collection, 3) Product Design, 4) Design Validation, 5) Design Revision, 6) Trial Product, and 7) Product Revision. In Addition, the seven steps of the research have been able to answer the problem formulation.

The research subject in this study is V class students at MI Ma'arif 18 Trimurjo of Central Lampung and the material used is How the Body Processes Food. The research instrument utilized is an interview guide as a reference in conducting interviews with teachers which is arranged to find out what kind of learning media is in accordance with the needs of students and serves to provide input in the development of *multimedia focusky*-based comic learning media. Instruments of teacher material experts and lecturers' material experts as well as media experts are used in the form

of a validation questionnaire to determine the feasibility of the learning media developed. The product trial instrument is the participant to find out the students' response to the developed learning media. The instrument operated is a student response questionnaire in the form of a statement.

The data analysis technique in this study applies qualitative descriptive analysis technique which describes the results of product development in the form of M *multimedia focusky*-based comic learning media. The data obtained through the product trial instrument are analyzed using qualitative descriptive statistics. This analysis is intended to describe the characteristics of the data on each variable. At this stage, a predetermined calculation will be carried out. The instrument used has 5 answers such as Very Appropriate (SL) given a score of 5, Eligible (L) score 4, Less Eligible (KL) score 3, Not Eligible (TL) score 2, and Very Inappropriate (STL) score 1 so that the score total assessment can be searched by using the following formula:

$$\bar{X} = \frac{\sum X}{N}$$

Information : \bar{X} = Average score
 $\sum X$ = Total score
 N = Rating numbers

Table 1. Criteria Table of Ideal Assessment Categories

NO	Score Range	Category
1	$\bar{X} > (M_i + 1,8 SB_i)$	Very Appropriate
2	$(M_i + 0,6 SB_i) < \bar{X} \leq (M_i + 1,8 SB_i)$	Eligible
3	$M_i - 0,6 SB_i < \bar{X} \leq (M_i + 0,6 SB_i)$	Less Eligible
4	$(M_i - 1,8 SB_i) < \bar{X} \leq (M_i - 0,6 SB_i)$	Not Eligible
5	$\bar{X} \leq (M_i - 1,8 SB_i)$	Very Inappropriate

RESULT AND DISCUSSION

Learning Media Product

The learning media developed in this study is a *multimedia focusky*-based comic learning media. It is a media in the form of display series on a laptop containing cover, material, and evaluation question.

There are three process stages to make this learning media. The first is to create a basic format of the media. At this stage, the researchers write a basic concepts on the *multimedia focusky*-based comic learning media. The text on the initial appearance of the media is the opening text on the material content about how the body processes food. Next, the researcher chose comic format. The selection of format for *multimedia focusky*-based comic media is the process of determining a format contained in menu available in Focusky application.

The second is a part to product the initial draft. In this stage, researchers write a script on *multimedia focusky*. The manuscript contains material about how the body processes food in display of focusky with a draft based on a lesson plan that have been made so that the material presented in writing the script is appropriate and students can understand it well. Also, researchers design the initial appearance of *multimedia focusky*. The initial display design of *multimedia focusky*-based comic media which is conducted by researchers by giving coloring to

the background and selection of appropriate font so material display presented is easy understand and attractive so that students focus on the material provided.

The third is production of comic images on *multimedia focusky*. Researchers add illustrated comic content to *multimedia focusky*. The addition of comic content is carried out by the researchers so that students, in paying attention to the display available on the *multimedia focusky*-based comic learning media, seemed to participate in demonstrating what they see, so it can be applied in daily life when learning outside of school. Furthermore, the researcher also arrange the layout of comic media. Layout setting has to be appropriate with display available on *focusky* in order not to be seen untidy, and students can give minimum assessment to it. The *multimedia focusky*-based comic learning media for class V on the subject matter-how the Body Processes food- is developed to make it easy learned and understand by students.

Design Validation

A comics which have been developed by researchers are validated by experts/validators. The experts who validate this media are material experts and media experts. The first is material validation. Material expert validation aims to examine aspects of curriculum suitability and presentation feasibility. There are two validators in this process. The first Validator is a science teacher of class V at MI Ma'arif 18 Trimurjo, Central Lampung, and a lecturer at PGMI IAIM NU Metro Lampung. The validation result obtain a score of 35 with a very decent category and it is not needed for revision. Based on these result, it can be knowed that the *multimedia focusky*-based comic learning media for class V to science material developed is very decent to implement in the teaching and learning process.

The second is validation from media experts. Media expert validation aims to examine aspects of guidance and information, and aspects of multimedia material, on *multimedia focusky*-based comic learning media. The results of the validation by media experts obtained a score of 38 in the very decent category and did not need revision. Based on these results, it can be seen that the *multimedia focusky*-based comic learning media developed is decent to use. This validation aims so that the product developed in the form of *multimedia focusky*-based comic learning media becomes a quality product in terms of application and assessment aspects. So that *multimedia focusky*-based comic media become media with good quality. That way this media can be tested.

Design Revision



Image 1. Before revision



Image 2. After revision

After the product design is validated through a assessment by material experts and media experts, researchers revise product design based on the advice and input from them. The first is a design revision. To improve the quality of learning media developed. Material experts provide input, namely the pattern of writing material on the Focusky display, has to be improved again. In the writing, there is a sentence "adults have a length of the esophagus can reach 25 cm." This sentence is difficult to be understand by students, so it is replaced with "the length of esophagus which is have by adults can be to 25 cm." The second is the revision of media design. The media revision conducted is to change the text according to the comic font type with capital letter.

Trial of Product

After the product has been validated by material experts and media experts, and has been corrected, then the product is tested on students class V of MI Ma'arif 18 Trimurjo, Central Lampung. The trial is conducted to determine a feasibility of the *multimedia focusky*-based comic learning media based on student’s response. The number of respondents are 21 students. It is carried out to be able to assess the feasibility of the learning media developed. Based on the result of research trial, is obtained a score of 36 so that the *multimedia focusky*-based comic learning media is in very decent category. In this stage, the learning process which motivates students more is by animation supporting to video, so students interested to learning media of creative edutainment video.

Discussion

The development of edutainment creative video learning media on a material of beautiful of Al-Asmaul Al-Husna aims to improve students' ability to understand *Akidah Akhlak* (Islamic moral and faith) material, therefore product has to be able to make student more interested in learning, to understand that material through the learning media of edutainment creative video. Validation is carried out by two experts, namely material experts and media experts. From the validation results, there are 2 points which must be improved or added. The validation values by the two experts are 79.5 and 50 with the criteria of "decent". Thus, it can be concluded that learning media of creative edutainment video can already be used in the learning process at school.

The learning media of edutainment creative video-which has been developed- is tested on students class V at MI Ma'arif 18 Trimurjo, Central Lampung. The result of trial is obtained a value of 44.52 so the category of media is very decent. Based those description, it can be known that the score of the validation result from material experts is 79.5 with a decent category, from media experts is 50, and the final test result to students gets a score of 42.52 with a very decent category. It can be illustrated in the following graph:

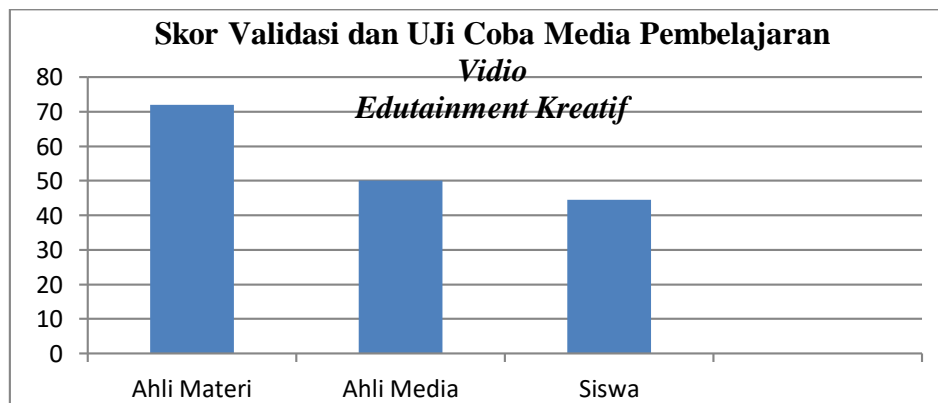


Diagram 1. Validation and Testing Score of Creative Edutainment Video Learning Media

Overall, these results indicate that the creative edutainment video learning media developed in this research is declared decent to be implemented by good quality. This media is also ready to more production to be applied in other schools.

CONCLUSION

Based on the every stage in this development research such as information gathering stage, planning, development stage, and validation and trial stage which conducted to student calss V MI Ma'arif 18 Trimurjo, Punggur Central Lampung, this media is very decent to be developed and implemented in elementary school. According to validation by the material expert, the validation result obtains score of 35 out of 10 question criteria given, and also a validation result from media expert obtains score of 38 out of 10 question criteria given so that the category of Multimedia Focusky-based comic learning media is very decent category to be implemented in the learning and teaching process.

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