

Development Of Health Education Teaching Material Through Comic Media For Elementary School Students

1st Martin Sudarmono
*Department of Physical Education
 Faculty of Sports Science
 Universitas Negeri Semarang
 Semarang, Indonesia
 martinsudarmono@mail.unnes.ac.id*

2nd Endang Sri Hanani
*Department of Physical Education
 Faculty of Sports Science
 Universitas Negeri Semarang
 Semarang, Indonesia
 hanani_unnes@mail.unnes.ac.id*

Abstract—The purpose of this study was to create a product for the development of health education teaching materials for elementary school students. This study is a developmental research. The development procedures in this study include: (1) conducting a need analysis, (2) making a draft of the initial product, (3) validating experts that are health education experts and media experts, (4) improving the draft initial product, (5) first trial that carried out on learning experts and students, (6) initial product revisions, (7) second trial, (8) revision of final products and (9) final products of the health education teaching materials. This study obtained 85% of health education expert evaluation data and 95% of media experts, so that the average percentage was 90% and included in the "very good" category. The results of the first trial reached 86% which is categorize as "good". The results of the second trial on the field received the following results: 1) physical education teacher in sd n 01 sekaran received 93%, 2) and physical education teacher in sd n 02 sekaran received 94%, so that the average percentage of 93.5% is included in the "very good" category. The results of student responses are as follows: 1) sdn 01 sekaran obtained 86%, 2) and sdn 02 sekaran obtained 92%. Since the students can understand and explain the material respectively, it can be concluded that the teaching materials of health education through comic media are very appropriate to be used.

Keywords— *Health Education Teaching Material, Comic Media*

I. INTRODUCTION

According to Punaji Setyosari, development in the general means growth, change slowly (evolution), and change gradually. Research and development is commonly referred to as research-based development [1].

According to Borg and Gall, development research is a process used to develop and validate educational products [2]. Basically the development research procedure consists of two main objectives, such as: developing the product as well as testing the effectiveness of the product and applying it to achieve the goal.

According to Wiryokusumo in his journal [3] development is an educational effort, both formal and non-formal, which is

carried out consciously, planned, directed, organized, and responsible for introducing, fostering guidance, and developing a basic personality balanced, intact, and harmonious, knowledge and skills in accordance with their talents, desires and abilities, as a provision to enhance and develop themselves, as well as their environment towards achieving optimal dignity, quality and human abilities and an independent person. According to Saud in his journal [4] it includes a variety of technologies used in learning and does not only consist of hardware but also software.

Based on the opinions of various experts above, it can be concluded that development is a stage of a process that includes changes in a basic personality that is balanced, intact, and harmonious with the knowledge and skills in creating a good product both hardware and software that can be developed and validated to test the effectiveness of the product in achieving its goals.

According to Iskndawassid and Surendar in their journal [5], teaching materials are a set of information that students must absorb through pleasant learning. In addition there are also those who argue that teaching materials are information, tools, and texts that the teachers need for applicative planning and analyzing in learning. As quoted by Andi Prastowo [6] and supported by Pannen in 2001, teaching materials are materials or subject matter that are arranged systematically, used by teachers and students in the learning process.

From several opinions regarding to the notion of teaching materials, Andi Prastowo [6] states that teaching materials are all materials (both information, tools and text) which are arranged systematically, that displays a complete figure of competencies that will be mastered and used by the students in the learning process with the aim of planning and reviewing the implementation of learning. The examples are textbooks, modules, handouts, worksheets, models or mockup, audio teaching materials, interactive teaching materials, and so on.

There are a lot of things needed in making the teaching materials. These materials are called a source of learning. It needs to be realized that learning resources are very important in preparing a teaching material. Therefore, the existence of

learning resources has at least three main objectives. First, it can be used to enrich the information needed. Second, it can be used by compilers of teaching materials, and lastly, it can be used by the students to learn a particular competency easily. [6].

We all know that teaching materials are not the same as learning resources because teaching materials have various types and forms. However, experts have made several categories for the various teaching materials. Some of the criteria that become references in the description make the classification based on its shape, how it works, and its nature, as will be described in the following explanation [6]:

1. Teaching materials according to their shape

According to the form, the material is divided into four types, namely printed teaching materials, audio teaching materials, audiovisual teaching and learning materials, and interactive teaching materials.

2. Teaching materials according to how they work

According to the way it works, teaching materials can be divided into five types, namely non-projected teaching materials, projected teaching materials, audio teaching materials, video teaching materials, and computer teaching materials.

3. Teaching materials according to their nature

Rowntree in Andi Prastowo's book [6] says that based on its nature, teaching materials can be divided into four types, as mentioned below.

- a. Print-based teaching materials, such as books, pamphlets, students' guidebook, tutorial materials, student workbooks, maps, charts, photos of material from magazines and newspapers, and so on.
- b. Technology-based teaching materials, such as audio cassettes, radio broadcasts, slides, filmstrips, films, video cassettes, television broadcasts, interactive videos, computer based tutorials, and multimedia.
- c. Teaching materials used for practice or projections, for example, science kits, observation sheets, interview sheets, and so on.
- d. Teaching materials needed for the purposes of human interaction (especially for distance education), such as telephones, mobile phones, video conferencing, and so on.

Health education is the attitude of instilling healthy living habits and encouraging students to participate in health efforts and be responsible for their own health and environment [7].

According to in the book Ircham Machfoedz and Eko Suryani [8], it is said that Health Education is an effort to translate what has been known about health into desired behavior of individuals or society through the educational process.

From the expert's opinions above, it can be concluded that health education is an important matter starting from healthy living habits and encouraging students to be more familiar with

their own health and environment through the educational process.

Education is the stage of changing a person's behavior. The relationship between healthy habits and health education strengthens the attention of learners' needs to their environment, which is the first social aspiration order that maintains close relationships that lead to the development of a more integrated personality. [9]. The process of changing the behavior of the students in school can be obtained from the learning process in physical education and recreation.

Learning certainly has a purpose, as well as health education. According to Health Law No. 23 of 1992, the purpose of health education is to improve the ability of the community to maintain and improve their health status, both physically, mentally and socially so that they are economically and socially productive. Based on WHO in 1954 in the book [10], the purpose of health education is to change people's behavior to become healthy one. It can be concluded that the purpose of education is to teach the community to apply a healthy lifestyle as a culture in everyday life.

The scope of health education in the journal [11] can be seen from various dimensions. The dimensions of health education include the dimensions of the educational goals, the place of implementation as well as its application, and the level of health care.

According to Toni Masdiono in the Journal [12], Comics are an arrangement of images telling stories and giving the readers' messages.

Comics are interesting learning media and create a stimulus so that someone wants to read and understand the knowledge conveyed in illustrated stories (comics). According to Mediawati in the journal [13], the use of learning media in the form of comics can make both the teacher and the students feel pleasant and not bored. Moreover, comics can also be used in learning to improve students' learning motivation.

The problem in this study focuses on how is the development model for health education teaching materials through comic for school students. The purpose of this study is to produce health education teaching material products through comic for elementary school students.

II. METHOD

This research uses education and development research, which is more familiar with the term Research & Development (R & D). The definition of the development research according to Borg & Gall (1983) is a process used to develop and validate educational products.

In this development research, the procedure for developing health education teaching materials through comic media for elementary school students was carried out through several stages. These stages include: 1) Analyzing the needs by conducting literature studies, observations and interviews, 2) Drafting initial products, 3) Expert Validation, 4) Initial Product Revisions, 5) Field trials, 6) Final Product Revisions, 7) The final result of the development of health education

teaching materials through comic media for elementary school students.

The followings are some pictures of the product draft for the development of health education teaching materials through comic for elementary school students.



Fig. 1. Picture of the product draft

In this research, the researcher obtained quantitative and qualitative data in the form of reasons for selecting answers and suggestions. Learning instruments, evaluation sheets and questionnaires were used by the researcher to collect data in this research.

III. RESULT AND DISCUSSION

The data that obtained from the experts is a guideline to state whether health education teaching material products are appropriate to be tested or not. The followings are the results of the questionnaires that had been filled out from the experts:

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TABLE I. DESCRIPTION OF EXPERT VALIDATION DATA

No	Expert	Average Score Assessment	Percentage (%)
1.	Health Material	3.4	85
2.	Media	3.8	95
Average		3.6	90

Source: expert evaluation sheet

According to the table of evaluation above, the results are as follows: 1) Health Education Experts shows 85% which is included in the "good" category 2) Media Experts shows 95%, which is included in the "very good" category. Thus, the average percentage is 90% and is included in the "very good" category. From the results of these data, it can be concluded that health learning media that used health education teaching materials is appropriate for field trials.

The data that obtained from the physical education teachers of SDN 01 Sekaran from the first trial is a guideline to state whether the health education teaching material products are suitable to test the students or not. The followings are the results of the questionnaires that had been filled out from the teachers and students:

TABLE II. RESULT DESCRIPTION OF DATA QUESTIONNAIRE COMPLETION BY LEARNING EXPERT ON TRIAL I

No	Learning Expert (Guru Penjasorkes)	Average Score Assessment	Percentage (%)
1.	SDN 01 Sekaran	3,6	90

Source: expert evaluation sheet

From the table above, the result shows a percentage of 90%, which is included in the category of "very good". Hence, it can be concluded that the teaching materials are appropriate to be used.

TABLE III. RESULT DESCRIPTION OF DATA QUESTIONNAIRE COMPLETION BY STUDENT ON TRIAL I

No	Studnet	Average Score Assessment	Percentage (%)
1.	SDN 01 Sekaran	17.5	87.5

From the table above, the result shows a percentage of 87.5%, which is included in the "good" category. From these data, it can be concluded that the media for health education teaching materials for school students are appropriate to be used for the learning process in the first trial. Therefore, this teaching materials are also appropriate to be used for the second trial.

The data that obtained from the physical education teachers of SDN 01 Sekaran and SDN 02 Sekaran from the second trial is a guideline to state whether the health education teaching material products are suitable to test the students or not. The followings are the results of the questionnaires that had been filled out from the teachers and students.

TABLE IV. RESULT DESCRIPTION OF DATA QUESTIONNAIRE COMPLETION BY LEARNING EXPERT ON TRIAL II

No	School	Average Score Assessment	Percentage (%)
1.	SDN 01 Sekaran	3.85	96,4
2.	SDN 02 Sekaran	3.75	93,75
Average		3.6	90

The results of the evaluation table conducted by the learning experts (Physical education teachers) are as follows: 1) SDN 01 Sekaran obtained a percentage of 96,4%, included in the category of "very good", and 2) SDN 02 Sekaran obtained a percentage of 93,75%, which is included in the category "very good". Thus, the average percentage is 95,1%, which is included in the "very good" category. From these data, it can be concluded that the media for health education teaching materials for the elementary school students are appropriate to be used for the learning process.

TABLE V. RESULT DESCRIPTION OF DATA QUESTIONNAIRE COMPLETION BY THE STUDENTS ON TRIAL II

No	Student	Average Score Assessment	Percentage (%)
1.	SDN 01 Sekaran	19	95
2.	SDN 02 Sekaran	18,3	91,5
Average		18	93,25

The results of the evaluation table conducted by the students are as follows: 1) SDN 01 Sekaran obtained a percentage of 95%, which is included in the category of "very good", and 2) SDN 02 Sekaran obtained a percentage of 91,5%, which is included in the category "very good ". Hence, the average percentage is 93,25%, which is included in the "very good" category. From these data, it can be concluded that the media of teaching materials for health education for school students are appropriate to be used for the learning process.

Product revisions in this stage are carried out after the results of the field trials are being analyzed. This process was conducted in order to find out the weaknesses and strengths of the products developed. For the teaching product improvement, the researcher added several parts, include material summaries and questions. By giving a summary, the students are expected to be better in understanding the points of the existing material, while the addition of the questions is done to measure how extent the cognitive abilities of the students are. The product revision at this stage resulted the final product in the form of

the development of health learning media using health education teaching materials through comic media for elementary school students.

IV. CONCLUSION

The results of the data analysis of health education expert evaluations shows a percentage of 85%, while the media experts shows a percentage of 95%. Thus, the average percentage obtained is 90%. Based on the determined health education teaching material assessment instrument, the learning media for health education teaching materials through comic media for school students meet the criteria so well that it can be used for students.

Based on the results of data analysis, the evaluation of two learning experts (Physical education Teacher) in SDN 01 Sekaran received a percentage of 85% while physical education Teacher in SDN 02 Sekaran gets a percentage of 95%. Based on the predetermined health education teaching material assessment instrument, the comic media for Health education teaching materials for elementary school students meet the criteria of "very good" so that it can be used for students.

Based on the results of data analysis, the response evaluation of students from SDN 01 Sekaran received a percentage of 96,4% while the response evaluation of students from SDN 02 Sekaran shows a percentage of 93,75%. Based on the predetermined health education teaching material assessment instruments, the learning media for teaching health education media through comic for Elementary School Students meet the criteria of "very good" so that it can be used for students.

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