

## DEVELOPMENT OF SCIENCE LEARNING MEDIA MONSAINS (SCIENCE MONOPOLY) IN HUMAN DIGESTION SYSTEM MATERIALS FOR ELEMENTARY SCHOOL

Evi Rusmiaty<sup>1</sup>, Helmia Tasti Adri<sup>1</sup>, Annisa Mawardini<sup>1</sup>

<sup>1</sup>Faculty of Teacher Training and Education, Djuanda University

Corresponding Author Email address: Evi Rusmiaty@unida.ac.id

**Abstract:** This study aims to develop MONSAINS (Monopoly Science) learning media that is suitable for science learning materials for the fifth-grade human digestive system. The objectives of this study are: (1) To explain the steps for developing the Monopoly *Science* (MONSAINS) media on the material of the fifth-grade human digestive system, (2) to determine the feasibility of developing the Monopolymedia *Science* (MONSAINS) on the material of the human digestive system in grade V in elementary school; 3) Adding innovation in the development of learning media. This research is a type of research and development *Research and Development (R n D)* which is a development model *Borg and Gall* with 7 stages taken. The media development stages carried out are: (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product testing, (7) product revision. The instrument used in this study was a validation questionnaire for material experts, media experts, teachers and students. The data analysis used was technical descriptive quantitative analysis. The number of subject trials is limited to only 5 students as a participant. The results of the validation that have been carried out obtain a very good category. In addition, this product also obtained a very good score from an average score of 4.6 on a scale of 5, so it is considered the media to be very interesting and suitable for use by students in the teaching and learning process.

**Keywords:** *Development Media; Science Learning; Monsains.*

### 1. INTRODUCTION

The development of science and technology has brought changes in almost all aspects of human life. In a developing country like Indonesia, education is very important for the welfare of the nation because education itself has an important role in advancing the nation. In this case, of course, there must be efforts to improve the quality of education in Indonesia. Efforts to improve the quality of education need to be carried out comprehensively including aspects of knowledge, skills, attitudes and values. With the development of science and technology, requires a professional and competent teacher. Teachers who are able to create an active and enjoyable learning process for students are professional and competent teachers. A conducive learning atmosphere, of course, must be mastered by the teacher so that the teaching and learning process is more enjoyable. Therefore, a teacher must be able to innovate in using and creating teaching media in order to increase student activity in the learning process to be achieved. Based on the results of observations made by researchers at MI Pondok Leungsir, the lack of student interest in science lessons about the human digestive system is the inaccurate use of the methods and learning media used by the teacher when delivering material so that students are not motivated. In other words, students are less motivated to learn because the materials and teaching methods used are monotonous and the media is less attractive.

Based on the results of interviews with grade V teacher, Mr. Oyan Royana, he said textbooks are still the main media that is often used so that they require more interesting learning media, to increase student motivation in learning science, especially material on the human digestive system. In order to achieve these results, a teacher should be able to build concepts with the basis and reality, namely by using the right media as a learning medium. Media development by combining game elements is one of the innovative solutions in improving science learning in the classroom. Media improvement in this case is devoted to the primary school education level in order to create active, creative, interactive, effective and fun learning. Especially at this primary school level there are still many students who like to play, are still learning to understand and think to operate logical rules and concrete concepts. Learning media can provide learning motivation to students, so that the selection must be made appropriately according to the material to be taught. Therefore, the teacher's efforts to increase interest, especially in science lessons by using the learning media used, must be in accordance with the material to be delivered. Facing the aforementioned facts, researchers are interested in exploring and taking steps to improve science learning, especially human digestion through research. The improvements that the researchers made were regarding the Development of Science Monopoly Media in Class V Elementary Human Digestive System Material. The hope of researchers is that there will be active, creative and fun learning and more meaningful and the courage of students who are thorough to solve contextual problems correctly and to better master the lesson.

Online learning emphasizes Internet-based courses offered synchronously and asynchronously. Synchronous is a form of learning with direct interactions between students and teachers at the same time using online forms such as conferences and online chat. The transition of instructional methods that have been through face-to-face directly in schools forces the school to follow the flow so that learning can take place with complex limitations.

## 2. METHODS

The method used in this research is research and development or research and development methods. Research and development or research and development is a research method used to produce certain products and to test the effectiveness of certain products. The number of subject trials is limited to only 5 students as a participants. Instrument validation designed developed in form questionnaire / questionnaire. The main purpose of The questionnaires (Arikunto, 2006) are: (1) Represents relevant information for survey purposes, (2) Gives a sequence of questions logical and point-focused problem to the respondent. (3) Provides a standard format recording facts, opinions and attitude. (4) Facilitate processing data. The measurement uses Likert scale. Each aspect is described becomes an indicator later will be used as the starting point of the arrangement the instrument has a measure expressed in the form of words, form: Very less, less, enough, good and very good (Sugiyono, 2010). For the purpose of quantitative analysis, then the answers are given number or value. The explanation as follows, less = 1, enough = 2, good = 3 and very good = 4.

To be able to produce certain products used research that is needs analysis and to test the effectiveness of these products so that they can function in the wider community, research is needed to test the effectiveness of these products. There are ten steps to use the Research and development (R n D) method, including: (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trials, (7) product revisions, (8) usage trials, (9) product revisions, and (10) mass production. (Sugiyono, Educational Research Methods (Quantitative, Qualitative and R & D Approaches), 2018) However, this study did not take the ten existing steps but only took the seventh step, namely:

(1) potential and problems, (2) data collection, (3) ) product design, (4) design validation, (5) design revision, (6) product testing, and ending with (7) product revision. The product trial involved 2 expert validators, namely media experts, material experts and was given an assessment by the class V teacher and involved 5 students, because it only used limited trials because of the impossible situation.

### 3. RESULTS AND DISCUSSION

Based on product feasibility trials using test results from material experts, media experts, grade V teachers and student responses. The following are material experts, media experts, grade V teachers, and student responses.

#### 3.1. Results

According to the validation of the material experts, the assessment category of the products developed got very good scores with a score of 41 out of a maximum score of 50. The validation assessment table from the results of the material experts is as follows:

**Table 1 Material Expert Validation Data**

No	Aspect	Grain	Score	Average	Category
1	Pembelajaran	4	15	3,8	Good
2	Isi	6	26	4,3	Very good
	Total	10	41	4,1	Good

According to the validation of media experts, the assessment category of the product developed gets a very good score with a score of 68 from a maximum score of 75. assessment of the validation of the results of media experts as follows:

**Table 2 Validation Data of Media Experts**

No	Aspect	Grain	Score	Average	Category
1	Presentation	2	10	5	Verygood
2	Quality	8	36	4,5	Verygood
3	Phsycal Display	5	22	4,4	Verygood
	Totally	15	68	4,6	Verygood

According to the validation of the class V teacher, getting the assessment category of the product developed got the value very good with the acquisition of a score of 49 from a maximum score of 50. The validation assessment table from the results of learning experts is as follows:

**Table 3 Class V Teacher Validation Data**

No	Aspect	Grain	Score	Average	Category
1	Content	2	10	5	Verygood
2	Learning	6	29	4,8	Verygood
3	Language	2	10	5	Verygood
	Total	10	49	4,9	Verygood

**Table 4 Student Data**

No	Category	Skor
1	Max. Skor	228
2	Average	4,6

### 3.2. Discussion

Based on the results regarding the development of the Science Monopoly learning media, that the learning media plays an important role in the learning process because the media is the channel for the message of the subject matter delivered by the teacher so that students can easily accept the material, the presence of media or means for learning can create effective and learning efficient. According to (Arsyad, 2019). Science itself is a very important field of knowledge (Learning Media can be defined as a tool or method used by educators to be used by students in achieving learning objectives. Teachers as educators must choose learning media that can be used effectively to deliver learning materials. and can involve active students in learning. Learning media can be classified into several groups depending on the classification criteria. Here are some examples of classifications of learning media.

Learning media can be classified as follows: 1) Audio media, namely media that can only be heard or media that only contain sound elements, for example radio and voice recordings. 2) Visual media, which is visible only media, does not contain sound elements, for example: slide films, photos, transparencies, paintings, maps, pictures, graphic media, and so on. 3) Audio-visual media, namely the type of media that contains image and sound elements, for example: video recordings, films, sound slides, and so on. In general, this media is considered better and attractive, because it contains elements of images and sounds, thereby activating the senses of sight and hearing. According to (Dwiputra, 2016) that Natural Sciences (IPA) is a natural learning concept and has a broad relationship related to human life and nature.

Science is specialized knowledge. Carry out observations, experimentation, inference, theory formation and other processes that are interrelated from one way to another. In Biology lessons, materials such as the digestive system, respiratory system, and circulatory system contain abstract concepts that are difficult for students to understand. The concept of material that is still abstract in nature can cause students to have difficulty understanding the material, it can also affect student success in achieving learning goals. (Khalida Ulfa, 2019) Furthermore, according to (Nendy Ramadhani, 2016) educational game media is a game media that has an educational element that can be used to educate or be used in a fun learning process. Fun learning while playing makes students active in learning. One educational game media that can be used as interesting and fun learning is monopoly. Monopoly game was chosen because it is a game that is popular with children and is easy to play. Monopoly is a medium that can train students' memory in mastery of material, train and encourage students' courage to express their opinions, and train mastery of concepts and understanding of learning material. This game is modified into a fun learning medium to support learning so that students can understand the material to be taught by the teacher. Monopoly media is preferred by students and can train students' honesty. Low grade students prefer to play while learning, so researchers use monopoly media development as a learning support. (Ulfaeni, 2017).

### 4. CONCLUSION

Development of science monopoly media is designed with an attractive shape like a briefcase, easy to carry anywhere. The size of the science monopoly media is 60x60 cm with the material used by plywood boards. This research on the development of learning media in

the form of a Monopoly game was validated by 3 experts. First, the material expert gave an assessment of the content and learning aspects with 10 questions. Material on monopoly learning media that has been developed is declared valid by material experts with improvements. The assessment category is "Good" with a score of 41 out of a maximum score of 50 with an average of 4.0. Meanwhile, media experts stated that the monopoly learning media that had been developed was valid with the assessment and advice given by media experts, with the category of assessment "Very Good" with a score of 68 with a maximum value of 75 with an average of 4.6 and the teacher stated that the learning media was categorized as the assessment of "Very Good" with the acquisition of a score of 49 with a maximum score of 50 with an average of 4.9, which has been developed valid with the assessment and advice given by experts. Meanwhile, the participant's assessment in the product trial had the criteria of "Very Good" with a score of 228 with an average of 4.6.

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