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Article

Development of *Scrapopbox (Scrap and Pop-Up Box)* Animal Metamorphosis in Elementary Schools

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ABSTRACT

In learning science in elementary schools, there are still many misconceptions, especially about animal metamorphosis material. Based on this then conducted research That aims To develop learning media *Scrapopbox* animal metamorphosis material. The process of developing learning media uses the development model that has been developed by Reiser and Mollenda, the ADDIE model with five stages, namely analysis, planning, development, implementation, and evaluation. The results of the development are in the form of *Scrapopbox* learning media in which there are scrap, pop-ups, and miniature toy animals. This study involved 18 grade V students. The data collection used was the validation of learning media, THB, and response questionnaires. With data analysis, namely analysis of validity, analysis of effectiveness, and analysis of user responses. Based on the analysis of data validation results, trials and user responses of *Scrapopbox* media, animal metamorphosis material meets the good criteria. The results of learning media validation by two media expert validators obtained a percentage of 87.5% which was categorized as valid and could be used during the learning process. It is categorized as effective from the results of THB, the results of the percentage of classical learning completeness are 100%, then the students' learning completeness is achieved because it reaches a score of ≥ 75%, for the results of students' responses to *Scrapopbox* media reaching a percentage of 98.33 % which is categorized as very good.

INTRODUCTION

The era of modernism has had a very significant influence on the development of education and science. In improving the quality of education, it is necessary to have curriculum innovations that are following the times and the existing science and technology. The existence of innovation in education also has a big impact on accommodating the needs of the community. Suryaman (Suryaman, 2020) states that innovation is part of the validation and expansion of useful knowledge. In this case, one aspect that needs to be innovated is the curriculum. This is based on the assumption that the curriculum is one of the essential main components of the education system.

In innovation, the curriculum needs to be adjusted to see the conditions and changes at that time. According to Ima Frima Fatimah (2021) curriculum innovation has changed and development is not just a technical process but involves all elements from the government to institutional leaders. Along with the times, science has a strategic role in improving the quality of human resources. Learning from the results issued by PISA (Program for International Student Assessment) in the Ministry of Education and Culture (2019) states that in Indonesia in the field of science, there are 35% of students are still in the competency group level 1a and 17% at a lower level. At level 1a regarding the ability of students to choose the best possible scientific explanation regarding data presented in a general context. It is in the field of science that the role of the teacher is very much needed, a teacher must have a good understanding and be proficient in subjects by using a variety of sources or learning media. Indirectly the learning process brought by the teacher can influence the understanding and abilities of students. Therefore, teachers must have the skills to develop and use the learning media needed by students. Here the teacher also acts as a mentor who reflects the competence of the teacher according to the curriculum and the times. Competence itself is an appropriate approach for dealing with the present (David et al., 2022).

Natural Sciences (IPA) is a translation from English, namely natural science. Science means science, science is scientific knowledge that has a rational and objective nature. While natural means nature. Based on the above, it can be interpreted that science is a science that examines everything about phenomena that exist in nature, both animate and inanimate objects (Wisudawati & Sulistyowati, 2014). According to Samatowo (2011) in Kumala (Kumala, 2016) that Natural Science discusses natural phenomena which are arranged systematically based on the results of experiments and observations made by humans. Science plays an important role for students because with this students have more creative and logical thinking abilities. Ningsih & Suhardi (2021) conveyed the same thing that in facing the challenges of the 21st century, scientific literacy is needed. With scientific literacy, students can think critically, creatively, and logically, and take initiative in solving problems in society due to the development of science and technology. Innovations in scientific learning can be implemented in various subjects such as learning models, learning methods, and especially learning environments that make it easier for teachers to convey information to students (Munawaroh et al., 2022).

Based on the results of observations, in learning metamorphosis material the teacher uses media in the form of pictures or videos where students only see and listen. But when the learning took place some children were busy so they were not focused, then in the animal metamorphosis material, the students still misinterpreted the term or did not understand the concept of metamorphosis. As for the notion of metamorphosis, they do not understand the difference between perfect and imperfect metamorphosis, students are confused in mentioning examples of animals based on the type of metamorphosis. Students cannot distinguish between larvae, caterpillars, larvae, maggots, and nymphs. In the competency understanding of animal metamorphosis, students are expected to be able to distinguish between perfect and imperfect metamorphosis, be able to name the order of perfect and imperfect metamorphosis, be able to distinguish between larvae, caterpillars, maggot larvae, and nymphs. The same thing was also stated by (Elen et al., 2022) that many students in elementary schools cannot distinguish and are still confused between perfect and imperfect metamorphosis. Nirmala's research (2020) also explains that in learning animal metamorphosis material, teachers are more likely to use the lecture method so that students don't interact much during the learning process.

Based on the analysis of needs through observation and interviews, it is necessary to have an innovation, the existence of innovative learning media is expected to facilitate and influence students' understanding abilities. According to (N. Lestari & St Muthmainnah

Yusuf, 2018) in his research, the use of direct media such as puzzle games can make students active in contributing during learning. This game involves students participating directly in the game to provide students with understanding so that there are no misconceptions. Then in research conducted by Iswari (2020), scrapbox media has an interesting shape and can be used as a means of cooperative learning. In previous studies, scrapbox is another name for an explosion box or a mysterious box. Based on the above, the researchers updated the name, design, materials, and how to use them. In developing this media the researcher added a pop-up so that the name of the media became scrapopbox (memo box and pop-up), then there was a magnetic board for games, and there were miniature animals so that students could get hands-on experience. The materials used are made of wood/plywood, duplex paper, and sticker paper which are fairly strong and durable.

In overcoming the problems above, the researcher creates learning media in the form of *scrapopbox* media. *scrapopbox* was originally often used for special birthday gifts for people we care about. You could say a scrapopbox is just an ordinary box but has its own uniqueness, when the box is opened it forms a net of cubes containing modified sheets of paper as attractive as possible. There is additional text or images in it. *scrapopbox* are generally made of paper so they don't last long. While the innovation that will be carried out is to make a *scrapopbox* made of wood based on animals around it. In the *scrapopbox*, examples of animals that have undergone metamorphosis with miniature animals are also given and the number of animals is six because several books previously used only a few examples.

The use of learning media in the learning process is very important and influential s o that the use of media must be meaningful by the learning objectives to be achieved and by existing competencies and teaching materials (Pratiwi & Meilani, 2018). So learning media can provide real and accurate knowledge. Media also supports students to gain learning experiences. Through the experience of Edgar Dale's cone, that *scrapopbox* media is in the sections of seeing pictures, reading, and experiences through artificial objects such as miniature animals and there is playing media so that users can have direct contact. *scrapopbox* media has a good level of the learning experience because this *scrapopbox* media involves many senses.

METHODS

This development research uses the ADDIE development model consists of five stages: analysis, design, development, implementation, and evaluation (Rusdi, 2018).

The analysis stage (Analysis) consists of 4 activities. The first analysis is needs analysis. This stage is carried out to find out related problems in the learning process of class V at Almadany Elementary School obtained from the results of observations and interviews. This stage also determine the product to be developed. The product to be developed is in the form of *scrapopbox* learning media on animal metamorphosis material in elementary schools. Second, there is curriculum analysis. At this stage, it examines the Flow of Learning Objectives (ATP), Learning Achievements (CP), and Learning Objectives (TP) in natural and social sciences (IPAS) subjects, especially in animal metamorphosis material. The curriculum used at SD Almadany in grade V uses the independent learning curriculum. Third, there is an analysis for students. This stage is to look at the characteristics of the fifth-grade students at Almadany Elementary School through class observation. This analysis aims to be adapted to students and useful for users. The fourth task analysis, this analysis is carried out to clarify the contents of the task. The assignments given are used as a reference in making animal metamorphosis scrapopbox so that they are following the abilities of students. This analysis it is also the basis for the formulation of indicators of students' abilities in *scrapopbox* learning media.

Scrapopbox learning media including setting the media development schedule, selecting, determining and making material descriptions by preparing data in the form of material, questions and images to be presented in *scrapopbox* learning media , then making design drawings. and storyboards with the aim of providing views that will be displayed on the *scrapopbox* learning media. Make a prototype as an example of the original product. Make a guidebook for using *scrapopbox* media to make it easier to use *scrapopbox* learning media. Prepare instrument sheets taken from validation, effectiveness, and user response. This stage compiles the instruments used to validate the *scrapopbox* learning media that will be developed. This instrument consists of validation sheets from media experts, and material experts, then effectiveness in the form of learning achievement test sheets and user response sheets.

The third stage is the Development Stage. At this stage developing *scrapopbox* learning media. The following are the steps that will be carried out by the researcher, namely Making finished goods as learning media *scrapopbox*. *Scrapopbox* media is made according to a pre-designed design. By preparing material, questions, pictures, and decorations related to the material. After the preparation is complete, continue to make goods so that the learning media is *scrapopbox*. Conduct validation by material experts and media experts. Making lesson plans/modules for trials. And the last stage in the development stage is revising/improving the learning media in accordance with suggestions of criticism input by material experts and media experts, in order to get comparisons between learning media before revision and after revision.

At this implementation stage, it is used to determine the effectiveness of the *scrapopbox* learning media being developed. This stage was carried out by testing the *scrapopbox* learning media which involved fifth-grade students. The learning media was tested on 18 fifth-grade students at Almadany Elementary School which was carried out offline. Researchers tested the media themselves that had been made using the TGT type of cooperative learning model. After the learning process is complete, students will be given a question sheet and a response questionnaire. The user response questionnaire is used to determine the feasibility of the media being developed. The following is a flowchart of the implementation stages:

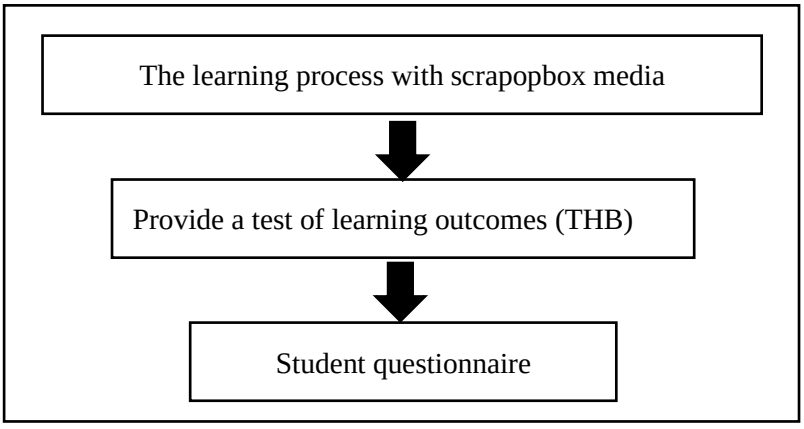

Figure 1. Implementation stage flow

Evaluate stage, this evaluation stage is the last stage to revise/improve the scrapopbox learning media after implementation. This stage is carried out to see if there are still deficiencies/weaknesses of the scrapopbox learning media. If there are no deficiencies/weaknesses, this Scrapbox learning media is said to be suitable for use. For the final results of the media carried out by researchers, there are activities carried out by providing certainty that the media has been repaired and is said to be suitable for use during the learning process.

The techniques used by researchers in data analysis are Analysis of the validity of scrapopbox media based on media experts and material experts. Data analysis was obtained from the validation of the percentage analysis method using the data processing formula taken from Akbar (2013). This validation data analysis uses a Likert scale of 1-4 (Sudaryono et al., 2013).

a. Guidelines for calculating the maximum validity score:

$$\text{Validitas (v)} = \frac{\text{score obtained}}{\text{max score}} \text{ x } 100\%$$

Source: Akbar (2013)

b. Analysis of the effectiveness of learning media

Learning media is said to be effective if the learning outcomes of students after the learning process. Learning test results are said to increase if learning outcomes achieve a score of > 75 and complete as much as 75% of the total number of students.

$$\text{Ketuntasan Belajar Klasikal} = \frac{\text{Number of students completed}}{\text{Maximum}} \text{ x } 100\%$$

c. *Scrapopbox* learning media

In this analysis, the researcher used the Guttman scale in the form of a checklist because it is clear, firm, and consistent (Sudaryono et al., 2013) *scrapopbox* learning media is said to be feasible if the minimum average rating gets good criteria. The following is the calculation formula according to Ridwan (Ridwan, 2008) :

$$P = \frac{f}{N} \text{ x } 100\%$$

Information:
P = percentage
f = score obtained
N = number of maximum score frequencies

Table 1. Rules of Assessment of *Scrapopbox* Media User Response Questionnaire

Mark	Score
Yes	1
No	0

Table 2. Percentage of Responses from *Scrapopbox* Media Users

Percentage	Benchmark
81% - 100%	Very good
61% - 80%	Good
41% - 60%	Pretty good
21% - 40%	Not good
0% - 20%	Not very good

Source: Arikunto (2007)

RESULTS AND DISCUSSION

The results of the research are adjusted to the theory developed by Reiser and Mollenda, namely the ADDIE development model which is carried out in five stages which include analysis, design, development, implementation, and evaluation.

Analysis

This analysis stage consists of 4 activities, namely:

a. Needs analysis

In the needs analysis stage, it is necessary to have observations and interviews to find out problems in the learning process for class V SD Alam Muhammadiyah Kedanyang (Almadany) Gresik. In the observation stage, it was found that during the

learning process in class and outside the class V grade students could be said to be active in learning but there were some who were passive, busy, and noisy. Here students are also very happy if invited to learn while playing.

For the results of the interviews, it was found that the teacher's metamorphosis learning material used learning media, media used was in the form of visual media in the form of pictures/videos and students only saw and listened. But when the learning took place several children were busy so they were not focused, then in the animal metamorphosis material the students still misinterpreted. Animal metamorphosis material is one of the materials that we often encounter in everyday life. A metamorphosis is an event of gradual changes in body shape in animals, starting from larvae to adults (Alim, 2020). They often come across but do not know as much detail about the process of metamorphosis. Evidenced by interviews of students who when answering still misunderstood. As in the notion of metamorphosis, students forget the meaning and difference between perfect and imperfect metamorphosis, students are confused in mentioning examples of animals based on the type of metamorphosis, and students cannot distinguish between larvae, caterpillars, larvae, maggots, and nymphs. Based on the learning objectives in class V science and learning subjects, students analyzed perfect and imperfect metamorphosis, so the above misconceptions are problems experienced by students in animal metamorphosis material. With this problem, the researcher developed a product to be developed in the form of *scrapopbox* learning media on animal metamorphosis material in elementary schools.

b. Curriculum analysis

This stage relates to the curriculum used by the school. The curriculum used at SD Almadany in grade V uses the independent learning curriculum. In this curriculum there are Learning Outcomes (CP) and Learning Objectives (TP) for the science subjects shown in the table below:

table 3. Learning achievements and learning objectives

CP	TP
Students can analyze the life cycle of living things (perfect and imperfect metamorphosis)	Students analyze animal metamorphosis Students analyze perfect metamorphosis Students analyze imperfect metamorphosis

c. Student analysis

This stage is to see the characteristics of fifth-grade students at Almadany Elementary School through class observation. From the results of observations in class V SD Almadany students have high enthusiasm as evidenced by the fact that they are always active in learning, and can still be directed. The characteristics of fifth-grade elementary school students are more synonymous with playing, students are happy if the learning process is carried out by learning while playing using supportive learning media.

d. Task analysis

The analysis was carried out to clarify. The tasks given are used as a reference in making animal metamorphosis *scrapopbox* so that they are following the abilities of students in terms of cognitive and psychomotor abilities. This analysis, is also the basis for the formulation of indicators of students' abilities in *scrapopbox* learning media that will be developed.

Based on the results of the analysis received by the researcher from the task analysis of class V students, when learning metamorphosis material, they were given the task of making pictures and coloring the stages of the metamorphosis of butterflies.

Design

Scrapopbox learning media by setting a media development schedule. Design creation begins in November 2022, and the manufacture of finished goods in December 2022. For Validation activities of media experts and material experts and Implementation and data collection in January 2023.

Scrapopbox learning media is animal metamorphosis, consisting of understanding, types of animal metamorphosis, perfect metamorphosis, and imperfect metamorphosis. For images, use images related to metamorphic material such as pictures of gardens, various insect animals, ants, bees, butterflies, flies, mosquitoes, grasshoppers, dragonflies, crickets, cockroaches, praying mantises, and spiders, frog amphibians. For the questions in the form of multiple choice and descriptions that are following the grid of learning outcomes test questions. To see the initial appearance of *scrapopbox* media, it is necessary to make a prototype. The following is a picture of the initial design of the *scrapopbox* media :

Figure 2. *Scrapopbox* design

In the *scrapopbox* design , the outer box uses plywood, and for the inside, which is in the form of a cube net, is made of plywood. then inside there are sheets made of duplex paper lined with sticker paper. This media consists of 5 sides where side 1 discusses animal metamorphosis, side 2 about perfect metamorphosis, side 3 imperfect metamorphoses, side 4 about evaluation, and side 5 a magnetic board and a small box.

To make it easier to use the media, there is a guidebook for using *scrapopbox* learning media. This manual is made of HVS paper which consists of a cover, preface, conceptual media, a brief description of the material, steps for use, and the back cover. The following are the components of the scrapobox media guidebook design :

(a)

(b)

(c)

(d) (e) (f)

Figure 3. *Scrapopbox* media guidebook design components (a) front cover, (b) preface, (c) conceptual media, (d) a brief description of the material, (e) steps for use, (f) back cover

The instrument sheet is taken from validation, effectiveness, and user response. This stage compiles the instruments used to validate the *scrapopbox* learning media that will be developed. This instrument consists of validation sheets from media experts, and material experts, then effectiveness in the form of learning achievement test sheets and user response sheets.

Development

In the manufacture of finished goods, learning media *scrapopbox* adapted to the design that has been previously designed. Then validate the learning media by material experts and media experts. The following are the results of the validation of media experts and material experts:

1. Media expert validation

The validator consists of 2 media experts who evaluate several aspects including aspects of media engineering, visual communication, media resilience, and security for users. Following are the results of the validity of the two media expert validators.

Table 4. Asessment results of two media expert validators

No.	Criteria assessed	Score		Total validation score	Maximum total score
		A	B		
1.	flexibility in use	3	3	6	8
2.	Easy students use	4	3	7	8
3.	Clarity of instructions for using the media	4	4	8	8
4.	Attractiveness media	4	4	8	8
5.	Communicative (Language easy to understand)	4	3	7	8
6.	Creativity and innovative	4	4	8	8
7.	Simplicity	4	2	6	8
8.	Font selection	4	3	7	8
9.	Font size selection	4	3	7	8
10.	Conformity of images that support animal metamorphosis material	3	3	6	8
11.	Layout setting	4	3	7	8
12.	*scrapopbox* media resistance	4	4	8	8
13.	There are no components that harm the user	3	3	6	8
	TOTAL			91	104

Based on the validation results of the table above, the final average validity value can be obtained as follows:

$$\text{Validitas (v)} = \frac{\text{Score obtained}}{\text{Max score}} \text{ x } 100\% = \frac{91}{104} \text{ x } 100\% = 87{,}5\ \%$$

Scrapopbox learning media meets the standard validity criteria that have been set at ≥ 76%. the percentage of learning media expert validation results shows a number that is higher than the set standard so that *scrapopbox* media can be used as effective learning

2. Material expert validation

The validator who validates the *scrapopbox* material consists of 2 people by assessing aspects of the material in the learning. The following are the results of material expert validity:

Table 5. Assessment results of 2 material expert validators

No.	Criteria assessed	Score		Total validation score	Maximum total score
		A	B		
1.	Material suitability with learning objectives (TP)	4	4	8	8
2.	Material suitability with learning indicators	3	4	7	8
3.	The material is easy to understand	4	4	8	8
4.	Material mess	4	3	7	8
5.	Accuracy using the term statemen	3	4	7	8
6.	Appropriateness of the order of material concepts	4	4	8	8
7.	Suitability with the character of students in learning	4	3	7	8
	TOTAL			52	56

Calculation of material validity in scrapobox learning media Can be considered valid after knowing the calculation of the final value of the average criterion score. From the table listed above, the final average value of validity can be obtained as follows:

$$\text{Validitas} = \frac{\text{score obtained}}{\text{Max score}} \text{ x } 100\% = \frac{52}{56} \text{ x } 100\% = \ 92{,}85\ \%$$

By obtaining a percentage score of 92.85%, the material in the *scrapopbox* media is Included in the standard validity criteria that have been set at ≥ 76%. Results that exceed these standards indicate that the proportion of validation by material experts on learning media is very good and the material contained in *scrapopbox* can be used in the learning process.

Table 6. Results of comments and suggestions from the validator on *scrapopbox* media

Validators	Comments And Suggestions		Repair
	Media Expert 1	Media Expert 2	
Media expert	The media is very good to be applied to elementary school children. However, the use of this media is not flexible because it is very heavy, we use iron material which can be dangerous, so there needs to be supervision from the teacher when the media is used.	Good medium, too complex, and has lots of content.	There is no need for improvement, but in the use of media, there must be supervision from the teacher..
Material expert	Appropriate for use in class V because it already includes animal metamorphosis material	*scrapopbox* media is very interesting for students and supports the understanding of metamorphosis material	No need for repair.

In trying out *scrapopbox* learning media, it is necessary to have teaching modules/lesson plans for trials. The making of this teaching module is adapted to the independent curriculum, with a cooperative type learning model. In the teaching module, there are Learning Outcomes (CP) and learning objectives (TP), students analyze animal metamorphosis material, analyze perfect metamorphosis material, and analyze imperfect metamorphosis material.

Next Revision or improvement. In this stage according to the comments and suggestions from the validator, there is no revision/improvement of the *scrapopbox* media, but in using *scrapopbox* media, supervision from the teacher is needed.

Implementation

This stage is carried out by testing *scrapopbox* media on students. The learning media was tried out in the even semester with 18 fifth-grade students at Almadany Gresik Elementary School. Researchers tested the media themselves that had been made using cooperative learning models and methods of discussion, presentations, lectures, and games. Before the media is used students feel curious about what is in the *scrapopbox* media, then when learning takes place using *scrapopbox* media the students are very active and listen, when group assignments students are busy, and actively discussing with their group. After the learning process is complete, students are given test questions and response questionnaires.

To find out the mastery of student learning on animal metamorphosis material in class V Almadany Elementary School, it is necessary to have a student learning test after the learning process using *scrapopbox* media. The learning outcomes test consists of 10 multiple-choice questions and 5 essay questions. The following table shows the results of student learning outcomes tests:

Table 7. Student learning outcomes

No.	Student name	Score	Completeness of learning outcomes	
			Complete	Not finished
1.	FNF	85	√	-
2.	KGM	100	√	-
3.	ADG	100	√	-
4.	KAMP	100	√	-
5.	SA	75	√	-
6.	KAJ	91	√	-
7.	A	80	√	-
8.	WF	95	√	-
9.	AJZ	100	√	-
10.	HAW	100	√	-
11.	IK	85	√	-
12.	KRA	85	√	-
13.	AQM	81	√	-
14.	N	100	√	-
15.	DA	86	√	-
16.	KJA	100	√	-
17.	AA	100	√	-
18.	MD	100	√	-
Total			18	-

Based on the table listed above, it was found that the THB results of students were known from 18 students who took the learning achievement test and managed to achieve a score of ≥ 75. Meanwhile, the KBK can be calculated using the following method:

$$\text{KBK} = \frac{\text{Number of students completed}}{\text{Maximum}} \text{ x } 100\% = \frac{18}{18} \text{ x } 100\% = 100\ \%$$

The calculation above shows that the percentage of students' learning success in a classical manner achieves a score of 100% so it is included in the completeness category because the standard of classical learning completeness is ≥ 75%.

User responses were obtained by distributing response questionnaires. This student questionnaire consists of 10 statements and 2 questions. Students check the available column. The following are the results of obtaining student response questionnaires:

Table 8. Obtaining student response questionnaire results

No.	Name	Evaluation		Information
		Yes	No	
1.	FNF	10	-	Positive
2.	KGM	10	-	Positive
3.	ADG	10	-	Positive
4.	KAMP	10	-	Positive

No.	Name	Evaluation		Information
		Yes	No	
5.	SA	10	-	Positive
6.	KAJ	10	-	Positive
7.	A	9	1	Positive
8.	WF	10	-	Positive
9.	AJZ	10	-	Positive
10.	HAW	10	-	Positive
11.	IK	9	1	Positive
12.	KRA	10	-	Positive
13.	AQM	10	-	Positive
14.	N	10	-	Positive
15.	DA	9	1	Positive
16.	KJA	10	-	Positive
17.	AA	10	-	Positive
18.	MD	10	-	Positive
	Total	177	3	

The calculation of user responses to *scrapopbox* learning media can be said to be suitable for use after knowing the calculation of the final value of the average criterion score. Based on the table above, the final average response value can be obtained as follows:

$$P = \frac{f}{N} \text{ x } 100\% = \frac{177}{180} \text{ x } 100\% = 98{,}33\ \%$$

By obtaining a percentage of 98.33%, the *scrapopbox* teaching media meets very good requirements from the parameters that have been set, which is greater than 61%. The results that exceed these limits indicate that the use of Scrapbox media in learning is very acceptable and can be applied in the teaching and learning process.

Evaluation

Based on the stages of implementation, *scrapopbox* does not need to be evaluated. The results of the responses of *scrapopbox* media users get good comments so that researchers can find out that *scrapopbox* media is suitable for use in the learning process from the validation results of media experts, material experts, and the responses of *scrapopbox* media users.

CONCLUSION

Based on data analysis and discussion conducted by researchers with the title Development of *Scrapopbox* (Scrap and Pop Up Box) Metamorphosis of animals in elementary schools, it can be concluded that this development research uses the ADDIE development model developed by Reiser and Mollenda. This research consists of five stages, namely analysis, design, development, implementation, evaluation. At the analysis stage, it is adjusted to the analysis of needs, curriculum, students, and assignments. The media developed by the researcher is in the form of *scrapopbox* learning media, before making the media, setting the development schedule, selecting, and determining the material, then making initial designs, prototypes, guidebooks, instrument sheets, and finished goods to produce *scrapopbox* media. Furthermore, the validation of media experts and material experts then carried out the implementation, learning achievement tests, and response questionnaires to fifth-grade students at SD Alam Muhammadiyah Kedanyang. This development was carried out without an evaluation stage because it was appropriate. and the use of scrapopbox media provides a direct experience by seeing, feeling, and watching replicas of animals so that they get an experience that is closer to real events. With real experience, students tend to think more creatively. This is in line with what was conveyed by E. Lestari & Hadi (2022) who stated that the process of demonstration and practicum is intended to encourage the development of creative thinking abilities in students. The recommendations are combined

with the cooperative learning model so that the role of *scrapopbox* learning media plays a maximum role in the learning process.

Media is said to be of high quality by fulfilling the following aspects namely valid, Effectiveness dan User response. *Scrapopbox* learning media is said to be valid with the results of the media expert percentage of 87.5% because the flexibility of *scrapopbox* media can be used in various places and times, raises the attractiveness of students, creativity, innovation, and has strong resilience. Whereas material experts are valid by obtaining a percentage of 92.85 % because they are following CP, TP, and material indicators of animal metamorphosis, the material is easy to understand, coherent, precise, following the concept of material, and the character of elementary school children. Based on the above, the *scrapopbox* learning media can be used in the learning process.

Scrapopbox learning media is said to be effective because it gets results of obtaining a 100% classical learning completeness percentage. After all, the test scores of 18 students are in a complete category with a score of ≥75. In mastery learning, 13 students were able to analyze animal metamorphosis proven by students, find out the differences between larvae, caterpillars, maggots, larvae, and nymphs., while 5 students still had difficulties. Based on this, the *scrapopbox* learning media can be said to be effective in the learning process.

The user response is included in the very good criteria with a percentage score of 98.33% because for students *scrapopbox* media is a unique media that is rarely found and can strengthen students' understanding of animal metamorphosis material. Based on the above conclusions, the researcher provides the following suggestions: (1) Educators can use *Scrapopbox* media in the learning process in class, *Scrapopbox* media is capable of being a tool in delivering animal metamorphosis material because it is practical, arouses student curiosity, is unique, there are miniature artificial animals that give students direct experience, and are made of materials that can last a long time are not easily damaged. (2) For future researchers it can be used as a reference or reference for further research and can develop learning media.

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