

# DEVELOPMENT OF VIDEO LEARNING MATERIALS ON ANIMAL AND HUMAN MUSCULAR ORGANS

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## ABSTRACT

Today's students grow and develop in the digital era, where access to various information via electronic media has become commonplace. Therefore, the development of learning videos is not only relevant but also an urgent need to answer the characteristics of this digital generation. This research aims to create learning videos on animal and human movement organs that are suitable for use in learning. This research is development research that uses the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model. Based on the presentation of research results, information was found that learning videos on animal and human movement organs were declared suitable for use in learning with an average percentage of 85.83% from media experts, 91.66% from material experts, and 87.5% of student responses in the category worthy. These findings highlight the importance of integrating technology in education to facilitate more effective learning. Therefore, adjusting the curriculum and developing learning materials that support using video as an educational tool is necessary. Apart from that, aspects of technology accessibility and affordability need to be paid attention to so that the benefits of video-based learning can be felt equally by all students.

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## 1. INTRODUCTION

Technological developments are experiencing rapid developments, causing human thought patterns to become more advanced. Technological advances in the world of education can provide benefits in facing the learning process to increase human resources. Education is given in order to direct a person towards success in life, this is influenced by one factor, namely a person's motivation so that quality education is created. In the current technological era, education requires learning that is truly capable of making students understand the explanations given by the teacher. According to (Semara and Agung, 2021), teachers must be able to create learning media that can support the success of the teaching and learning process in the classroom.

Learning media is a fundamental component of the learning system (Salim et al., 2020). Learning media is a tool widely used in the learning process, making it easier to convey the material's content. The learning media must attract students' attention so that students are more active when learning. The interaction between teachers and students when using learning media helps students be more active because the use of learning media can facilitate the achievement of learning goals. The role of learning media in the learning and teaching process is an integral part that cannot be separated from the world of education (Talizaro, 2018). According to (Nabella, 2022), media is one form of learning multimedia that can be made, one of which is

learning videos. Learning videos are media that teachers can use in the learning process in class to help students understand the learning material provided. Apart from that, learning videos also make it easier for teachers to provide teaching materials by developments in learning technology. Videos are very effective for use in the teaching and learning process.

Based on observations made at SD Negeri 28 Kendari, information was found that this school had yet to utilize technology in the learning process, so the learning outcomes obtained were still meager, especially in the matter of animal and human movement organs. The low level of students' understanding of animal and human movement organs is caused by teacher and student factors. One of the factors causing the low understanding of animal and human movement organ material is that teachers only use books, so students are often asked to take notes, read the material provided, and then answer questions related to the reading. Teachers think that the important thing is that students have taken notes and listened to what is said; students can immediately understand it. There are many ways to increase students' understanding of animal and human movement organs, one of which is the help of technology-based learning media, one of which is learning videos. According to (Astika et al., 2020), the use of videos in learning provides several advantages, including being more attractive to implement in learning activities, the audio-visual format found in videos makes it easier to transfer knowledge, and the addition of exciting animations can increase students' learning motivation.

Research findings (Hasbullah et al., 2022) show that the video scribe media obtained the results of the media and material expert validator's assessment reaching the Very Good criteria and is suitable for use in learning. Another research was conducted by (Rezan et al., 2023) with the finding that learning media based on the Microsoft PowerPoint application on locomotor materials and their functions in animals and humans is very suitable for use as learning media. The weakness of this research is that the video media was developed only to measure cognitive abilities, while the affective and psychomotor aspects of students still need to be measured. Research conducted by (Purwanti, 2015) shows that learning video media is effectively used in learning and can increase students' learning motivation. The weakness of this research is that several video elements need to be refined to facilitate the continuity of material in learning.

Based on the description above, learning videos are needed to support effective and optimal learning. Today's students grow and develop in the digital era, where access to various information via electronic media has become commonplace. Therefore, the development of learning videos is not only relevant but also an urgent need to answer the characteristics of this digital generation. Learning videos are a tool and a means that can motivate and accelerate students' understanding of learning material. This research aims to create learning videos on animal and human movement organs that are suitable for use in learning.

## 2. METHOD

This research is development research which is defined as a research method used to produce a product and test its effectiveness (Sugiyono, 2019). The research model used is the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The details of the ADDIE model procedure are presented in the following figure:

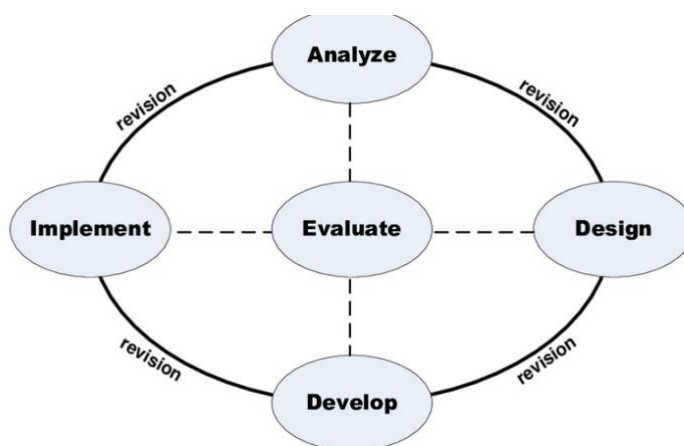


Figure 1. ADDIE Development Model

The initial stage of this research is the analysis stage by carrying out needs analysis activities related to teaching modules and identifying problems in the field, in this case class 5 of SD Negeri 28 Kendari with 20 students. The second stage, namely the design or planning stage, aims to collect teaching materials, which are then displayed on a storyboard as an initial design. The third stage in this research is the development stage; in this activity, the learning videos that have been made are validated by three material experts and three media

experts and will then be tested on grade 5 students at SD Negeri 28 Kendari, consisting of 20 respondents. The next stage is implementation, the field trial stage, and the final stage is an evaluation. This stage can occur in the four previous stages, which are helpful in improving the learning video according to the evaluation results at these four stages.

The data collection technique used in this research is a questionnaire (questionnaire method). The data analyzed is used to determine the appropriateness of learning videos on the subject of animal and human movement organs at SD Negeri 28 Kendari. The formula used to determine the appropriateness level of learning videos is:

$$Eligibility\ percentage(\%) = \frac{Actual\ Score}{Ideal\ maximum\ score} \times 100\%$$

The percentage scale for the feasibility test of learning videos is presented in Table 1 below:

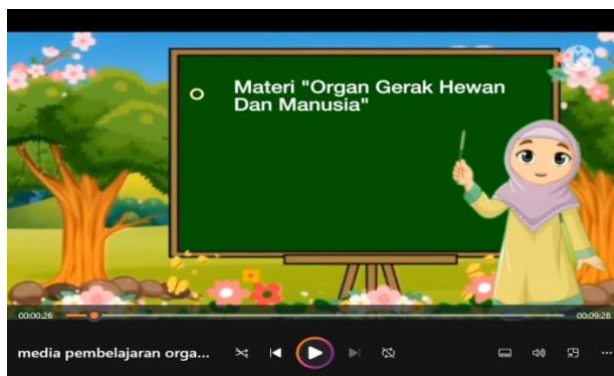
**Table 1. Due Test Percentage Scale**

Value Score	Value Scale	Description
76%-100%	4	Worthy
51%-75%	3	Decent Enough
26%-50%	2	Not Worth It
0%-25%	1	Not feasible

### 3. RESULT & DISCUSSION

#### 3.1. Development Stages

The analysis stage was obtained based on the results of the needs analysis carried out by observation and interviews. The results show that it is necessary to make learning videos using video scribes that are made according to the characteristics of students. Next, the second stage is design, this design stage is used to prepare teaching materials which are then displayed in storyboards. The third stage is development, this stage is the stage where you start making learning videos about animal and human movement organs using the video scribe application. Next is the implementation stage, where this stage is the field test stage which will be tested on grade 5 students at SD Negeri 28 Kendari. The evaluation stage is the final stage which is the stage of improving the learning video from various input obtained from the questionnaire distributed in the previous stage with the aim that the revisions carried out are in accordance with the input and suggestions from the questionnaire filled out. The learning videos that were developed and produced can be seen in the following image:



**Figure 2.** First Scene in the Learning Video

In the first scene, the learning video for animal and human movement organs displays an animation of a child and the theme to be studied. The background theme used is a mixture of several animations starting from images of trees, flowers and butterflies and added with an image of a blackboard which is used for text sentences to be written, navigation buttons consisting of play, stop, volume and exit buttons, written text. The color used is white which is adjusted to the background theme and the audio used is music little idea. This is in line with the opinion of (Sukiman, 2012) stating that learning videos are the display of images together with sound on electronic devices.



**Figure 3.** Second Scene in the Learning Video

In the second scene in the learning video about animal and human movement organs, the story's theme is displayed with an orange background, followed by animated images of trees, clouds, birds, and butterflies. These flowers are united in one scene. This serves so that the resulting video display can attract students' attention so that it is not dull in receiving learning. According to Arsyad (Iswara & Rosnelli, 2019), this is reinforced. Video media used in the teaching and learning process has many benefits and advantages, including video as a substitute for the natural environment and can show objects that students cannot usually see, for example, material on the digestion of food. And breathing. Videos can describe a process accurately and be viewed repeatedly, as well as encourage and increase students' motivation to see it. The navigation buttons consist of play, stop, volume, and exit buttons. The writing used is white, and the audio used is music little idea.



**Figure 4.** Third Scene Learning Video Display

In the third scene in the learning video about animal and human movement organs, it shows an explanation of the content of the material about animal and human movement organs which is made with a white background and several animations in it. This is in line with the statement (Rahmayanti & Istianah, 2018) stating that video media is audio-visual by combining several animated images that can move and are followed by audio according to the animated characters. The navigation buttons consist of play, stop, volume and exit buttons, the text used is bright red and the audio used is little idea music.



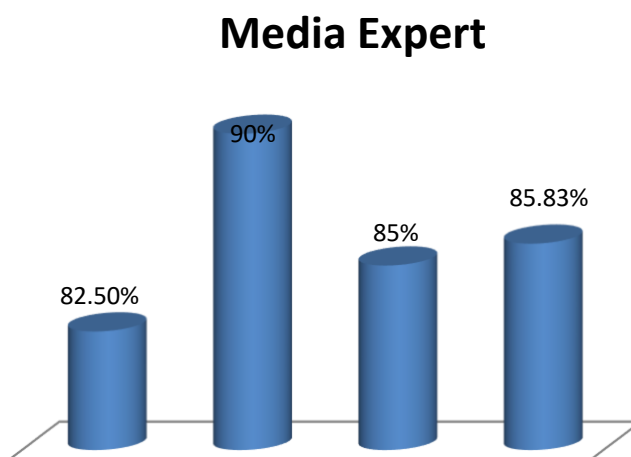
**Figure 5.** Fourth Scene Learning Video Display

In the fourth scene, the learning video for animal and human movement organs displays a quiz, with several questions and answers. With this quiz, the learning video is made not only to convey learning material

but with the aim of making the material explained easy to understand and acceptable to students. According to Rizki, et.al in (Hae et al., 2021) stated that for educators, giving quizzes or (Pretest) assignments has its own meaning for their students, pretests are often used as a mainstay instrument to measure students' level of achievement in mastering something. subject matter. The background used is blue with several other animations, black writing is adjusted to the background, navigation buttons consist of play, stop, sound volume and audio used, namely quiz music.

**2.2. Product Test**

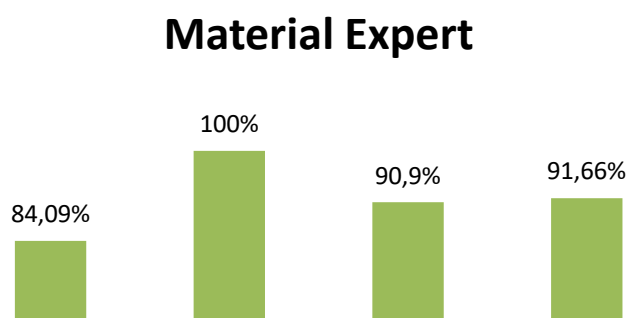
After the media is developed, its feasibility level is then tested. Product testing begins with a media expert validity test. Based on the results of media expert validity tests, an average result of 85.83% was obtained which was categorized as feasible. This average value was obtained from the recapitulation of the assessments of 3 media experts as presented in Figure 6. Based on this average value, the learning video product on the subjects of animal and human movement organs can be said to be suitable for use in learning.



**Figure 6.** Image of Media Expert Validity Results

Learning videos on animal and human movement organs are stated to be very effective, efficient and interesting to use (Badruttaman, 2019). According to (Krissandi & Rusmawan, 2015) also emphasized that the clarity and connection between learning media and indicators, objectives and materials must be a concern and consideration for teachers in selecting and using media in the learning process in the classroom so that the media used is more effective and efficient for achieve learning goals.

After the learning video is declared appropriate by the media expert, the assessment continues with the material expert. Based on material expert validation, an average of 91.66% was categorized as feasible. This average value was obtained from the recapitulation of 3 learning material experts as presented in Figure 7. Based on Figure 7, it can be said that the learning video using the video scribe application on animal and human movement organs has met the appropriateness standards. Learning videos are a medium that is able to bridge teachers so that learning is not conventional, the attractiveness of the media developed attracts students because the videos contain music, sound and explanatory illustrations as well as pictures taken from real conditions which are packaged very attractively (Woolfolk in Usman , 2011).



**Figure 7.** Material Expert Validation Diagram

After the learning video was declared suitable by media experts and material experts, a field trial was then carried out on 20 grade 5 students at SD Negeri 28 Kendari. The results obtained from the field test can be seen in Table 2.

Table 2. Data on Student Response Results

No	Respondent Code	Skor (%)	Criteria
1.	Responden 1	85	Worthy
2.	Responden 2	87,5	Worthy
3.	Responden 3	87,5	Worthy
4.	Responden 4	95	Worthy
5.	Responden 5	87,5	Worthy
6.	Responden 6	90	Worthy
7.	Responden 7	75	Decent Enough
8.	Responden 8	90	Worthy
9.	Responden 9	87,5	Worthy
10.	Responden 10	90	Worthy
11.	Responden 11	95	Worthy
12.	Responden 12	85	Worthy
13.	Responden 13	95	Worthy
14.	Responden 14	97,5	Worthy
15.	Responden 15	87,5	Worthy
16.	Responden 16	95	Worthy
17.	Responden 17	85	Worthy
18.	Responden 18	87,5	Worthy
19.	Responden 19	82,5	Worthy
20.	Responden 20	65	Decent Enough
<b>Average</b>		<b>87,5</b>	<b>Worthy</b>

Based on the results of the field test, it was found that the learning video on animal and human movement organs was suitable for use by students, where of the 20 student responses, 2 students gave an assessment in the Fairly Appropriate category, while 18 students said it was appropriate. This finding is in line with research results (Mukmin & Primasatya, 2020) which show that multimedia is valid and suitable for use in learning. Learning videos have a positive impact on students' learning activities such as material demonstrations, motivation, tutorials, and time effectiveness (Agustini & Ngarti, 2020).

#### 4. CONCLUSION

Based on the presentation of research results, information was found that learning videos on animal and human movement organs were declared suitable for use in learning with an average percentage of 85.83% from media experts, 91.66% from material experts, and 87.5% of student responses in the category worthy. The implications of these findings highlight the importance of integrating technology in education to facilitate more effective learning. Therefore, it is necessary to adjust the curriculum and develop learning materials that support the use of video as an educational tool. Apart from that, aspects of technology accessibility and affordability need to be paid attention to so that the benefits of video-based learning can be felt equally by all students. Thus, improving digital skills and applying appropriate evaluation methods is also an integral part in optimizing the positive potential of learning videos in educational contexts.

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