Development of Learning Videos Based on Problem-Solving Characteristics of Animals and Their Habitats Contain in Ipa Subjects on 6th-Grade

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A B S T R A K

Kurang tersedianya media pembelajaran berupa video dalam proses pembelajaran daring pada masa pandemi covid-19, sehingga belum mampu menarik perhatian siswa saat belajar. Penelitian ini memiliki tujuan untuk mengembangkan sebuah media video pembelajaran berbasis *problem solving* pada muatan IPA dan sudah diujikan kelayakannya menurut evaluasi uji ahli dan uji coba perorangan. Jenis penelitian ini adalah pengembangan dengan menggunakan model ADDIE. Metode yang digunakan untuk mengumpulkan data adalah angket yang dilengkapi dengan wawancara dan observasi. Analisis data yang digunakan adalah analisis deskriptif kuantitatif dan kualitatif. Subjek penelitian ini adalah pengembangan media video pembelajaran. Hasil penilaian tahap uji coba produk oleh ahli isi mata pelajaran adalah 100% pada kategori sangat baik, oleh ahli desain istruksional adalah 91,67% pada kategori sangat baik, ahli media pembelajaran 93,3% pada kategori sangat baik dan uji perorangan mendapatkan hasil 95,23% berada pada kategori sangat baik. Terimplikasi video Pembelajaran dengan meningkatkan cara siswa Untuk berpikir tingkat tinggi bukan hanya dalam pelajaran IPA tetapi juga pada mata Pelajaran lainnya. Sehingga dapat disimpulkan produk video pembelajaran berbasis problem solving layak digunakan dalam proses pembelajaran.

A B S T R A C T

Lack of available learning media in the form of videos in a bold learning process during the Covid-19 pandemic, so that it has not been able to attract students' attention while studying. This study aimed to develop a learning media video based on problem-solving in IPA subjects, and its feasibility has been tested according to expert test evaluations and individual trials. The type of this research is a development using the ADDIE model. The method used to collect data was a questionnaire equipped with interviews and observations. The data analysis used was descriptive quantitative and qualitative analysis. The subject of this research was the development of learning video media. The assessment results from the product trial stage by subject content experts were 100%, that was categorized great, by the instructional design experts was 91.67%, that was categorized great, by the expert of learning media was 93.3%, that was categorized great, and individual testing obtained 95, 23%, which were also categorized great. Implicated learning videos are by improving the thinking way of students to think higher is not only in the IPA subject but also in the other subjects. Thus, it can be concluded that the learning video product based on problem-solving is feasible to be used in the learning process.

Introduction

The development of science and technology increasingly encourages changes in utilizing the technology to make the learning process run smoothly (Wulandari, Sudatha, & Simamora, 2020; Yusuf & Widyaningsih, 2020). Teachers are required to be able to utilize all the materials and tools provided by the school following the condition, developments, and demands of the times. Besides, they should be able to use cheap tools and utilize them efficiently. Although it is simple, it should be useful and commonly used. However, it must be appropriate with the demand in achieving the expected learning objectives. In addition to being able to use the available material and tools, teachers are also required to develop their skills in creating a creative learning media that will be used if there are no media provided (Alviolita & Huda, 2019; Hafsah, Rohendi, & Purnawan, 2016). According to Pramana, Tegeh, & Agung (2016) a professional teacher not only comprehend theory but also can develop media as a whole and helpful for the education field. It also requires adequate facilities and infrastructure to be used in the learning process. Teachers as the facilitator should have a better ability which is not only teaching skills but also they should be able to use and develop any media provided in school.

In general, media is an intermediary. Media selection should be based on the students' needs which are different between one and another (Fadhli, 2016; Krisna, D, & Abadi, 2013). Also, it requires suitability between learning video media and learning objectives, suitability between learning video media and learning material, and suitability between learning video media and learning methods (Naharir, Dantes, & Kusmariyatni, 2019; Yusnia, 2019). At the primary school education level, the curriculum provides the lesson in the form of an integrated thematic that consists of five subjects. IPA (Natural Science) is one of the subjects included within the theme. IPA can engage interaction with nature so that the students can directly feel the object around their environment. IPA can be interpreted as a branch of science about nature such as animals, the environment, plants, and other objects that are useful and can be found in surroundings or actual natural conditions (Kimianti & Prasetyo, 2019; Puspasari et al., 2020).

Teachers also should utilize the media to increase the motivation of students learning activities (Alviolita & Huda, 2019; Novita, Sukmanasa, & Pratama, 2019; Puspitorini, Subali, & Jumadi, 2014). Therefore, learning media such as learning videos is very needed, not only on IPA subject but also in all other subjects. Thus, the learning process designed and carried out will have a higher quality. Learning media is something that can be used to deliver and concretize the message or learning material. Furthermore, it can stimulate students' attention, interests, thoughts, and feelings during the learning process to achieve learning objectives (Novita et al., 2019; Puspitasari & Murda, 2018). Learning is an important process for the changes in human behavior. It can include all of their thought and what they do. Through the interview with the 6th-grade teacher, the number of educational problems demands the teachers to find out effective suggestions and solutions to overcome them. It is such as maximizing the quality of the teachers by providing applicative and quality training. It can be seen from the number of teachers that still apply conventional teaching methods that are not appropriate to be applied in the present. Here, the teachers determine the quality of their students (Wahyono, Husamah, & Budi, 2020).

IPA subjects are fun learning because students can learn through nature and surroundings that are familiar to them. The students are invited to feel nature directly and recognize the learning objects around them, such as the phenomenon, problems, or the implementation of the science process. It is expected that they can understand and find the conclusion or concept about something they have learned. Learning outcome that are still not optimal is a problem and it must be addressed immediately. It is because the comprehension of learning material in the 6th-grade can influence the learning outcomes in the next level. Basically, the concept of IPA material, especially those which are related to the animal characteristics and their habitat, is directly related to real-life and found around us. Thus, the topic about the animal characteristics and their habitat should be able to be understood easier. The learning process of IPA, precisely at the Primary School Education Level applied a scientific approach, where the students seek out their own experience and science first (Jaedun & Nuryadin, 2017; Suryani, Renda, & Wibawa, 2019). It also invites students to think critically. The current problem is the problem of the implementation of the learning process that is less efficient and effective. Moreover, it is getting worse by the current situation of the COVID-19 pandemic that prohibits the schools from providing face-to-face learning process for students and replacing it by carrying out the learning process through online media with students. Therefore, many teachers face difficulties in delivering the teaching material to the students because it does not use any learning media, only face to face via online. Similarly, the students also face difficulties in comprehending the learning material.

Based on the results of needs analysis conducted through observation and interview steps, there are various problems or obstacles in learning IPA during the current pandemic situation. The use of learning video media in accordance with the material in the online learning process is still unavailable. Thus, it cannot stimulate students' attention maximally. Teachers only develop media such as a simple PowerPoint that contains text, explanation, and the benefit of the thematic book, which is still delivered unclearly and is difficult for students to understand. For these problems, it is deemed necessary to have an alternative solution that can help students in learning IPA, for example, the availability of learning video of IPA material that can help and facilitate the learning process. So, students can comprehend the concept and learning material quickly. Based on the analysis of student's characteristics and the school environment through the observation and interview, it was found that all students answered they like studying using a video as media. Therefore, it is necessary to develop learning video media as a reference for students in learning IPA.

Media can be interpreted as a means to distribute or spread information and message, which are important for the learning process, especially at the primary school level (Japa, Suarjana, & Widiana, 2017; Paramita, Garminah, & Wibawa, 2016). Media can also be interpreted as an intermediary for a message from teachers to the students. Teachers can also use learning media to convey learning material to the students (Devi & Bayu, 2020; Diani & Niken, 2018). Media selections for learning need to be adjusted with the availability and readiness of the teachers to use it, the availability of facilities and infrastructure that support the broadcasting of videos in schools, and the availability of an internet network for the smooth viewing of learning videos. Learning videos can be considered as the most familiar media for teachers. The roles of videos are not only seen as media

entertainment but also have a function as the learning media (Imamah, 2012; Purwanti, 2015). There are many advantages of learning video media, such as overcoming the problems of distance and time. It means that video does not have to be played or broadcasted at the same time because it can be easily accessed by anyone, anytime and anywhere. Furthermore, it can be used to tell any short past events or phenomenon, such as telling the past event of Indonesia independence. Also, it can invite students to adventure from one activity to another and can be played repeatedly to find clarity. Thus, the message conveyed is easy to remember because it is presented attractively and supported by images, text, and audio. Other advantages are able to develop students' opinions and thoughts, it can expand the imagination of students, and many more (Novita et al., 2019; Tegeh, Simamora, & Dwipayana, 2019). Thus, it can be concluded that the use of video media in learning can motivate students' interest and improve the quality of learning, especially students at the primary school level (Kurniawan, Agung, & Tegeh, 2017).

One of the solutions that can help teachers to overcome various existing problems is by utilizing learning media in the teaching and learning process. Media is a means that is sufficient to give a positive impact in maximizing educational problems. Media has an important role as the means to develop the thought about the teaching material contained in it. In this research, the researcher tries to provide an effective solution by developing media in the form of a learning video. Thus, it can help the teacher to convey the learning material to the students. Then, it is expected that the students will have an interest in it and can understand the learning material to be learned more quickly. The result of previous research conducted by (Krishna, Sudhita, & Mahadewi, 2015) is relevant to this research. It shows that the validity of learning video according to the subject content experts is 92% in excellent qualification, according to design experts is 89, 75% in good qualification, according to media expert is 88,6% in good qualification, and the individual trial is 95, 06% in excellent qualification. Furthermore, the results of small group trial are 94,5% in good qualification, and field trial is 93,46% in excellent qualification. Another previous research is by (Pramana et al., 2016). The results show that the validity of learning video development based on the experts' review is excellent. Based on the results, the percentage level of achievement by subject content experts is 92%, instructional design experts is 92%, and media experts is 90%. Based on the action research carried out in two cycles, it obtained a significant increase in learning outcomes. Thus, it can be concluded that the problem-solving method can increase the learning outcome of IPA in 6th grade of SDN 023 Long Ikis on the topic of the characteristics of living creatures.

However, in this current time, there is still a lack in the availability related to media, precisely creative and innovative learning video media regarding the learning material of animal characteristics and their habitats in the learning process. Besides, it is deemed necessary to make the students easier in understanding the explanation of a topic in a thematic book to be learned. Thus, based on the problems, a learning video media is developed, especially on IPA subject about the animals' characteristics and the animals' habitats. In developing this learning video media, the learning model that is used to channel the broadcasting video is the problem-solving learning model. The strength of this research is in optimizing the learning process by implementing the problem-solving learning model. It is because of its advantages that can develop the students' ability to think critically. By developing a learning video media and use it in learning process, it will encourage and train the students' ability to think critically. Also, it will evolve the students' interest to learn harder. This study aims to develop a product and describe the design and feasibility of learning video products.

Method

This research is descriptive qualitative and quantitative research. The research was conducted at SD No. 2 Tibubeneng, North Kuta District. This development research applied the ADDIE model as the development stage. It included Analyze, Design, Development, Implementation, and Evaluation. This model is a systematic learning design model.

The method applied to collect the data was the questionnaire method with interviews and observations. The questionnaire method was used in testing the product on the trial subjects. The trial subjects were subject content expert, instructional design expert, learning design expert, and individual trials on students. The experts consisted of 1 (one) expert of subject content, who is a lecturer of Ganesha University of Education. This expert teaches the IPA course. The next expert was 1 (one) expert in design and learning media who is a lecturer at the Ganesha University of Education. This expert is qualified in the field of educational technology. In the individual trials, the subject consisted of three people of 6th-grade students of SD No. 2 Tibubeneng, North Kuta District. The questionnaires given to the respondents were closed and open questionnaires. There were 13 (thirteen) statements in questionnaire for the subject content expert that consisted of three aspects, namely the aspect of curriculum, material content, and grammar. There were (9) nine statements in questionnaire for the instructional design expert that consisted of three aspects, namely objectives, strategies, and evaluation. There were 15 (fifteen) statements given to the learning media expert that consisted of two aspects, namely technical

Development of Learning Videos Based on Problem-Solving Characteristics of Animals and Their Habitats Contain in Ipa Subjects on 6th-Grade

39

and view. Also, there were 7 statements in the questionnaire for the individual trial that consisted of three aspects, namely view, material, and motivation. The questionnaire grid for the validity of the learning video development is presented as follows.

Table 1. Questionnaire Grid of Subject Content Expert

Aspect	Indicators	Item	Total Item
Curriculum	a. Basic Competencies b. Indicators c. Objectives	1,2,3	3
Material Content	a. Material Truth b. Provisions of the material c. Depth of material d. Material attractiveness e. Suitability of material with students characteristics f. The material is easy to understand g. The material represents real life h. The concept of material is make sense (can be logically understand)	4,5,6,7,8,9, 10,11	8
Grammar	a. Use of appropriate and consistent language b. The language used is in accordance with the characteristics of students	12,13	2
Total			**13**

Source: (Suartama, 2016)

Table 2. Questionnaire Grid of Instructional Design Expert

Aspect	Indicators	Item	Total Item
Objectives	a. Clarity of Objectives b. Consistency between objectives, material, and evaluation	1,2	2
Strategies	a. Delivery of material b. Learning activities c. Providing examples for concept understanding d. Providing students to study independently	3,4,5,6	4
Evaluation	a. Presentation of questions b. Clarity of question instructions c. Giving feedback	7,8,9	3
Total			**9**

Source: (Suartama, 2016)

Table 3. Questionnaire Grid of Learning Media

Aspect	Indicators	Item	Total Item
Technical	a. Ease of using media b. Media can help students in understanding the material c. Media can provide motivation for students in learning d. Students can play back video media e. The effective duration of the video for students to study	1,2,3,4,5	5
View	a. Text legibility b. Consistency of themes c. Use of images that support the material d. Use of proper letter type, fond, size, and space e. The right and match of colour composition and combination f. Use of proper animation g. Support for appropriate accompaniment music h. Use of the right sound effect	6,7,8,9,10, 11,12,13,14,15	10

Aspect		Indicators	Item	Total Item
	i.	Use of appropriate narrative		
	j.	The screen display is harmonious and balance		
		Total		15

Source: (Suartama, 2016)

Table 4. Questionnaire Grid of Individual Trial

Aspect		Indicators	Item	Total Item
View	a.	The attractiveness of the opening of the learning video	1,2,3,4	4
	b.	Text legibility		
	c.	Clarity of image		
	d.	Clarity of Dubbing Voice		
Material	a.	The material is easy to understand	5,6	2
	b.	Clarity of material explanation		
Motivation	a.	Media give a motivation for students in learning	7	1
		Total		**7**

Source: (Sudarma, Tegeh, & Prabawa, 2015)

In this research, the data was analyzed using a descriptive quantitative method. The results of the quantitative data analysis were data processing steps in the form of numbers related to an object researched. As a result, it obtained a conclusion. The descriptive quantitative analysis was applied to process the data or the answer to questionnaire statements written in a score filled by the respondents (subject research).The following provision was used to draw a significant conclusion. It was analyzed using a Likert scale that has 4 (four) categories.

Furthermore, the scores obtained through the questionnaires were converted into a percentage response of each subject. The standard applied to give a significant percentage score in decision making of research product trial is shown in the following table.

Table 5. Conversion of Achievement Levels with a Scale of 5

No	Achievement Levels (%)	Qualification	Description
1	90-100%	Excellent	No need to revise
2	75-89%	Good	Little revision
3	65-74%	Pretty Good	Revised sufficiently
4	55-64%	Not God	Many things are revised
5	1-54%	Very Poor	Repeat to make a product

Source: (Tegeh & Kirna, 2010)

Result and Discussion

The data analysis results of the stage of developing learning video obtained the validity of learning video development related to the evaluation product. The validity results of the learning video were explained into 4 (four) main topics. Those were the subject matter expert test, instructional design expert test, learning media expert test, and individual trial. The four data will be presented in a structure in line with the results obtained from each trial. The final results of validity of the learning videos development according to the expert test and product trial will be explained in more detail in the following table:

Table 6. The Percentage of Validity Results of Learning Video Development

No	Trial Subject	Validity Results (%)	Qualification Percentage
1.	Subject Content Expert Test	100	Excellent
2.	Instructional Design Expert Test	91,67	Excellent
3.	Learning Media Expert Test	93,3	Excellent
4.	Individual Trial	95,23	Excellent

Development of Learning Videos Based on Problem-Solving Characteristics of Animals and Their Habitats Contain in Ipa Subjects on 6th-Grade

41

Based on the percentage of each validity result of the developing learning videos product problem-solving based can be concluded that learning video media problem-solving based was feasible to be implemented in the 6th-grade of SD No. 2 Tibubeneng. Also, it had passed some revisions according to benchmark and reference in the revision process. The next stage was product revision carried out after the product had been assessed for its usefulness and feasibility by experts. The input gave related to the quality of the learning video media to improve and enhance the learning videos developed. The following described the revisions that had been made in improving the product according to the input and comments from all experts and students. This research resulted in a product in the form of learning video media problem solving based for 6th-grade elementary school. The media developed was about the material with IPA subject and combined using supporting pictures that harmony with the material. So, it was clear that students understand the material when reading and observing the media. In each development, this learning video media had gone through the trial and improvement stages. The following section discusses the results of media development based on the evaluation results of the three experts and product trials by students.

The design of learning video media development used the ADDIE development model. The first stage carried out by the researcher was the stage of analyzing students' characteristics, analyzing material, and analyzing the school environment. The process in this stage faced difficulties when analyzed the students' characteristics due to the current pandemic situation and condition. It caused not all students could attend and meet in person at school. It was proven during the process of needs analysis. The researcher still needed to interview the teacher in order to obtain a maximum result. There was also a problem with the lack of media availability of visual aids such as a video to help the teacher delivered the learning material. It caused the students' had less interested in the material conveyed by their teacher.

The second stage was the design stage. This stage started from determining the application to be used in developing the product without difficulty. Also, it carried out the storyboard design and video scripts to make it easier during the product development process. The learning video was designed as good as possible by implementing the problem-solving learning model. So, it can attract students' attention and interest. It was similar to the learning video media design that used real pictures and presented the material using legible letters as well as following the students' characteristics. In addition to the use of letters, the use of colors was also considered in developing the learning video media. Learning video media contained elements of text and images to support the material presented. There wee several concepts and design principles for text and pictures in designing the product, which was the developer must pay attention to it. The video developer must pay attention to the positive impression of learning media, which is designed according to the students' characteristics. Besides, the text should be readable. It can use simple and easy-to-understand language. Also, it was significant to consider the clarity of the images, a layout that raised enjoyment for the media readers, and the attractiveness of the images chosen. Those can arouse passion and students' enthusiasm and seriousness in using learning videos during the teaching and learning process. Lastly, the choice of colors should be considered in designing the learning video media.

The third stage was development. At this stage, the product that had been designed was developed. It was made in physical form and arranged following previous made designs and subject matter that had been prepared and agreed upon previously. At this stage, the learning video product was formed to become a unit of learning video media with a problem-solving learning model. Thus, it gave a different impression from existing video products. The plot of this learning video presented the problems or cases that can build students' high-level thinking. Further, it proceeded with the presentation of limited material related to the animals' characteristics and their habitats. The learning video contained images as well as text and material in accordance with the IPA subject material. The results of the development in the form of learning videos were tested on experts until the product was declared feasible to be applied.

The fourth stage was the implementation. This stage aimed to determine student responses in terms of the attractiveness and feasibility of the media. At this stage, it used a questionnaire as a data collection technique. The questionnaire was distributed to individual trial subjects, namely the 6th-grade elementary school students. The process at this stage did not experience difficulties because the school allowed meeting directly with students. However, it still applied health protocols during the process. At this stage, the product testing was carried out on a limited basis, not until the effectiveness test.

The last stage or the fifth stage was the evaluation stage of all data that had been collected in the fourth stage or implementation stage. The evaluation in this stage was in the form of formative evaluation. A formative evaluation was carried out to measure or assess learning videos consisting of expert validation and individual trials. Calculating each score and giving meaning in decision-making was done manually using a formula to calculate the percentage.

The results of the Validation Review of Learning Video Media Development. The results of the review regarding learning video media according to subject content experts were the assessment of content experts in IPA subject on the material components that was spread over a score of 4 (strongly agrees). The quality achieved

was that the material aspects got 100% criteria from subject content experts. As for what was assessed by content experts included the material presented and displayed in the learning video. In developing instructional videos, the suitability of the material reviewed in the learning media must be in accordance with predetermined learning objectives. According to (Nurrita, 2018) the composition of the material is seen from the sub-abilities or skills described in the specific learning objectives. Thus, the material was compiled to achieve the expected goals of the teaching and learning process.

The results of the Instructional design expert on the instructional design components of learning shown that it was at a score of 3 (agree) and a score of 4 (strongly agree). Each distribution of these scores obtained the final results that provided excellent criteria with a 91.67% percentage. Learning designs were developed in order to help someone's learning process. Instructional video media in terms of learning design got excellent criteria. It was because learning video media were able to motivate students to be active in learning activities and made learning more attractive and meaningful in terms of assessment. Similarly, (Yuanta, 2019) stated that the existence of learning video media, students can see firsthand events that cannot be presented in the classroom. Therefore, learning using video media can foster students' interest and motivation to pay attention to learn.

The results of reviews from learning media experts on the material learning components were spread over the score categories 3 (agree) and 4 (strongly agree). The spread of these scores created an excellent final result with a 93.3% percentage. The provisions of the assessment included packaging and message design. In terms of appearance and affirmation, learning video media products combine real and simple images, which is in line with student characteristics to attract student's attention to be more active in learning with the help of learning videos. According to (Yendrita & Syafitri, 2019)learning video media can improve student understanding by seeing pictures and hearing voices about explanations of events that cannot be seen. All of these things can be seen and can be broadcast repeatedly through video media. Based on this assessment, learning video media developed in terms of learning media had been aligned with student characteristics.

The results of reviews of learning video media based on the individual trials. This media achieved excellent stipulated results. Based on the comments given by respondents or students, learning video media got a positive response. Similarly, the results of research conducted by (Silmi & Rachmadyanti, 2018) based on the product trial stage shows that the ANVIS learning media is suitable for use as an alternative to learning media on a wider scale. Improvements were also made to media to minimize media shortages before use. Based on the assessments from experts of subject content, instructional designs, instructional media, and individual tests, the learning video media developed were valid. Thus, it can be used by students in learning activities, especially in IPA subject in the 6th grade of elementary school.

The results of product trials conducted by subject content experts got a 100% percentage score with excellent qualification results. Instructional design experts got a 91.67% percentage score with excellent qualification results. Learning media experts got a 93,3% percentage score with excellent qualification results. Trial products by individual trial got a 95, 23% percentage score with excellent qualification results. Therefore, learning video products did not need to be revised. However, there were inputs or suggestions from test subjects that were used to improve learning video products. Suggestions and inputs are described as follows.

Table 7. Inputs/ Suggestions

No	Trial Subject	Input/Suggestions	Revision
1	Test of Subject Content Expert	Complete the material related to the elephant's hearing sense	Fully understand the material related to the function of the elephant's hearing sense
2	Test of Instructional Design Expert	The question is adjusting to the material, especially animals. The objective to be "through watching learning videos"	Fix the evaluation questions to fit the material in the video, improve the learning objectives to be "through watching the learning video"
3	Test of Learning Media Expert	In the picture of an elephant, you should also show a swimming elephant, duck feet, and duck beak and zoomed in. It needs confirmation about an arrow is important, thank you.	Fix the image in the video according to the description of the dub, clarify the duck's legs and beak, improve the video display by giving an arrow as an explanation, display thanks to all parties involved in making the video.
4	Individual Trial	The video is very interesting and easy to understand, the video is very interesting, the video display is clear and easy to understand	-

Development of Learning Videos Based on Problem-Solving Characteristics of Animals and Their Habitats Contain in Ipa Subjects on 6th-Grade

43

The result obtained based on the trial products was an excellent qualification. Therefore, the learning videos are interesting and feasible to use. ADDIE model was applied as the developing model because it had structured stages. This research was limited to the individual trial stage without doing the effectiveness test phase considering the current situation.

The results at the product trial stage by subject content experts based on the assessment shown excellent qualification results. It was followed by some input and suggestions for product improvements. Product testing was carried out by distributing a questionnaire that contained statements related to the material displayed in the learning video, such as the suitability of the material with indicators and the material with learning objectives. Besides, the main function of learning media is as a teaching aid, in which it influences the motivation, conditions, and the learning environment (Falahudin, 2014; Putri & Desyandari, 2019). Two factors influence students' learning conditions. Those are internal and external factors (Susmiati, 2020). For this reason, the ability of teachers to choose strategies for learning is needed to increase the achievement of learning objectives (Oya & Budiningsih, 2014; Wuryanti, 2016). Based on the results of research and discussion, the learning video media will greatly complement the facilities and infrastructure in the learning process (Batubara & Batubara, 2020).

The results of product testing by instructional design experts were obtained from distributing questionnaires containing statements related to design assessments about learning objectives, basic competencies, indicators, and the suitability of questions to the material. All designs arranged must be related to each other in order to generate better motivation from students themselves (Widiyasanti & Ayriza, 2018; Zahroh, 2014). Improving students' abilities by combining the use of video media will be very helpful (Lestari, 2019). According to (Purwanti, 2015) media is something in which it can convey messages and information in learning materials such as audio-visual aids. It can stimulate students' minds in the learning process. Likewise, (Novita et al., 2019; Purwanti, 2015) argued that instructional video media is a combination of media between audio and visual combined, so it has sound and image elements.

The results of product trials by instructional media experts obtained excellent qualification results. It was obtained by distributing questionnaires containing statements to experts to be given assessments related to research products. The contents of the statement were an assessment regarding the view of the learning video, such as the duration of time, the readability of the writing, and the clarity of the image. The video also contained voices such as music, explanations, and sounds taken from actual conditions (Naharir et al., 2019). Video learning media also has a positive influence on students' learning outcomes and provides a pleasant atmosphere. Thus, students' attention will focus on videos containing information regarding the learning material (Dewi, 2013; Sarnoko, Ruminiati, & Setyosari, 2016).

The results of individual trials were the last product trials. The trial subject involved 3 (three) students who had the different achievement of learning outcomes, ranging from high, medium, and low. The product trial process was carried out by distributing a questionnaire containing statements about the clarity of the video and the attractiveness of the learning video display. According to (Sudiarta & Sandra, 2016), learning videos can be a solution to overcome students' low abilities in understanding a concept. The ease of presenting videos that can be repeated during the learning process makes it easier for students to understand them. In addition to the systematic presentation of material, it is also easier for students to quickly understand concepts (Sudiarta & Sandra, 2016).

Based on these data, the learning video media developed is suitable for use in the learning process, especially in IPA subject. It is due to the advantage of applying a problem-solving learning model as a flow for the video display and combining real pictures that will attract students' attention. Thus, it makes students enthusiastic in participating in the learning process and can train students' higher-order thinking skills. Likewise (Irfan, A., 2016) stated that video is a fun medium for students, which can arouse curiosity and enthusiasm for learning. Videos can explain something abstract and seem real.

Conclusion

Based on the observations and trials, the results show that the implementation of learning video media problem solving-based can make learning activities is more interesting, efficient, and have a positive effect on the learning outcomes of each student. Therefore, learning video media is feasible to be applied in thematic learning, especially in IPA subject.

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45

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Development of Learning Videos Based on Problem-Solving Characteristics of Animals and Their Habitats Contain in Ipa Subjects on 6th-Grade

47