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Animated Video-Based Learning Media Assisted with Powtoon on Living Things Characteristics Topic

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ABSTRAK

Kurangnya pengembangan media pembelajaran, dan pembelajaran masih berpatokan dengan buku menyebabkan kegiatan pembelajaran terkesan kurang inovatif. Hal ini berdampak pada hasil belajar siswa yang rendah. Tujuan penelitian ini yaitu mengembangkan video animasi berbantuan aplikasi powtoon pada mata pelajaran IPA topik ciri-ciri makhluk hidup. Jenis penelitian ini yaitu pengembangan dengan menggunakan model pengembangan 4-D. Subjek penelitian yaitu ahli media pembelajaran, ahli materi, ahli media, respon praktisi, respon siswa. Metode pengumpulan data yang digunakan dalam penelitian ini adalah observasi, kuisioner, rating scale, dan dokumentasi. Instrumen yang digunakan untuk mengumpulkan data yaitu kuesioner. Teknik analisis data yang digunakan pada penelitian pengembangan yaitu teknik analisis statistik deskriptif kualitatif dan analisis statistic deskriptif kuantitatif. Hasil penelitian yaitu hasil validitas dari ahli media sebesar 94,5% (sangat baik). Hasil ahli materi pembelajaran mendapatkan nilai 93,8% (sangat baik). Hasil uji kepraktisan guru sebesar 97,7% berada pada predikat sangat praktis dan tidak perlu di revisi. Hasil uji kepraktisan oleh siswa memperoleh persentase sebesar 95% (sangat praktis). Disimpulkan bahwa media video animasi powtoon ini layak digunakan dalam proses pembelajaran. Media video animasi powtoon memudahkan siswa belajar dan memotivasi siswa dalam belajar.

ABSTRACT

The lack of learning media development and learning that is still based on books causes learning activities to seem less innovative. It has an impact on low student learning outcomes. This research aims to develop an animated video with the help of the Powtoon application in natural science subjects on the topic of living things. This type of research is designed using the 4-D development model. The research subjects were learning media experts, material experts, media experts, practitioners' responses, and student responses. Data collection methods used in this study are observation, questionnaires, rating scales, and documentation. The instrument used to collect data is a questionnaire. Data analysis techniques used in development research are qualitative descriptive statistical analysis techniques and quantitative descriptive statistical analysis techniques. The research results are the results of the validity of media experts at 94.5% (very good). The results of learning material experts get a score of 93.8% (very good). The teacher's practicality test results were 97.7% in the very practical predicate and did not need to be revised. Students' results of the practicality test obtained a percentage of 95% (very practical). It was concluded that this Powtoon animation video media is feasible to use in the learning process. Powtoon animated video media makes learning easy for students and motivates them to learn.

1. INTRODUCTION

A teacher has a very important role in improving the quality of education in Indonesia. Teachers are required to develop their potential which has an important role in creating a comfortable and conducive learning atmosphere so that learning goes well (Izati et al., 2018; Jatmiko et al., 2018; Mertasari & Ganing, 2021). Good learning is learning that can facilitate student learning needs. This is in accordance with the nature of learning, namely the process of organizing and organizing the environment around students so that it can encourage students to carry out the learning process. (Maulida et al., 2020; Shahbari & Daher, 2020). Learning aims to enable students to achieve basic competence in a learning content that is appropriate to their cognitive level. To achieve the learning objectives, of course the teacher must design learning by paying attention to learning content, student characteristics, and student learning environment (LaForce et al., 2017; Sadikin & Hakim, 2019). Teaching materials must be prepared and developed so that students quickly understand and remember the subject matter in a relatively long period of time.

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In addition to learning materials, student learning environment must also be considered. A good environment will make students feel comfortable when studying. Besides that, the environment can also be used as a learning resource. Learning resources are anything that can contain messages or subject matter to be presented through the use of tools or directly by himself (Juwandi & Widyana, 2019; Rimawati & Wibowo, 2018). The learning resources used in the learning process are not only limited to the environment, but there are many that can be used as learning media. Messages or learning materials contained in learning resources will be easier to understand if conveyed or presented using appropriate learning media(Giovanni & Komariah, 2019; Hamidah & Yanuarmawan, 2018). Learning media is an intermediary means of communication to deliver teacher messages to help students understand in achieving learning goals (Astutik et al., 2021; Wahyu et al., 2020). By using learning media it will become more interesting and not seem monotonous, students can also be directly involved in using the media so that students become more active and the class atmosphere becomes more enjoyable. Therefore, the media has a very important role in the learning process.

Learning media allows students to find and understand a concept independently (Saputra & Putra, 2021; Syahrowardi & Permana, 2016). At the present time we are faced with the covid-19 pandemic, this pandemic does not only have an impact on health but one of which is an impact on education where the government takes a policy to dismiss students and divert learning from face-to-face at school to online learning or online. (Djalante et al., 2020; Wijayanti & Fauziah, 2020). The government hopes that online learning will not dampen student enthusiasm for learning and will not reduce the quality of students. However, in fact there are still many problems found in the field. The problem found is the lack of students' understanding of the material taught with online media, especially in science subjects (Laksmi & Suniasih, 2021; Mertasari & Ganing, 2021). What's more, students do not listen to the teacher's explanation directly so that learning becomes less effective and boring. The material presented is only sourced from student books and teacher books only provide one-way teaching. If this is allowed to continue, it will affect student learning outcomes in science subject matter.

In line with the opinion above, the problems encountered based on observations at SD Negeri 3 Sambangan, Buleleng Regency, are the lack of development of learning media, and most of the learning is still based on books so that it seems less innovative. This problem is reflected in students who rarely respond to teacher questions. Science learning on the topic of the characteristics of living things is still low in the learning process, it can be seen that students only master knowledge about science learning without relating it to the surrounding environment. In addition, the use of learning media is also still very less visible from students who tend to get bored participating in learning and students who are engrossed in their own activities in learning.

The solution to this phenomenon is to make learning activities that involve active students with animated video media assisted by the powtoon application, so that the learning process must always involve student activity (Fitriani et al., 2020; Laksmi & Suniasih, 2021). Learning Media is anything that can convey and distribute messages from sources in a planned manner so as to create a conducive learning environment where recipients can carry out the learning process efficiently and effectively (Hikmah & Purnamasari, 2017; Permatasari et al., 2019). Animated video is media that contains a collection of images that are processed in such a way as to produce movement and is equipped with audio so that it is memorable and saves learning messages.

The findings of previous research stated that powtoon is a website that allows users to create and edit short videos containing various elements and features that can be selected to create animations with complete backgrounds, animations, background music/audio and recordings. (Mertasari & Ganing, 2021; Sabilla et al., 2020). Other research also states that the display on the Powtoon website contains a variety of templates that users can directly use by simply changing and adding the points needed. (Lestari et al., 2018; Wulandari et al., 2020). There has been no study on Powtoon-assisted animated learning videos on the topic of living things' characteristics. The purpose of this research is to develop Powtoon-assisted animation learning videos on the topic of living things' characteristics. It is hoped that the Powtoon-assisted animated learning videos can help students learn material on the topic of the characteristics of living things.

2. METHOD

This research is a research on the development of animated video-based learning media assisted by the powtoon application on the topic of living things in class III Elementary School. The model used in this study is the 4D model which consists of four phases, namely definition, design, development, and deployment (Istiyono et al., 2018). The selection of this model is based on the consideration that this model is developed systematically and is based on a theoretical foundation of learning design. The

development of animated video-based media on the topic of the characteristics of living things is carried out in several stages. The stages carried out are: define, design, develop, and disseminate.

The product development research trial was carried out by reviewing animated video-based media assisted by the Powtoon application that had been developed. Reviews are carried out by experts to determine the validity of animated video-based media. In addition to the expert review, the trial was conducted on third grade students at SD Negeri 3 Sambangan, Buleleng Regency. In product trials, several things are also carried out in it such as conducting design trials, determining the test subjects, determining the type of data, determining the methods and instruments of data collection, determining the test assessment instruments. Data collection methods used in this study are observation, questionnaires, rating scales, and documentation. The instrument used to collect data is a questionnaire. Questionnaire grids are presented in Table 1 and Table 2. The data analysis technique used in this development study was a qualitative descriptive statistical analysis technique and a quantitative descriptive statistical analysis technique.

Table 1. Questionnaire of Learning Media Experts

No	Indicator
1	The clarity of the animation on the video
2	The attractiveness of the animated video display
3	Ease of use of animated video media
4	Clarity of sound animation video content and clarity of text/readability
5	Accuracy of symbols and punctuation
6	Use simple sentences
7	Spelling accuracy used
8	Ease of presentation of animated videos
9	The accuracy of the layout of the animation on the video

Table 2. Learning Material Experts

No	Indicator
1	Suitability of animated video media with natural science learning characteristics of living things
2	Media can be used both individually and in groups
3	Animation video media can support students' understanding and problem solving
4	Suitability of the material in the animated video with KI and KD
5	The material is in accordance with learning science class III
6	The material presented is attractive to students and easy to understand
7	The material presented is in accordance with current science
8	Submission of material sequentially

3. RESULT AND DISCUSSION

Result

This type of research is development research in the form of developing animated video-based learning media assisted by the powtoon application in natural science subjects on the topic of living things in class III elementary school. Media development is carried out by applying the 4-D model through the stages of defining, designing, developing, and disseminating. The selection of the 4-D model is based on the fact that the 4-D model has clear and systematic stages. and easier to do research. The results obtained in development research are as follows. The first stage is the definition stage (define). At this stage the activities carried out by analyzing student books are carried out to find out the scope of the science content material in the book, so that the material that needs to be developed can be identified. The next activity is to design animated video-based learning media with the help of the powtoon application in natural science subjects on the topic of living things.

The second stage, namely design. At this stage it begins with designing animated video-based learning media with the help of the powtoon application in the natural sciences topic about the characteristics of class III elementary school creatures. This activity begins with determining KD (Basic Competency) and Indicators. The next activity is to create a sketch of learning media based on animated videos with the help of the Powtoon application. The third stage is development. The activities carried out are developing animated video-based learning media assisted by the powtoon application. Then the expert test was carried out by providing a wide assessment which contained the feasibility of animated

video-based learning media assisted by the powtoon application on the topic of living things. This activity is assisted by the powtoon application, namely media in the form of an animated video which includes an opening, content, and closing. The media that has been developed is then assessed by experts, teachers, and students. The results of the assessment of learning media experts are presented in Table 3.

Table 3. Results of Learning Media Expert Assessment

No	Indicator	Responden 1	Responden 2
1	The clarity of the animation on the video	4	3
2	The attractiveness of the animated video display	4	4
3	Ease of use of animated video media	4	4
4	Clarity of voice animation video content and clarity of text/readability	3	3
5	Accuracy of symbols and punctuation	4	4
6	Use simple sentences	4	4
7	Spelling accuracy used	4	4
8	Ease of presentation of animated videos	4	4
9	The accuracy of the layout of the animation on the video	4	4
	Total	**34**	**34**

Based on the results of media experts, the percentage of achievement levels is then calculated. The total percentage of R1 and R2 is 189%, then find the average percentage of respondent 1 and respondent 2 = 189% : 2 = 94.5% with very good qualifications. Based on the results of the responses of learning material experts, the percentage of achievement levels is then calculated. The total percentage of R1 and R2 is 187.6%, then find the average percentage of respondent 1 and respondent 2 = 187.6% : 2 = 93.8% with very good qualifications. The results of the expert assessment of learning material experts are presented in Table 4.

Table 4. Results of Expert Assessment of Learning Materials

No	Indicator	Responden 1	Responden 2
1	Suitability of animated video media with natural science learning characteristics of living things	3	3
2	Media can be used both individually and in groups	4	4
3	Animation video media can support students' understanding and problem solving	4	4
4	Suitability of the material in the animated video with KI and KD	3	3
5	The material is in accordance with learning science class III	4	4
6	The material presented is attractive to students and easy to understand	4	4
7	The material presented is in accordance with current science	4	4
8	Submission of material sequentially	4	4
	Total	**30**	**30**

Animated video-based learning media assisted by the powtoon application in natural science subjects on the topic of the characteristics of living things was then tested for practicality by 2 teachers and 3 students. The results of data analysis showed that the percentage given by the teacher was 97.7%, then the results were converted into a media practicality category table. The practicality calculation results of 97.7% are in the **Very Practical** predicate and do not need to be revised. The results of the assessment given by the students obtained a percentage of 95%, then the results were converted to a table of media practicality categories. The practicality calculation results of 95% are in the **Very Practical** predicate and do not need to be revised. Based on the results of data analysis, it was concluded that animated video-based learning media assisted by the powtoon application in natural science subjects on the topic of living things is appropriate for use in learning.

Discussion

Based on the results of data analysis, it was concluded that animated videos assisted by the powtoon application in natural science subjects were appropriate for use in learning. This is caused by several factors, namely first, animated videos assisted by the powtoon application make it easier for students to learn. Teachers have a very important role in improving the quality of education must study

data on students who have difficulty learning (Alannasir, 2016; Armansyah et al., 2019). Teachers are also required to develop the potential of each student, so teachers must design learning activities with a comfortable and conducive atmosphere so that learning activities can run optimally. (Alfianti et al., 2020; Muslina et al., 2018). Good learning is learning that can facilitate students in learning, and this is in accordance with the nature of learning, namely that it can encourage students to carry out correct learning activities (Wuryanti, 2016; Yuniarni et al., 2020b). The use of animated videos assisted by the PowToon application makes it easier for students to learn science. In accordance with the findings of previous studies, it was stated that the use of animated videos would make it easier for students to understand learning material (Permatasari et al., 2019; Yuniarni et al., 2020a). This is because the use of video helps convey abstract material into concrete so that it is easier for students to understand learning material. Students who easily understand learning material will certainly have an impact on increased competence so that learning objectives are achieved (Hikmah & Purnamasari, 2017; Mayang Ayu Sunami & Aslam, 2021).

Second, animated videos assisted by the powtoon application increase learning motivation. An interactive learning atmosphere will certainly increase the enthusiasm of students in participating in learning activities (Sabilla et al., 2020; Sukiyasa & Sukoco, 2013). Good learning is learning that can facilitate student learning needs. This is in accordance with the nature of learning, namely the process of organizing and organizing the environment around students so that it can encourage students to carry out the learning process. (Antika et al., 2019; Patriani & Kusumaningrum, 2020). The use of animated videos assisted by the Powton application makes the learning environment comfortable so as to make students enthusiastic in participating in learning activities. Learning resources in the form of learning videos provide messages and learning materials that make students easy to understand the material, so that students' interest in learning increases. Learning media is an intermediary means of communication to deliver teacher messages to help students understand in achieving learning goals (Kusumawati, 2016; Novita & Putra, 2017). With the use of animated videos, learning activities become more interesting and not monotonous, students are also fully involved in the use of media, the class atmosphere becomes more enjoyable.

Previous research findings also state that learning media enables students to understand a concept independently (Saputra & Putra, 2021; Syahrowardi & Permana, 2016). Other findings also state that learning videos will facilitate and increase students' enthusiasm in learning (Arditya Isti et al., 2020; Siddiq et al., 2020). It can be concluded that animated videos assisted by the powtoon application are very suitable to be applied in science learning. Learning activities that involve active students with animated video media assisted by the Powtoon application can help students learn science quickly (Fitriani et al., 2020; Laksmi & Suniasih, 2021).

4. CONCLUSION

The results of the data analysis found that the animated video assisted by the powtoon application in science subjects received very good qualifications from experts, teachers and students. It was concluded that the animated video assisted by the powtoon application in natural science subjects was appropriate for use in learning. Animated videos assisted by the powtoon application can help students learn science.

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