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Wondershare Filmora-Based Learning Video on Material Body Parts of Plants Class IV Science Learning Content

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ABSTRAK

Kurangnya penerapan media video pembelajaran berbasis Wondershare Filmmora berdampak pada menurunnya pemahaman konsep belajar siswa pada muatan pembelajaran IPA. Tujuan penelitian ini adalah mengembangkan sebuah media pembelajaran berbentuk video pembelajaran berbasis Wondershare Filmmora pada materi bagian tubuh tumbuhan muatan pembelajaran IPA kelas IV SD. Tipe penelitian pengembangan ini menggunakan model pengembangan ADDIE. Metode pengumpulan data yang digunakan adalah observasi, wawancara, kuesioner, dan tes. Subjek pada penelitian ini terdiri atas 1 orang ahli rancang bangun, 1 orang ahli isi materi, 1 orang ahli desain instruksional, 1 orang ahli media pembelajaran, 3 orang subjek uji coba perorangan, dan 9 orang subjek uji kelompok kecil. Teknik analisis data yang digunakan adalah teknik deskriptif kuantitatif. Hasil pengembangan media video pembelajaran berbasis Wondershare Filmmora pada muatan pembelajaran IPA di kelas IV SD dinyatakan valid. Hasil penilaian ahli rancang bangun berkualifikasi sangat baik (90,00%). Hasil penilaian ahli isi materi berkualifikasi sangat baik (96,00%). Hasil penilaian ahli desain instruksional berkualifikasi baik (89,33%). Hasil penilaian ahli media pembelajaran berkualifikasi baik (89,33%). hasil penilaian uji perorangan berkualifikasi sangat baik (97,33%) dan kelompok kecil berkualifikasi sangat baik (96,15%). Implikasi dari penelitian ini secara empiris terbukti dengan penggunaan media video pembelajaran berbasis Wondershare Filmmora mampu meningkatkan pemahaman konsep siswa pada materi bagian tubuh tumbuhan.

ABSTRACT

The lack of application of Wondershare Filmmora-based learning video media reduces students' understanding of learning concepts in science learning content. This study aimed to develop a learning media in the form of a learning video based on Wondershare Filmmora on the subject matter of plant body parts for class IV SD science learning content. This type of development research uses the ADDIE development model. Data collection methods used are observation, interviews, questionnaires, and tests. The subjects in this study consisted of 1 design expert, 1 content expert, 1 instructional design expert, 1 instructional media expert, 3 individual test subjects, and 9 small group test subjects. The data analysis technique used is a quantitative descriptive technique. The results of learning video media development based on Wondershare Filmmora on science learning content in class IV SD are declared valid. The results of the assessment of engineering experts are very well qualified (90.00%). The content expert's assessment results are very well-equipped (96.00%). The results of the assessment of instructional design experts are well qualified (89.33%). The results of the evaluation of learning media experts are well qualified (89.33%). The results of the individual test assessment are very well qualified (97.33%), and the small group is very well qualified (96.15%). The implications of this research are empirically proven by using Wondershare Filmmora-based instructional video media to increase students' conceptual understanding of the material on plant body parts.

1. INTRODUCTION

Many developments have occurred in the 21st century, especially technological developments (Oktasari et al., 2019; Rosnaeni, 2021). In the 21st century, of course, it is known that technological developments have very rapidly entered all corners of the world (Rosidin et al., 2019; Yuliati, 2017). The

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presence of technology can make human work feel easy to do. Especially in the educational aspect, the benefits of technology are felt, where technology can simplify and streamline everything that is done, one of which is obtaining educational resources (Herliandry et al., 2020; Hujjatusnaini et al., 2022). Education can be said to be a very important means of self-development in human life (Afandi et al., 2021; Wangid et al., 2020). In its development, this education is passed down from generation to generation in order to adapt to the circumstances and conditions of the community and the surrounding environment (Nurabadi et al., 2021; Sutarni et al., 2021). Therefore, human life cannot be separated from education. The purpose of education is to optimally and maximally develop the potential in individuals, be it the development of physical, intellectual, emotional, and spiritual aspects that are in line with the development of characteristics and environmental conditions around the individual (Garad et al., 2021; Muhtar & Dallyono, 2020). In order to achieve these goals in the learning process, of course, it must be carried out optimally and in ideal conditions in each educational institution. One of the formal educational institutions that are commonly known by the public in order to develop their education is the Elementary School.

The position of education at the elementary school level is very strategic because education at the elementary school level can be likened to a foundation in education that can influence the continuation of the further educational process for individuals (Ananda, 2018; Diningrat et al., 2020). Given the importance of the portion of education at the elementary school level for the continuity of an individual's education, the learning process at the elementary school level must be carried out optimally and supported by ideal learning tools (Kawuryan et al., 2022; Supriyoko et al., 2022). Learning devices are tools or equipment to carry out processes that enable educators and students to carry out learning activities. It is hoped that the teacher's ability to design learning and the skills to put it into the form of learning tools, especially learning media, is expected to bring students the benefits of learning through optimal learning activities (Mumpuni & Nurpratiwiningsih, 2018; Ritonga et al., 2020). One of the learning tools that have a special role in creating an interesting learning atmosphere is learning media. Learning media are all forms of physical equipment that are designed in a planned way to convey information and build interaction. Choosing the right learning media can create an ideal, quality learning process, increase students' understanding of the learning material described, improve student skills, and of course attract students' interest in learning (Rohmawati & Kristanto, 2018; Wibowo & Dg Matona, 2019).

However, in reality, learning media is rarely used by teachers in the learning process. Based on the results of interviews with one of the teachers, namely the homeroom teacher of class IV at SD No. 1 Penarungan, found the fact that learning only uses visual aids in the form of pictures, and students are only invited to directly observe learning objects in the school environment and there is no application of technology-based learning media. The lack of application of technology-based learning media affects the learning process, which has an impact on tending to decrease students' understanding of learning concepts, especially in science learning content. Of the 25 students in one class IV room, only 40% or as many as 10 students scored above the minimum completeness criteria in science learning content. Meanwhile, when compared with the PAP criteria, it was found that only 60% or as many as 15 students scored in the low category or below the minimum completeness criteria that had been set. The low competence of students' knowledge in science learning content can certainly cause the learning process to be not optimal or it can be said that it is not ideal, especially in the material of plant body parts. If this problem is not solved, it will have a negative impact on the development of student competence and lead to a decrease in students' conceptual understanding of the material for plant parts.

The solution to overcome these problems is the need for a learning media that is in accordance with current developments and is able to increase students' understanding of science concepts, especially in the material of plant body parts. Learning media can simply be interpreted as a tool that can be used to carry and convey information between sources and recipients of information (Krismayoni & Suarni, 2020; Pramana & Suarjana, 2019). One type of learning media that is appropriate to use to overcome these problems is learning media in the form of learning videos. Learning video learning media is learning media that displays images or animations that can move and be heard in learning activities (Laksmi & Suniasih, 2021; Sentarik & Kusmariyatni, 2020). The percentage use of audio-video learning media can increase students' understanding of the material by 50% (Mariani et al., 2021; Paramita et al., 2022). With the existence of learning video media for learning material for plant body parts, teachers can make learning fun and able to improve students' understanding of concepts.

Several other research results show that learning video media can assist students in developing science learning competencies and make it easier for students to understand the material presented in learning videos (Mustadi et al., 2022; Sujarwo et al., 2022). The use of video media in science subjects has a positive effect on increasing student interest in learning (Asri et al., 2020; Ngabekti et al., 2019). This learning video media can increase student enthusiasm in participating in learning because this learning media can provide a fun and efficient learning experience (Kurniawan et al., 2018; Pagarra & Idrus, 2018).

This science learning video product can lead students to their learning goals (Dewi et al., 2020; Wulandari et al., 2020). Learning video media can create learning that is more meaningful and more flexible without being bound by distance and time because it can be accessed anywhere (Asih & Ujianti, 2021; Megawati & Utami, 2020). However, the previously developed media still has some drawbacks, especially in the development of learning video products. Of these deficiencies, renewal or refinement again.

The update made in this research is the use of the Wondershare Filmmora application base in making learning video media to increase the variety of animations in the learning videos to increase students' interest in following the learning process. In addition, the renewal aspect in the development of this learning video media is the existence of interactive quizzes to evaluate students' understanding of concepts in the material of plant body parts after listening to learning video media. This study aims to create learning media based on the Wondershare Filmmora application on plant body parts for grade IV elementary school students. The existence of technology-based learning media in elementary schools is an effort to increase students' understanding of concepts in science learning content.

2. METHOD

This research is of the type of development research (RnD) which is oriented towards a product, namely the Wondershare Filmmora application-based learning video media. The development model used in this research is the ADDIE development model (Mohd et al., 2020; Nurhayati et al., 2021). The data collection method used is the observation method, the questionnaire or interview method, the questionnaire method, and the test method. In this study, the data collected was the result of the validity of the experts and test subjects as well as the advice given regarding the learning video products that had been assessed. Product effectiveness is also carried out by giving pre-tests and post-tests to fourth-grade students with the aim of knowing the understanding before and after the application of learning videos in learning. Data collection instruments used are questionnaires and tests. The questionnaire sheet or questionnaire used is of the rating scale type. The subjects in this study consisted of 1 design expert, 1 content expert, 1 instructional design expert, 1 instructional media expert, 3 individual test subjects, and 9 small group test subjects. The questionnaire grids were given to design experts, material content experts, instructional design experts, instructional media experts, individual trials, and small group trials.

In this development research, there are 2 kinds of data, namely qualitative data and quantitative data. Qualitative data is data in the form of words that are collected from the results of assessments, input, criticism, and also suggestions for improvement obtained from the results of questionnaire responses from expert reviews and student reviews. Meanwhile, quantitative data is data in the form of numbers or numbers. This quantitative data was collected through the results of the assessment of media development design experts, content experts, instructional design experts, instructional media experts, individual trials, small group trials, and test results (pre-test and post-test).

3. RESULTS AND DISCUSSION

Results

The results of this study are in the form of learning video learning media based on the Wondershare Filmmora application on the material of plant body parts in science learning content for class IV SD. This research was designed and conducted by following the stages of the ADDIE model. The ADDIE model consists of five stages, namely: the analysis, design, development, implementation, and evaluation stages. The first stage is the analysis stage (analyze), at this stage results are found in the form of problems in learning. There is no learning media that is able to attract students' interest so learning is carried out in a monotonous manner. This makes students feel bored and the focus of student learning is distracted. Through observation and interviews conducted with the homeroom teacher, the content of the lesson that experienced the most impact from the lack of learning media was the content of learning science. Therefore, the material for plant body parts was chosen because it is able to cover all the problems and aspects of deficiencies in the learning process experienced by students so far. So, at this analysis stage identification of learning objectives (TP) and indicators of achievement of learning objectives (IKTP) are carried out in accordance with the curriculum used by the school, namely the Independent Curriculum. Identification of learning objectives (TP) and indicators of achievement of learning objectives (IKTP) are also adapted to the material used, namely the material for Plant Body Parts in Science learning content. The purpose of developing Wondershare Filmmora-based instructional video media is to be able to help increase students' knowledge competence in science learning.

After conducting a curriculum analysis, a needs analysis is then carried out in order to find out the appropriate learning materials and media used in the learning process. It can be seen from the results of

the analysis of students' learning needs in the questionnaire that has been given that students enjoy learning using interesting and simple learning video media. This is in accordance with the character analysis carried out by grade IV students who are at the concrete operational level. At this stage of development, students need a learning media that is able to describe understanding with the help of concrete objects. The second stage is the design stage. The results at this stage are in the form of an arrangement of learning video media designs that will be developed. The design of the learning videos was carried out using the Wondershare Filmmora application using a laptop which was made starting from the opening page to the closing page. At this design stage, a rough sketch of the product design is made, starting from the background, animation layout, image layout, to material layout. The design of learning videos is also made by adapting the material to the Parts of the Plant Body. The learning video also includes the title of the video, namely "Educative Learning Video Based on Wondershare Filmmora" and there is the identity of the product developer presented in the learning video. In order to facilitate the development of learning video media based on Wondershare Filmmora, a flowchart and storyboard have been prepared which aims to provide an overview of the workflow and arrangement of the presentation of learning material to be more coherent and clear. Followed by making a learning implementation plan (RPP) or in the Independent Curriculum it is called a Teaching Module which aims to direct and design the implementation of learning activities using the developed learning video media.

The third stage is the development stage. The result of this stage is the development of learning video media based on Wondershare Filmmora which refers to the previously designed flowcharts and storyboards. The development of learning video media is done by adding video components, starting from pictures/illustrations, back sound songs, and sound dubbing, to learning materials. The final result obtained from this development stage is a learning video product based on Wondershare Filmmora which is ready to be implemented on research subjects through the product trial stage. The display of learning media that has been successfully developed can be seen in Figure 1.

Figure 1. Wondershare Filmora Based Learning Video Products

At this development stage, it was also continued by compiling a questionnaire or questionnaire for trial subjects consisting of individual trials and small group trials. In addition to providing valid instrument sheets, input and comments from experts are also expected to obtain optimal media development. At this stage, pre-test and post-test questions were also made to be given to students with the aim of being able to test the effectiveness of the products developed on students' understanding of science learning concepts in grade IV. The pre-test questions compiled were used to be able to measure students' initial understanding of the material on plant body parts presented before presenting Wondershare Filmmora-based learning video media as a development product.

The fourth stage is the implementation stage. At this stage, several tests were carried out to determine the feasibility of the learning media that had been developed before proceeding to the next development stage. The feasibility of Wondershare Filmmora-based learning video products can be determined by carrying out tests with experts and test subjects. The feasibility of the product was assessed by experts, consisting of 1 design expert, 1 material content expert, 1 instructional design expert, and 1 learning media expert. Furthermore, to find out the feasibility of the product by the test subjects, an assessment was carried out with fourth-grade students, consisting of individual trials involving 3 students

and small group tests involving 9 students. The test results of the experts and test subjects can be presented in Table 1.

Table 1. Percentage of Scores from Expert Tests and Learning Video Product Trials

No.	Test Subjects	Percentage Results	Qualification	Description
1.	Design Expert Test	90.00%	Very good	No revisions
2.	Content Expert Test	96.00%	Very good	No revisions
3.	Instructional Design Expert Test	89.33%	Well	Little revision
4.	Learning Media Expert Test	89.33%	Well	Little revision
5.	Individual Trial	97.33%	Very good	No revisions
6.	Small Group Test	96.15%	Very good	No revisions

Modified from (Pratama et al., 2020)

Based on these results, it can be concluded that the learning video media based on the Wondershare Filmmora application is suitable for use in fourth-grade elementary school students, especially in the material for plant body parts for science learning content, with notes that it needs several revisions. The last stage carried out is the evaluation stage. The evaluation phase is carried out to know the effectiveness of the product that has been developed. The evaluation carried out was a summative evaluation by giving a pre-test and post-test to fourth-grade students. Before carrying out effectiveness tests in the form of pre-tests and post-tests, the instruments to be used are tested first to determine the stability or quality of an instrument. The implementation of the instrument quality test obtained results, namely the validity test of the test items obtained results, namely from the 30 objective test items that had been tested, 5 were obtained (invalid objective test items (drop).

Meanwhile, the validity test of the test item description questions obtained results, i.e. out of the 10 essay item tests that have been tested, 5 invalid essay test items (drops) were obtained. So, overall the objective test item and essay test items obtained were 30 valid test items to be used in the effectiveness test. In the test item reliability test it was found that the objective test item test instrument (multiple choice) had KR-20 reliability of 0.93 with a very high test item reliability qualification. Meanwhile, the test item reliability test results concluded that the test item test instrument has KR-20 reliability of 0.64 with a high test item reliability qualification. The test item difficulty level test, it is results show that 7 objective test items have easy qualifications, 11 objective test items have moderate qualifications, and 7 objective test items have difficult qualifications. Meanwhile, the difficulty level of the description test items obtained results, namely, as many as 5 test items with moderate qualifications. Furthermore, the different power test of the test items showed that there were 10 objective test items with good qualifications and 2 objective test items with very good qualifications. Meanwhile, the different power test of the description test items obtained the result that 5 of the description test items had a fairly good qualification.

The implementation of the product effectiveness test is continued by carrying out the prerequisite test, which consists of the normality test of data distribution, and homogeneity test, and continues with the inferential statistics of the t-test technique. The results obtained from the data distribution normality test were 0.952 for the pre-test results and 0.957 for the post-test results. In the homogeneity test of variance, the result is 2.57 which can be concluded that Fcount <Ftable (n1-1,n2-1), namely Fcount (2.57) <Ftable (4.40), so that H0 is accepted which shows the data homogeneous. Furthermore, the results obtained from the implementation of the t-test technique correlated, namely tcount = 4,651 for db = 48 and a significance level of 5% ttable = 2.00. This shows tcount ≥ ttable, so H0 is rejected and H1 is accepted. Based on the testing criteria, H0 is rejected and H1 is accepted, which means that there is a significant difference (5%) in science learning competence after using Wondershare Filmmora-based learning video media on plant body parts material for science learning content for fourth-grade students at SD No. 1 Penarungan academic Year 2022/2023.

Discussion

In this development research, the final result is in the form of learning video media based on Wondershare Filmora. This Wondershare Filmmora-based learning video media was developed for fourth-grade students, especially in increasing understanding of the concept of plant body parts material in science learning content. The development of this learning video media uses the ADDIE development model which consists of; stages of analysis (analyze), design (design), development (development), implementation (implementation), and evaluation (evaluation). The Wondershare Filmmora-based instructional video media that has been developed can be declared valid and feasible to be used in helping students improve science learning competence in the material of plant body parts. This can be supported

by the results of tests conducted with experts and test subjects, in which the percentage of scores belonging to the good and very good categories was obtained so that Wondershare Filmmora-based learning video media is feasible to use (Asih & Ujianti, 2021; Wulandari et al., 2020).

he development of learning video media based on Wondershare Filmmora was developed according to the needs of students in the learning process and student characteristics. This learning video media can be said to be feasible because it is packaged with interesting learning material, namely material on plant body parts. Interestingly presented material can motivate students to actively learn and increase student focus on learning because students like the material presented (Kurniawan et al., 2018; Novita et al., 2019). The material for plant body parts is chosen as well as possible and follows the needs of students who find it difficult to remember well the various parts of the plant body and their functions. The selection of learning materials is a reference in developing attractive media, so in this study, suitable media were developed according to students' needs, selection of learning materials, and also student characteristics, namely learning video media (Mustamiroh & Ramadhayanti, 2021; Ulyana et al., 2019).

The selection of appropriate media and material topics will be able to produce interactive learning so that the material presented can be conveyed properly, students can understand it, and remember it well as a provision for knowledge at the next level. The learning video products in this study were strengthened by the findings of previous research which stated that the developed instructional video media had a positive influence on increasing student interest in learning. The update carried out in this study was to use the Wondershare Filmmora application base in making learning video media to increase the variety of animations in the learning videos, to increase students' interest in participating in the learning process (Mustamiroh & Ramadhayanti, 2021; Yusuf et al., 2022).

In addition, the renewal aspect in the development of this learning video media is the existence of interactive quizzes to evaluate students' understanding of concepts in the material of plant body parts after listening to learning video media. The existence of this learning video media will help students to more easily understand learning material because the material presented has been packaged and supported by various pictures, and animations, as well as clear explanations (Efendi & Nurjanah, 2019; Fitriyana et al., 2020). The Wondershare Filmmora-based learning video media developed also streamlines student learning, can be accessed anytime and anywhere, and can be watched repeatedly to understand properly (Rohmawati & Kristanto, 2018; Wibowo & Dg Matona, 2019). The implications of this research are empirically proven by the use of Wondershare Filmmora-based instructional video media capable of increasing students' conceptual understanding of plant body parts material and being able to increase student focus so that the learning process can run more optimally.

4. CONCLUSION

Based on the results of the research that has been described and looking at the problems presented, it can be concluded that this development research provides an output or product in the form of a Wondershare Filmmora-based learning video that was developed concerning the ADDIE development model. The product effectiveness test results show that the Wondershare Filmmora-based instructional video media is appropriate for use in science lessons that present material on plant body parts to fourth-grade elementary school students. This learning video can help students properly in improving the competence of science learning knowledge so that the learning process can run optimally and be able to achieve learning goals.

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