Powtoon-Based Animation Video to Improve Students' Learning Outcomes on Regional Artworks

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A B S T R A K

Media pembelajaran berbasis IT yang digunakan guru kurang bervariasi dan membuat siswa kurang antusias mengikuti pembelajaran sehingga siswa kurang memahami materi pembelajaran SBdP. Penelitian ini bertujuan untuk mengembangkan media Powtoon pada Muatan Pembelajaran SBdP kelas V materi karya seni rupa daerah kelas V. Penelitian ini menggunakan metode pengembangan Research and Development (R&D). Subjek dari penelitian ini yaitu guru kelas V dan siswa kelas V SDN Kandang Panjang 10 yang berjumlah 43 siswa. Pengumpulan data yang dilakukan meliputi wawancara, dokumentasi, pengamatan atau observasi lapangan dan angket kebutuhan guru dan siswa. Teknik analisis data dilakukan dengan uji kelayakan dan uji keefektifan media. Hasil uji kelayakan dilakukan oleh ahli materi dan ahli media mendapatkan hasil 85% dan 91% dengan kategori layak. Hasil uji t-test diperoleh hasil 17.80774 dan uji n-gain sebelum dan sesudah pembelajaran diperoleh hasil 0.68 dengan kriteria sedang, sehingga efektif digunakan sebagai media pembelajaran. Simpulan dari penelitian ini yaitu video animasi Powtoon dinyatakan layak, dan efektif digunakan, sehingga dapat meningkatkan hasil belajar siswa materi batik sebagai karya seni rupa daerah.

A B S T R A C T

IT-based learning media used by teachers are less varied and make students less enthusiastic about participating in learning so students do not understand the SBdP learning material. This study aims to develop Powtoon media for class V SBdP learning materials for regional artworks of class V. This research uses the Research and Development (R&D) development method. The subjects of this study were the fifth grade teachers and the fifth-grade students, totaling 43 students. Data collection carried out includes interviews, documentation, field observations or observations, and questionnaires on the needs of teachers and students. The data analysis technique was carried out with a feasibility test and media effectiveness test. The results of the feasibility test carried out by material experts and media experts got 85% and 91% results in the appropriate category. The results of the t-test obtained are 17.80774 and the n-gain test before and after learning is 0.68 with moderate criteria, so it is effectively used as a learning medium. The conclusion of this study is that the Powtoon animation video is declared feasible, and effectively used so that it can improve student learning outcomes for batik material as a work of regional art.

1. INTRODUCTION

Education is something that affects growth, human change. Education make every individual is encouraged to develop their potential. Education is an effort to help individuals towards a better life (Saputra & Semara, 2021; Sujana, 2019). Education is essential in advancing a country. Education gives a person opportunity, hopes, skills, and knowledge to lead a better life. Education is a conscious effort to make personal changes for the better (Astalini et al., 2021; Bahari et al., 2018). Based on several definitions, education is an effort to improve an individual's quality of life, which is helpful in social and personal life. Education also has a vital role in advancing a country. Education is expected to give birth to the next generation, who are intelligent and have noble characters.

SBdP is thematic integrated learning in SD/MI. Art education comprises fine arts, music, dance, and skill arts. SBdP learning aims to hone students' talents, be able to give birth to creative and innovative generations and create a character of love for the motherland (Diah Ratna Sari et al., 2018; Pitriani, 2020). It is hoped that students can apply it in everyday life. One of the materials in SBdP content in elementary schools is regional art. In SBdP learning in elementary schools, students not only learn about art materials and the beauty of art, but students are also introduced to a variety of cultural arts in Indonesia, and are expected to be able to preserve them. Subjects taught in SBdP content in elementary schools include visual arts, dance, music, and skills. The results of the SBdP learning process are expected that students can develop the talents or potential that exist in students based on the

character of being honest, creative, innovative, imaginative, and have a sense of caring for their fellow environment.

The term art in English comes from the word art which means the skill. Art contains expression, imagination, and one's skills, which are produced through art. art learning can optimally develop students' potential. There are various kinds of art, including fine arts, dance, and music. Fine art is a branch of artists whose work can be enjoyed through the eyes and felt through touch. State that by providing arts and culture learning and skills in elementary schools, students can develop three aspects of fine arts education, namely expression, observation, and appreciation (Diah Ratna Sari et al., 2018; Rahayunita & Werdiningtyas, 2020). Cultural and craft arts can encourage student creativity and develop skills, increase awareness of local culture, and foster a sense of love for the environment. Students involved in NGO arts programs displayed higher self-esteem, improved confidence, and a general shift to socially productive behaviors (Lee Acham Chen, 2021; Setiawan et al., 2021). Students participating in an NGO arts program have higher self-confidence and behave productively.

In the learning process, it is essential to have learning media to support the teacher in providing the material that will be delivered in a more authentic and exciting form. Learning media can also motivate students to take part in learning. In addition, learning media can help students be active by observing, doing, and demonstrating. Learning media can be developed through the technology available in schools (Andika et al., 2017; Awalia et al., 2019). Available facilities, infrastructure, and facilities can support the development of these learning media. When teachers use various learning media in learning, it is expected to be able to dismiss students' assumptions about subjects that are less varied. Teaching students media literacy is an ongoing process that requires engaging students in conversations about how media shapes how they think and interact with the world and equipping them with the tools and skills to be media creators themselves (French & Campbell, 2019; Saputra & Semara, 2021). Teaching media literacy to students can shape ways of thinking and form students' skills in making media.

In the Covid 19 pandemic era, teachers are required to develop learning media to support distance learning activities. Learning media aims to convey meaning, stimulate the brain, emotions, enthusiasm, and enthusiasm of students, and motivate learning where teaching and learning activities cannot be done face to face (Astika et al., 2019; Fathurrahman et al., 2021). The use of technology-based learning media can be used by teachers to support learning at home and school. In addition to increasing students' enthusiasm and interest in learning, the use or use of learning media can also increase students' understanding of the lesson so that the learning process becomes more effective in conveying messages and lesson content. The results of research about students' views of the benefits of learning media are considered to have good benefits (Dewi & Handayani, 2021; Fuady et al., 2021).

One of the learning media that teachers can use during distance learning is using Powtoon animated videos. Powtoon is an application that contains text, images, sound and an attractive design. Using this application is also easy, there is no need to download it on a laptop or computer because Powtoon animation videos can be made online through the website. Powtoon can be used to create animations containing subject matter that is packaged attractively (Demirkan, 2019; Donna et al., 2021). Powtoon media can be used as an exciting learning medium because many funny animations are suitable for elementary school children. Powtoon is a media with animation, cartoons, objects, and a back sound that elementary school students like (Adnyani et al., 2021; Luh et al., 2019). Research conducted by previous study in the journal of Basic Education entitled development of scientific-based powtoon videos for grade V Students at SD Muhammadiyah 8 Surabaya (Adnyani et al., 2021). Based on the results of this study, the powtoon media is feasible and practical to use in scientific learning. Based on this research, it is relevant research that can be used as a basis for this research because some of these studies state that powtoon-based video animation media is very feasible and effective when used in learning.

The similarity of this research with previous research is research on learning media in learning. Meanwhile, the difference between this research and previous studies is the research location, the subjects to be studied, and the population to be studied. Another difference is found in the indicators of each variable studied. The research that the researchers conducted aimed to develop learning media using Powtoon on SBdP content material for regional art works at SDN Kandang Panjang 10, Pekalongan City. This study aims to develop Powtoon media for class V SBdP learning materials for regional artworks of class V. This research is expected to provide benefits both theoretically and practically. Theoretically the development of powtoon learning media can optimize the quality of learning so that it is appropriate and effective for use in the learning process. With this research, it can be a theoretical support for further research related to the development of learning media in SBdP content.

2. METHOD

This research uses a type of research and development (R&D). Research and development methods (Research and Development) are methods or processes used to validate and develop a product (Sugiyono, 2019). The method of research is based on the opinion of Borg and Gall. The design used was the pre-experimental design by applying the one-group pretest-posttest design model, namely carrying out the pretest before treatment and the

post-test after the study. So that the results of the treatment can be known more accurately because they can be compared with the conditions before being given treatment and after being given treatment. Data collection included interviews, documentation, observations or field observations, and questionnaires for the needs of teachers and students. The design used was the pre-experimental design by applying the one-group pretest-posttest design model, namely carrying out the pretest before treatment and the post-test after the study. So that the results of the treatment can be known more accurately because they can be compared with the conditions before being given treatment and after being given treatment. Data collection included interviews, documentation, observations or field observations, and questionnaires for the needs of teachers and students.

The subjects of this study were all fifth-grade students at SDN Kandang Panjang 10, which totaled 43 students. Product trials on a small scale used a purposive sampling technique, namely sampling based on certain balances selected with consideration based on class ranking: three top-ranking students, three middle-ranking students, and three lower-ranking students. The trial use of the product was carried out on 31 fifth-grade students at SDN Kandang Panjang 10 as a sample. This trial was conducted to test Powtoon media's use of SBdP content for regional artworks. The variable used in this study is the independent variable, namely the Powtoon animation video, and the dependent variable is the result of learning SBdP on regional artworks.

In this study, researchers did not use ten research stages; researchers used eight research stages, namely: 1) potential and problems, 2) data collection, 3) product design, 4) design validation, 5) design revision, 6) product trials, 7) product revision 8) usage test. This method was chosen because it analyzes the needs, feasibility and tests the effectiveness of the product so that it can be used and utilized for the advancement of education. The data analysis technique used was initial data analysis in the form of a normality test, product data analysis in the form of analysis of teacher and student responses, and final data analysis in the form of a t-test and average increase test (N-Gain).

3. RESULT AND DISCUSSION

Result

The purpose of the need's questionnaire is to find out the needs of teachers and students regarding the development of media that researchers will produce and as a guideline for how media is developed to meet the needs of teachers and students in learning. On the results of the questionnaire, the needs of class V teachers at SDN Kandang Panjang 10 Pekalongan City teachers know the need for innovation and variation in learning media to support learning on SBDP content material for regional fine arts. The teacher's lack of variation in learning media makes students sometimes need help understanding the material, thus requiring Powtoon-based animated video media that suits the needs and characteristics of students, namely Powtoon animated videos accompanied by explanations of fine regional artworks, types, and Batik Pekalongan.

The student needs around 41 students to fill out the questionnaire in VA and VB classes at SDN Kandang Panjang 10, Pekalongan City. From the results of the questionnaire recapitulation, students need Powtoon animation video learning media on SBdP content for regional fine arts. The Powtoon video contains material for regional fine arts, including material explanations about Pekalongan Batik, which is accompanied by various types, steps to make, and an explanatory video about making the typical Pekalongan Batik Jlamprang pattern. The material students approve of is explicit, solid, easy to understand, and accompanied by animated images. Students like short, concise, clear, and communicative sentences and have a color combination in dark and bright color videos. The preferred font is a combination of letters: Times New Roman, Comics Sans MS, and Berlin Sans FB. The font needed combines large and small fonts (as needed), and the material presented must be systematic/sequential. The design of Powtoon learning is show in Figure 1.

Figure 1. Design of Powtoon Learning

This culture-based Powtoon-based animated video is adapted to the age development of students, student needs, and teacher needs so that it can be used easily in the learning process. Animated video based on Powtoon contains art material and typical Pekalongan batik, from understanding to steps to produce batik. In addition, the

researcher chooses the sound effect to be used. The use of sound effects or sound effects is intended to increase the value of student interest. The researcher also determines the animation that will be used as attractive as possible according to needs. The sentences are clear, concise, and easy to understand so that students can quickly learn and understand the material and achieve learning objectives. Then two experts, material experts and media experts, assessed the media. The assessment was carried out using an assessment questionnaire. The following is a recap of the results of the assessment is show in Table 1.

Table 1. Powtoon Media Assessment Recap

No.	Assessor	Score Obtained	Maximum Score	Percentage	Category
1	Material Expert	51	80	85%	Worthy
2	Media Expert	91	100	91%	Worthy

Base on Table 1, the Powtoon media assessment, assessed by material experts, obtained a score of 51, and the total score obtained was 85% in the appropriate category. For the assessment of media experts with a total score of 91, the total value obtained is 91% in the appropriate category. In the material expert assessment, the validator provides suggestions for improvement with a note that researchers must pay attention to the appropriateness and clarity of KD, indicators, and learning objectives in Powtoon-based animated videos. Therefore, researchers improved Powtoon-based animated videos according to input from material experts so that the media could be tested. In the assessment of media experts, the validator noted that researchers must pay attention to the suitability of colors to look more contrasting in Powtoon-based animated videos. Therefore, researchers improved Powtoon-based animated videos according to input from media experts so that the media could be tested. The expert validator provided input to improve the skills assessment rubric section and create a Powtoon learning media guidebook in the skills assessment rubric. Product trials were carried out in two groups, namely small groups and large groups. The results of the assessment recap can be seen in Table 2.

Table 2. Product Trials

No.	Group	Average Pretest	Pretest Average	Improvement of Completeness
1	Small Group	47.75	71.92	59%
2	Large Group	35.21	80.79	93%

Based on Table 2, the mastery results for the small group reached 59%, and for the large group, it was 93%. With a KKM of 65, the result is that the students' post-test scores have reached more than the KKM.

The data obtained by researchers in the form of initial data in the form of pretest and post-test were analyzed using the normality test. The normality test helps know whether the pretest and post-test data are typically distributed. The data normality test can affect the techniques in data analysis to be used. In this case, the normality of student data in the form of pretest and post-test learning outcomes is tested for the normality of the distribution. In this analysis, the researcher uses the Liliefors formula. The result is show in Table 3.

Table 3. Large Group Pretest and Posttest Scores

Data	Average	Standard Deviation	L_0	L_t	Description
Pretest	35.209	15.975	0.088	0.134	Normal Distribution
Posttest	80.790	6.981	0.129		Normal Distribution

According to Table 3, the results of the calculations done by the researchers on the pretest scores with a total of 43 students (n = 43) obtained L_0 0.088 and, based on the Liliefoors table, obtained L_t 0.1339 equal to α = 0.05. So, it can be seen that $L_0<L_t$, so the pretest values are normally distributed. Meanwhile, based on the results of the calculations that the researchers did on the post-test scores with 43 students (n = 43) obtained L_0 of 0.129 and, based on the Liliefors table, obtained L_t of 0.1339 with α = 0.05. So it can be seen that $L_0<L_t$, so it can be stated that the post-test values are normally distributed.

The t-test was used to determine the difference in the pretest and post-test mean and to test the difference in pretest and post-test mean results using Powtoon media. Calculation: the t-test uses the paired sample t-test formula, presented in Table 4.

Based on Table 4 show the results of the t-test calculation, the tcount is 17.80774, and the ttable is 1.681. It can be seen that $t_{count}>t_{table}$ so that H_a is accepted. So, the conclusion from the results of these calculations is that there are differences in student learning outcomes after applying Powtoon media effectively used in SBdP lesson content material for regional fine arts.

Table 4. T-test Results Mean Pretest and Post-Test Scores

Measures	Number of Students	Average	t_0	t_{table}	Description
Pretest	43	35.21	17.807	1.681	H_0 is rejected
Posttest	43	80.79			

The N-Gain test used in large groups analyzes pretest and post-test learning outcomes in percentage terms and the increase in the average pretest and post-test results. The following are the results of the N-Gain test for pretest and post-test values. Based on the results of data analysis using the N-gain test on a large-scale trial, the learning outcomes of fifth-grade students at SDN Kandang Panjang 10 after applying Powtoon media increased by 0.68 in the moderate category. Based on the table shows that the results of the N-gain calculation in the large group are with intermediate criteria. The difference between the pretest and post-test scores is 45.58139535. Thus Powtoon media is effectively used in SBdP learning material for regional artworks.

Discussion

Teachers must master science and technology to provide cultural arts learning materials with learning media following current needs. Teachers must master science and technology to provide cultural arts learning materials with appropriate learning media. In this case, the researcher developed Powtoon media. At the learning meeting, researchers used the discovery learning model. Students learn to search, solve and discover in their way (Desyandri et al., 2019; Tegeh & Dwipayana., 2019). Discovery learning is a learning process that is not entirely given but involves students organizing and developing knowledge and skills for problem-solving. The application of the discovery learning model can improve individual discovery abilities. Besides that, learning conditions that were initially passive become more active and creative. The student's creativity in the learning will be worsening as the teacher did not much involve the students so the students' enthusiasm during the learning worsened too (Ana, 2019; Setiawan et al., 2021). Children's creativity will be correct if the teacher involves a few students.

It follows the opinion state very much hope that teachers can adopt innovative education and teaching methods. Sincerely hope that teachers can adopt innovative education and teaching methods (Ma & Li, 2021). Learning media is essential in teaching and learning activities. With the existence of media, the process of teaching and learning activities will increasingly be felt by the benefits. Media use is expected to generate positive impacts, such as the emergence of a more conducive learning process, feedback in the teaching and learning process, and achieving optimal results. Learning media that is utilized appropriately in the learning process will become a more effective and efficient support tool for achieving the learning objectives (Febrita & Ulfah, 2019; Puspitarini et al., 2019). Learning media used appropriately in the learning process will be a more effective and efficient supporting tool in achieving learning goals. Teachers must master science and technology to provide cultural arts learning materials with learning media following current needs (Johana & Ardipal, 2021; Umbara et al., 2020).

The design of the Powtoon animated video developed by researchers is adapted to the definition of Powtoon, an online application containing text, images, sound, and attractive designs. Using this application is also easy, and there is no need to download it on a laptop or computer because Powtoon video animations can be made online through the website www.powtoon.com. Powtoon is a medium whose operation is almost the same as PowerPoint, Impress, and Prezzi (Akmalia et al., 2021; Pais et al., 2017). Powtoon is an application with advanced features on one screen, which can create various animations according to the requirements. Powtoon-based animated videos are an alternative that helps the distance learning process during the Covid-19 pandemic (Awalia et al., 2019; Fatmawati, 2021).

Powtoon videos are equipped with KD explanations, indicators, and learning objectives. Then, the material consists of the definition of fine regional artworks and the characteristics and types of fine regional artworks. Followed by elaborating material based on local culture Batik Pekalongan (Apriliani et al., 2021; Larasati, 2021). In the video, there is also a video for making simple Jlamprang Batik patterns so that students will know more and learn more quickly because "Pekalongan Batik" is one of the typical icons of the city Pekalongan. This city has become the daily environment of students. Jlamprang batik has traditional motifs typical of Pekalongan City (Oginawati et al., 2021; Surya et al., 2019). The Jlamprang motif has a round motif filled with floral motifs in the middle. The Powtoon-based animated video was developed based on various works of art from the Central Java region, consisting of text accompanied by pictures to explain the material. The colors in the animated videos are attractive, so students can more easily understand and remember the material.

Based on the results of the validation of material experts and media experts as a whole, Powtoon media has met the appropriate criteria as a learning medium so it is feasible to be tested in research. This is in accordance with the opinion of the media developed has been tested for its validity and is suitable to be used as learning media (Megita Rani et al., 2019; Sanjaya et al., 2021). This is also supported by research which states that by using video learning media based on the Powtoon application the learning outcomes of students' speaking skills have increased so that learning video media based on Powtoon is very feasible to use (Sanjaya et al., 2021). The results obtained

are also in line with research which states that video media based on the Powtoon application facilitates understanding and improves students' scientific representation skills so that media based on the Powtoon application is suitable for use (Manurung, 2020; Sanjaya et al., 2021). This is reinforced by research conducted by study which states that the Powtoon learning media developed is considered effective in increasing understanding of concepts in learning mathematics (Akmalia et al., 2021).

The development of Powtoon learning media can assist teachers in conveying regional fine art material and optimizing learning in class. Powtoon learning media can provide views on teachers in developing interesting learning media for students. This research is also beneficial for schools with the development of Powtoon learning media that can help find solutions to problems at school, namely improving student learning outcomes in SBDP learning. The development of instructional media is very beneficial for student learning activities and can help improve student learning outcomes. The development of this learning media is creative, interesting, innovative, and helps students' understanding, and helps in building character values from an early age in elementary school students. In developing learning media, you also have to look at how the conditions of the learning environment are, and adapt it to the material that will be delivered to students. Making the developed learning media achieve the desired learning objectives, namely optimizing students in learning and being able to increase student understanding so that satisfactory learning outcomes are achieved.

4. CONCLUSION

This study developed Powtoon media containing SBdP material for grade V regional artworks adapted to the teacher, student needs questionnaire, KD, indicators, and learning objectives. The feasibility of Powtoon media shows that after the product validation process by material experts, a value of 85% is obtained in the feasible category. Media experts get a score of 91% in the proper category. The effectiveness of the Powtoon media was shown by the normality test results showing that the pretest was 0.088 and the post-test was 0.129. Based on these data, it can be concluded that the small group test pretest and post-test values are normally distributed because the value of $L_0 < L_{table}$. The results of the t-test obtained results of 17.80774, and the results of the N-gain test in this study showed that the results of the N-gain calculation in the large group were 0.68 with moderate criteria. It indicates that Powtoon media effectively improves student learning outcomes in knowledge and skills. The results of this study conclude that Powtoon media containing SBdP material for regional visual arts for class V SDN Kandang Panjang 10 Pekalongan City is appropriate and effective for use to facilitate students in receiving learning because "Pekalongan Batik" is one of the typical icons of Pekalongan city. This city has become the daily environment of students. The introduction of culture is necessary so that the culture survives and can be sustainable along with the times.

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