

## DEVELOPMENT OF TECHNOLOGY-BASED LEARNING MEDIA USING ADOBE PREMIERE PRO ON THE ANCIENT RELICS OF THE SRIWIJAYA KINGDOM IN BUKIT SIGUNTANG TO MITIGATE ONLINE LEARNING PROBLEMS DURING THE COVID-19 PANDEMIC

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**Abstract:** *This research uses a Research and Development approach that is applied to teaching materials about the long-lost ancient relics of the Srivijaya Kingdom found on Siguntang Hill. The target audience of this study is class X (ten) students of SMA 15 Palembang. The Research and Development methods used in this study came from Hannafin and Peck, while the validators for the material produced came from experts in their respective fields related to this research, namely: media, materials, and learning design experts respectively. The purpose of this study is to see the effectiveness of the products produced during online learning. This effectiveness is evidenced by an increase in student learning outcomes by 39.37% with an N-gain of 0.74 after utilizing Adobe Premiere Pro in the online learning process. That is, the use of Adobe Premiere Pro in the context of technology-based learning media is effective and thus valid.*

**Keywords:** *Adobe Premiere Pro, History Education, Learning Media Development,*

**Abstract:** Penelitian ini menggunakan pendekatan Research and Development yang diterapkan pada bahan ajar tentang peninggalan purbakala Kerajaan Sriwijaya yang telah lama hilang ditemukan di Bukit Siguntang. Sasaran dari penelitian ini adalah siswa kelas X (sepuluh) SMA 15 Palembang. Metode Penelitian dan Pengembangan yang digunakan dalam penelitian ini berasal dari Hannafin dan Peck, sedangkan validator untuk materi yang dihasilkan berasal dari para ahli di bidangnya masing-masing yang terkait dengan penelitian ini yaitu: ahli media, materi dan desain pembelajaran masing-masing. Tujuan dari penelitian ini adalah untuk melihat keefektifan produk yang dihasilkan selama pembelajaran online. Keefektifan tersebut dibuktikan dengan peningkatan hasil belajar siswa sebesar 39,37% dengan N-gain sebesar 0,74 setelah memanfaatkan Adobe Premiere Pro dalam proses pembelajaran online. Artinya, penggunaan Adobe Premiere Pro dalam konteks media pembelajaran berbasis teknologi sudah efektif dan valid.

**Keywords:** Adobe Premiere Pro, History Learning, Media development.



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## INTRODUCTION

Education is a process of teaching and training, especially for children and adolescents, both in schools and colleges, with the aim of transferring knowledge and developing skills (Saidah, 2016). According to Ki Hajar Dewantara (1889-1959), education is "a way or effort to develop a child's character (mentally or emotionally), mind (intelligence), and physical growth to prepare him for life in harmony with the surrounding environment" (TEA, 2019).

National education carries an important role in enriching the lives of the nation. The role of national education is to improve people's competence in terms of intelligence, knowledge, and skills in utilizing technology (Daryanto, 2013). Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious or spiritual strength, self-control, personality, intelligence, noble character, and the skills they need for society, nation, and state whose function is to develop capabilities and shape the character and civilization of a dignified nation in the context of the intellectual life of the nation and aim to develop the potential of students to become human beings who have faith in God Almighty and follow His rules, have a noble character, are healthy, knowledgeable, capable, creative, and independent, and become democratic citizens who are responsive to the demands of changing times.

The paradigm of changing the times towards the essence of this kind of learning has become a classic with the COVID-19 crisis that has changed the paradigm of education and learning in the world. This pandemic has not only attacked the human respiratory organs, but also the organs of the education and learning system that are organized normally through face-to-face learning in schools. The whole world is busy preventing the transmission of COVID-19 so that all activities outside the home and office, including schools, are temporarily closed (Mansyur, 2020). The COVID-19 pandemic has led to the implementation of various policies to break the chain of the spread of the COVID-19 virus in Indonesia. The government implements a policy, namely Work from Home (WFH). This policy is an effort that is applied to the community in order to complete all the work at home. Education in Indonesia is one of the regions affected by the COVID-19 pandemic. With limited interaction, the Ministry of Education and Culture in Indonesia also issued a policy of closing schools and replacing the teaching and learning process (*KBM*) with an online system (Siahaan, 2020). This is intended so that the learning process continues to run in the midst of the COVID-19 pandemic. The industrial revolution 4.0 has had an impact on various areas of life, including education and learning. This is in line with the use of communication and information technology in classroom learning practices, ranging from the simplest to the most advanced. Advances in the field of education are also driven by technologies created and used to aid and facilitate human learning (Punaji, 2019). If this statement is

brought to the world of education, it can be interpreted that education cannot be separated from technology in this modern era and has become a measure of educational progress (Syarifuddin, 2019).

Degeng (1989) explained that learning is basically an effort or process to make students (mostly children or adolescents) carry out by educators (teachers, instructors) with the aim of helping students by manipulating the learning environment so that they can learn effectively, easily, and actively seek information, solve a problem, express ideas and practices in order to have a new potential that is permanent (Asyhar, 2011). Learning objectives are the direction that must be achieved by learners regarding behavior changes that must be possessed after utilizing the developed learning media. Both educators and students are expected to know what goals should be achieved, what should be done to realize those goals, what material should be delivered and how it should be delivered (Zainiyati, 2017).

Online learning will be carried out optimally if it is supported by adequate media, methods, tools, and materials. In this era of technological development, various forms of digital media, tools, and materials have developed rapidly. In fact, all forms of learning are carried out virtually with pandemic policies. Through virtual learning or online learning, the process is not limited by time and space. Interaction between educators and students takes place anytime and anywhere (Syarifudin, 2020). Learning media can be seen as "everything that can convey or distribute messages from a source in a planned manner, so that a conducive learning environment occurs where students can carry out the learning process efficiently and effectively" (Asyhar, 2011). Educators must be able to combine elements of historical study material in the media for it to be delivered to students. This is so that history learning is more interesting and meaningful without losing the slightest historical value.

History has very strong ties within the Indonesian nation and is a valuable record in commemorating the nation's struggle, seeing the Indonesian nation born from the founders of the nation who came from various backgrounds in social, political, cultural, and religious life. History is included in the 2013 curriculum in order to keep pace with the development of science and technology. One of the functions of studying history is as a means of education and recreational and inspirational learning media so that it can add insight into nationality and statehood for the younger generation, which is a sign of devotion to the homeland and the nation (Abdullah, 2004). Based on the above, it can be concluded that the learning of history is the learning given to learners based on the reality that occurs and aims to increase awareness in the form of nationalism, which studies the growth of events, genealogies, and descendants over time in order to obtain better changes in knowledge, personality, and behavior.

Adobe Premiere Pro is a video editing software that can be operated using a computer with either a Windows or MacOS operating system.

Adobe Premiere Pro itself is a software that has grown rapidly since the 2000s. Therefore, computers with specifications below Intel i5 can only use Adobe Premiere Pro version 2.0. But computers with higher specifications, such as the i7, can operate Adobe Premiere Pro CC (Enterprise, 2019).

Adobe Premiere Pro CC 2019 is a video editing software often used by video editors for weddings, birthdays, product launches, and even career building. Adobe Premiere Pro CC 2019 makes it easier for us in the process of making videos by providing various audio, titles, still images (photos and illustrations), graphic design files, and so on (Enterprise, 2019). Video editing software such as Adobe Premiere Pro CC 2019 is often used by YouTubers, videographers, and even cameramen to make commercial videos. However, in this study, the authors will present learning media in the form of videos.

Learning media in the form of videos will be made using Adobe Premiere Pro CC 2019 because it can combine several video recordings, processed videos, images and animations into one unit so that the presentation of the video is more interesting. Adobe Premiere Pro CC 2019 has simple features that can be used for this purpose (Enterprise, 2019). In addition to being used to combine several clips and other assets into one complete video, Adobe Premiere Pro CC 2019 can also be used for editing with a broader understanding, namely: removing unwanted parts of the video, providing transition effects between one clip and another clip, creating special effects on the video, improving the video such as increasing the light intensity and adjusting the saturation, exporting an edited video that has become a complete video into a format that can be opened by other platforms, editing the audio and music that accompanying the video (Enterprise, 2019).

Video editing software such as Adobe Premiere Pro CC 2019 is often used by video editors, videographers, cameramen, and even YouTubers for commercial needs such as product launches, video vlog creations, weddings, birthday events, and can be developed as educational research that produces creative learning media, as has been widely used by previous instructional media development researchers.

The initial data obtained during the needs analysis stage is the learner's interest in history learning and its characteristics in the history learning process. The research target of this study is SMA 15 Palembang. Based on the results of interviews with teachers of history education subjects as well as several students at SMA 15 Palembang class X Social 4, the teachers said that they did not use interactive media that could foster students' interest in the learning process. Teachers more often use PowerPoint as a learning medium because of its easy and flexible application, but the explanation is only dominated by mere writing without images, videos, animations, or sounds. Teachers also only use textbooks to provide subject matter to students. Some students in the class said that they needed some interesting media in every process of learning history.

They feel that learning history only causes boredom, like memorization of the given material. One of the students said that the teacher only occasionally displays interesting media in the form of videos. The characteristics of students in class X Social 4 have almost the same interests. They are happy with the media in the form of audio-visual elements that display images and sounds simultaneously when conveying messages or information.

Through history subjects, students will learn all kinds of national problems through historical messages, and they will become more critical, empathetic, wise, and independent to have a strong and dignified national spirit. But besides this, the subject of history is often underestimated because all that is known is memorization of details and events from textbooks. The subject of history is considered monotonous because it is only presented in the form of books and PowerPoint presentations that require students to remember events and their details such as their dates. In relation to the problems experienced by students in class X Social 4, SMA 15 Palembang, the authors of this study felt the need to create solutions to online learning problems faced during the Covid-19 pandemic. Thus, the author of this study tried to develop a product to take advantage of Adobe Premiere Pro CC 2019 with the scope of Technology-Based Learning Media with material from the remains of the Sriwijaya Kingdom found in Bukit Siguntang to overcome historical learning problems during the Covid-19 pandemic.

## **METHODS**

The media development model used in this study came from Hannafin and Peck named "the CAI design model" (CDM), which stands for "Computer Assisted Instruction". The research was conducted at SMA N 15 Palembang. Subjects are teachers and students of class X at SMA N 15 Palembang. Validator by 3 validators from the fields of learning design, material, and products. The effectiveness of the media was evaluated from the results of product trials conducted by 32 students of class X SMA N 15 Palembang. The development phase of this model follows 3 phases, namely the needs assessment phase, the design phase, and the development and implementation phase.

## **RESULTS**

The research method used in this study is a research and development method using the Hannafin and Peck models in the learning media development procedure as a foundation in developing the intended product. The stages of development in this model follow 3 phases, namely the needs assessment phase, the design phase, and the development and implementation phase, with each phase having a certain stage in it. The flow of these stages makes it easier in the data processing stage for a

learning media product to be produced according to the needs of students to overcome online learning during the COVID-19 pandemic.

The author of this study conducted research and analysis of the needs of schools, teachers and students with an online system without face-to-face contact, which was carried out via the Internet due to the Covid-19 pandemic situation, which caused the government to make a rule that the teaching and learning process must be shifted to a model-based learning model and carried out online. All of this aims to break the chain of the spread of the Corona virus. In addition to conducting research or observation, the authors of this study conducted online interviews by asking several questions to get valid data so that the solutions to the problems mentioned above in online learning can be mitigated.

Teachers say that they do not use interactive media that can foster students' interest in learning in the learning process. Teachers use PowerPoint more often because of its easy and flexible application, but the explanation is dominated only by mere writing without images, videos, animations, or sounds. Teachers also only use textbooks as learning resources. In addition, there are no books in the school library that contain material about the local history of the city of Palembang. Based on information obtained from the vice principal for curriculum, this school has used the 2013 Curriculum in both the Science and Social Departments for classes X, XI, and XII.

After knowing the problems experienced by both students and teachers, the authors of this study then tried to meet their needs by identifying their respective learning styles. The result obtained is that the average student prefers to learn using digital media, such as a combination of images, sound, text, and video. This is due to the desire to make learning easier to understand and not just read from texts; furthermore, coupled with online-based learning, students need to explore using studies that are made systematically so that they are easy to understand.

Online learning is supported by platforms such as Zoom Meeting, Google Classroom, and Google Drive. Thus, the application of Adobe Premiere Pro CC 2019 Based Learning Media using audio-visual media can be easily accessed by students. After the identification was carried out, the author of this study tried to adapt the material of the ancient remains of the Srivijaya kingdom contained in Siguntang Hill with basic competence. The authors of this study tried to collect material from various written and documented sources, including: the Regional Library of South Sumatra Province, the Central Library of Sriwijaya University, the Library of the Postgraduate Program of Sriwijaya University, the Reading Room of FKIP (Department of Teacher Training and Education) of Sriwijaya University, the Center for Archaeology of South Sumatra, the Archaeological Park of the Kingdom of Sriwijaya, and the Balaputera Dewa Museum. The author of this study also conducted a direct interview with Dr. Wahyu Rizky Andhifani, as the head of the research team from the Archaeological

Center of South Sumatra and an epigraphic researcher of ancient script in the Indonesian archipelago, to discuss the historical origins of the ancient remains of the Srivijaya kingdom in Bukit Siguntang. The search for written sources is not only about material from the Srivijaya kingdom in Bukit Siguntang, but also related to the research procedure for the development of the Hannafin and Peck model in order to produce valid learning media products with the material / content. After that, the author of this study can determine the Learning Implementation Design (RPP) and learning objectives that will be used in learning media using Adobe Premiere Pro CC 2019.

The design phase is the second stage in the process of developing learning media based on Adobe Premiere Pro CC 2019. In the design phase, the target is to use the design concept used to produce a product, design instructional goals, determine the subject matter in learning media based on Adobe Premiere Pro CC 2019, script preparation design, material map design containing material boundaries, and create a storyboard that serves to understand the storyline that is systematically designed regarding the stages and parts contained in making it from the target learning media. The storyboard is arranged systematically to match the content of the media to be created so that it is easy to understand. Then it is arranged between various elements of text, images, and videos about the ancient remains of the Srivijaya kingdom in Bukit Siguntang in one unit to become a learning video output. The author of this study then made a product by applying learning indicators, learning objectives, and materials in accordance with the 2013 Curriculum using Adobe Premiere Pro CC 2019 so that the results obtained were maximized.

After the product is created and ready for development, the final stage is development and implementation. At this stage, the products that have been made are tested for alpha, namely their validity by three related skill validators, namely media experts (videos), content material experts, and instructional design experts (learning implementation design and learning techniques). The results of the alpha test with three validators can be seen in table 1 below:

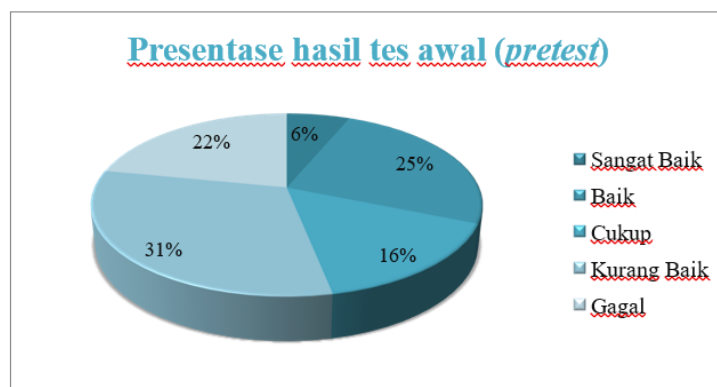
**Table 1** Alpha Test Results

<b>Validation</b>	<b>Result</b>	<b>Category</b>
Media Expert	4,68	Very Valid
Learning Desai Expert	4,48	Very Valid
Material Expert	4,20	Valid

Based on the table above pthe root of the media in this study is Syarifuddin. He is an expert in the field of Educational Technology. The validation sheet showed that the media expert assessment aspect scored 4.68 with a very valid category. Furthermore, the material expert in this study is Wahyu Rizky Andhifani. He is the head of the research team from

the Archaeological Center of South Sumatra and a researcher of ancient script epigraphy in the Indonesian archipelago who was appointed by a research supervisor to validate material with the subject of the ancient remains of the Srivijaya kingdom in Bukit Siguntang. The material expert assessment aspect scored 4.20 with a valid category. The next aspect of the assessment is an assessment of the aspects of learning design validated by Andy Harry Kusuma. He is a teacher at MAN 1 Prabumulih School who was appointed by a research supervisor to validate the learning design with the subject of the ancient remains of the Sriwijaya kingdom in Bukit Siguntang. The assessment aspect of learning design experts got a score of 4.84 with a very valid category.

After validating and revising according to suggestions, the next step is to apply Adobe Premiere Pro CC 2019-based learning media regarding the ancient remains of the Sriwijaya kingdom in Bukit Siguntang for grade X students of SMP Sosial 4 15 Palembang. The field trial was conducted on Friday, April 16, 2021 for two hours (2x45 minutes), namely in the first and second hours (07:30-09:00) using the zoom meeting online learning platform. Before applying the media, subjects are given a pretest through the Google Form link as many as 10 questions with the aim of knowing the initial knowledge possessed by each student. The following are the results of the initial test percentage (Pretest) in the following diagram 1:



**Pie Diagram 1.** Breakdown of Student Completion Percentage through pretest

Based on pie 1 diagram regarding the details of the results of the student pretest recapitulation and pie1 diagram regarding the breakdown of the percentage of student completion through the pretest, it can be seen that as many as 21.87% of the student's score is entered the failed category, as many as 31.25% of the scores of students who were included in the category of not good, as many as 15.62% of the scores of students who were included in the category of sufficient and as much as 25% of the scores of students who fall into the good category. Meanwhile, students who fall into the excellent category are 6.25%. The highest score at the time of pretest was obtained by 2 students with a score of 90.



After that, the learning media produced in the ancient remains of the Sriwijaya kingdom using Adobe Premiere Pro CC 2019 was presented through the Share Screen menu on the zoom meeting platform. After the learning is completed, the subject is given a posttest of 10 other questions via the Google Forms link. The posttest results obtained for 32 students were 86.87. The results of the posttest can be seen in the chart:

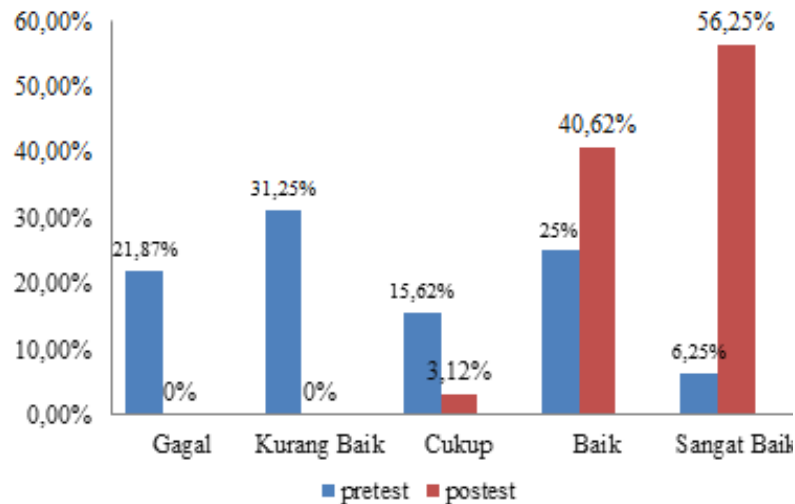


**Pie Diagram 2.** *Details of Student Completion Percentage through posttest*

Based on diagram 2 regarding the *details of the results of the student's posttest recapitulation* and pie 4.2 diagram regarding the breakdown of the percentage of student completion through *posttest*, it can be seen that as much as 0% of the learner's score is entered the category of failing, as much as 0% of the scores of students who fall into the category of not good, as many as 3.12% of the scores of students who fall into the category of sufficient and as many as 40.62% of the scores of students who fall into the good category. Meanwhile, students who are included in the excellent category are 56.25%. The highest score at the time of *posttest* was obtained by 8 students with a score of 100.

After knowing each average value on the test, it can be seen that there was a significant increase between the pretest and posttest by 39.37%. From the significant differences obtained, the use of learning media based on Adobe Premiere Pro CC 2019 has a good impact on student learning outcomes during the Covid 19 pandemic. With the learning media developed by the authors of this study, the historical learning outcomes of students during the pandemic have increased and can be easily applied through learning platforms, online. It can be seen from the test results that students actually have a high interest in learning. The increase in scores from pretest to posttest after being given newly developed video material shows that students follow the learning well even with the online learning system. The students can easily access the learning media that has been developed so that they can focus on participating in the learning. This is

evidenced by the posttest result of 86.87 with an N-gain value of 0.74 which corresponds to the medium-high category scale.



**Figure 1.** Comparison of pretest and posttest scores for primary data

It can be seen from the graph above that the significant increase in learning outcomes by 39.37% by students was due to the innovation of a series of digital-based learning media that were systematically created to meet the needs of students.

## DISCUSSION

The globalization, science and technology play a role in improve human resources to be able to compete in the internasional world (Yasin, 2019:2). Referring to the results of the study, it turns out that Adobe Premiere Pro CC 2019-based learning media for the ancient remnants of the Sriwijaya kingdom in Bukit Siguntang can provide new information for students that has a positive impact on their learning outcomes. The increase in learning outcomes was seen in students who experienced an increase of 70 points. Some students experienced a significant increase in learning outcomes. In connection with the significant impact, the role of constructivist theory according to Hamiyah, the concepts cultivated in the cognitive structure of a person will develop and change if they gain knowledge or experience. The study by Sharan and Sachar (1992) referred to in Sushkin (1999) proved that students taught using the constructivist approach have much higher achievement than students taught using the traditional approach.

The advantages of adobe premiere pro cc 2019-based learning media in online learning are as follows: 1) Mthe adobe premiere pro cc 2019-based learning availability can be accessed easily using google drive links, 2) Mthe Adobe Premiere Pro CC 2019-based learning availability has a unity of text, voice, and image elements so that it is interesting to students,

3) Learning media based on Adobe Premiere Pro CC 2019 is very complex because it has basic competencies, indicators and learning objectives according to students. While the disadvantages of Learning media based on Adobe Premiere Pro CC 2019 include: 1) Learning media based on Adobe Premiere Pro CC 2019 must have hardware such as laptops or smartphones to be able to access it so that it can be used, 2) Learning media based on Adobe Premiere Pro CC 2019 in the form of videos so that to understand more deeply users must pause the video so that they can read carefully the text Be shown.

## **CONCLUSION**

The Adobe Premiere Pro CC 2019-based learning media for class X history subjects in high school developed by the authors of this study has taken effect after going through the stage of expert evaluation and field trials. The results of the expert study obtained from the validation sheet showed that the media expert assessment aspect received a score of 4.68 with a very valid category, the material expert assessment aspect got a value of 4.20 with a valid category, and the learning design expert assessment aspect got a score of 4.84 with a very valid category. As a result, the learning media developed in this study is suitable for use in history learning with the subject of the ancient remains of the Srivijaya kingdom in Siguntang Hill.

The results obtained from field trials show the effectiveness of learning using learning media products based on Adobe Premiere Pro CC 2019 in class X history subjects in high school developed by the authors of this study in terms of the results of pretest and posttest scores. The percentage of average scores achieved by students at the pretest stage showed a figure of 47.5 which was categorized as very low with a total of 28 students not achieving a minimum completion criteria score of 75, while 4 students achieved a minimum score. The percentage of results obtained with the average score achieved by students at the posttest stage was 86.87 which was categorized as high with a total of 29 students achieving a minimum completion criteria score of 75 while 3 students did not achieve a minimum score. The increase in pretest and posttest scores obtained by class X Social 4 students was 39.37% ( $86.87 - 47.5 \times 100\%$ ). The calculation result is that the value of the N-gain index is 0.74, meaning that if the N-gain is  $0.74 \geq 0.7$ , then it can be categorized as high.

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