Development Of Interactive E-Modules Based On Video Tutorial Practices Learning Models in Historical Learning Strategies As A Source Of Innovative Learning

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Abstract.
This study aims to produce interactive e-module products based on practical video tutorials of learning models for the History learning strategy course as an innovative learning resource, with innovations containing a collection of multimedia in the form of graphics, text, images, animations that are processed in such a way as to produce movement and movement. equipped with audio so that it seems alive, which is systematically arranged and stores learning messages that can be used to improve the quality and effectiveness of learning. The method used is the research and development method or Research & Development (R&D).To produce a product, test its feasibility, and its effectiveness in accordance with the development objectives. The research was conducted at the Department of History Education batch 2019. The developed interactive e-module has been validated and meets the criteria for good and appropriate learning media to be used in learning, by obtaining a validation value of 85% from material experts and 87.5% from media experts. While the feasibility of each trial ranged from 89.88% for small trials, 89.77% for medium trials, 83.67% for large trials and the effectiveness obtained a value of 81.04%.

Keywords: *Development, interactive E-module and Video Tutorial.*

I. INTRODUCTION

Education is a conscious effort made by humans for survival. So that education must be able to change the mindset of people for the better. The quality of education is closely related to how the implementation of learning is carried out in educational institutions from elementary to tertiary levels.Achieving the quality of learning in Higher Education is one of the professional responsibilities of the lecturer. In the learning process, the components that play an important role in achieving the learning objectives are objectives, learning materials, teaching and learning activities, methods, and learning tools and resources that are in accordance with the objectives to be achieved. This is often related to the development of science and technology that encourages lecturers to make updates in the use of technology results in the learning process.Conditions due to the Covid-19 pandemic require students to study from home through online or online learning activities. Online learning is an educational innovation that also requires to continue to use existing learning resources that are in accordance with the times. Likewise in the implementation of lectures in the history learning strategy course. The history learning strategy course is one of the subjects that must be taken by students of history education in Indonesia, this course will increase student competence in understanding, analyzing the concepts and nature of history learning strategies, demonstrating various approaches, models, methods and learning resources in learning history, analyze and evaluate the practice of teaching history in high school, and design solutions to problems.

One of the Learning Outcomes of the History Learning Strategy Course is that students are able to demonstrate and create innovative historical learning models in accordance with the applicable curriculum. In order to realize a relevant and conducive learning model to prepare students to become citizens of a global society who are information and technology literate in the 21st century, a learning strategy is needed that focuses on direct practice towards learning models.Implementation of learning on learning models material is usually done by giving examples or modeling directly to students to then demonstrate in practice classes. However, in today's online learning practice, it is often constrained by access to an internet network that is less stable, as well as the lack of learning resources so that the learning process does not run as expected, thus students need learning materials that can be used independently and can be accessed easily by using the Internet. the use of learning media that is better able to accommodate various problems that occur

in the learning process.One alternative solution to the problem above is by developing interactive video tutorial-based E-modules that can train students' independence in learning, so that they can easily understand examples of learning model practices, then can create innovative 21st century learning models. Combination of E-Modules This interactive video tutorial will create learning media innovations that are inserted interactive links in the form of graphics, text, images, audio, video, animation so that the information conveyed is understood in its entirety and is more meaningful.

Theoretical Framework

A. Research and Development

To be able to describe the nature of interactive E-Module development, the first thing to describe is the concept and nature of development. The meaning of development in this context is referring to one of the research methods known as Research and Development (R&D).Research and development methods or research methods are used to produce a particular product, and test the effectiveness of the product. To be able to produce certain products requires research that is needs analysis and to test the effectiveness of these products so that they can function in the wider community, research is needed to test. So development research is gradual with several steps used [1][2].Research and development is a process or steps to develop a new product or improve an existing product, which can be accounted for [3].

Where, the steps of the research and development process show a cycle, which begins with a need, a problem that requires solving by using a particular product. Where in research and development there are several development steps to produce models or learning products that will later be used in the learning process. Suhadi stated that development research as a type of research aimed at producing a hardware or software product through a typical procedure, usually begins with a needs analysis, continues with the development process and ends with evaluation [4]. The purpose of hardware/software products here is that development is carried out using computer equipment to produce an innovative learning product in accordance with the development of 21st century education.There are several research and development models that can be applied in the field of education, such as the Borg and Gall model, the Dick and Carey model, the ADDIE model, the ASSURE model, and the Sugiyono model.

B. Interactive E-Module

E-module is a form of presenting self-study materials that are systematically arranged into certain learning units, which are presented in an electronic format, where each learning activity in it is connected by a link as a navigation that makes students more interactive with the program, equipped with presentation of video tutorials, animations and audio to enrich the learning experience [5]. So that with the use of the E-module, the quality of learning is increasing in line with technological developments or advances.According to Samiasih E-module is a computer-based module and contains fragments with questions in each section to make it easier for users to understand the material [6]. This type of module is a change from a printed module into a digital or electronic form to make it more effective and of high quality.E-modules are now being developed by adding interactive links so that they become Interactive e-modules.

One of the criteria for interactive e-modules is self-instruction which makes the teaching materials able to teach students independently. Learning independence is given to students with the intention that students have the responsibility to organize and discipline themselves and develop learning abilities on their own abilities. It is said to be interactive because users will experience interaction and be active, for example actively paying attention to pictures, paying attention to writing that varies in color or moving, animations, videos, and can provide responses or feedback on content, for example in conducting training activities.Based on the explanation of Research and development as a research method and the presentation of Interactive E-Modules, it can be concluded that the development of Interactive E-Modules is the development of innovative learning products in the form of electronic modules that insert interactive links in the form of text, audio or video.

C. Video Tutorials on the Practice of 21st Century Learning Models

According to Binarto, video tutorial refers to the words video and tutorial [7]. Video comes from Latin which means I see. Video is an electronic signal processing technology that represents moving images. Videos are divided into two namely; 1) analog video, which is video that encodes image information by

varying the voltage and/or frequency of the signal, 2) digital video, which is video that actually consists of a series of digital images that are displayed rapidly at a constant speed. For those who see the video will get a variety of information contained in it.According to Cecep, video is a tool that can present information, explain processes, explain complex concepts, teach skills, shorten or slow down time and influence attitudes [8]. With the use of video will affect those who see it. One form of video is a video tutorial.Tutorial is a learning guide in the form of providing direction, assistance, instructions and motivation so that students learn efficiently and effectively [9] [10]. Providing assistance means assisting students in learning the subject matter. Guidance means providing information on how to learn effectively and efficiently. Direction means directing students to achieve their respective goals. Motivation means moving the activities of students in studying the material, doing assignments and participating in assessments. Guidance means helping students solve learning problems. In tertiary institutions, mentoring is carried out by lecturers to students.Referring to the definition of videos and tutorials above, it can be written that video tutorials are a series of many picture frames that are played quickly that present information, describe processes, explain complex concepts as class guidance by lecturers (Tutors) to students.

Video tutorials are very suitable to be used as learning media to talk about certain knowledge, attitudes and skills. One of them is about the practice of learning models.The practice of learning models is one of the competencies that must be achieved in the course of history learning strategies. Through this practice, students will be able to practice various learning models in accordance with the applicable curriculum. To achieve this competency, real examples of how to practice learning models must be provided so that students will be able to exemplify them in real classes. Various ways can be done by lecturers in providing these practices, one of which is by utilizing video tutorials as learning media.Haryono stated that in order to realize a learning model that is relevant and conducive to preparing students to become citizens of a global society that is literate with information and knowledge in the 21st century, a learning strategy that is more focused on learning deeper learning practices (deeper learning) and learning new partnerships is needed. learning to apply pedagogical strategies that support deeper learning practices and new partnerships, direct learning towards the inquiry based model, and the use of technology directed at helping students develop technological skills as part of 21st century competencies[11].Thus, it can be concluded that video tutorials on the practice of 21st century learning models are videos that contain guidance and direction that tell or contain scenes about the implementation of learning models that are in accordance with 21st century developments.

II. METHODS

The development model used in this study is a descriptive procedural development model from Borg and Gall which consists of several steps. The first step; preliminary research (preparation, in-depth survey, needs analysis), second; product development planning (data collection, identification of developed products), third; product validation and revision (expert review, small group trial and large group trial), fourth; product implementation (planning, preparation, implementation, observation, evaluation).

III. RESULT AND DISCUSSION

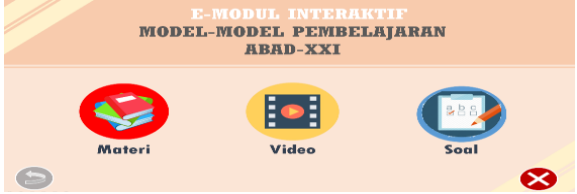
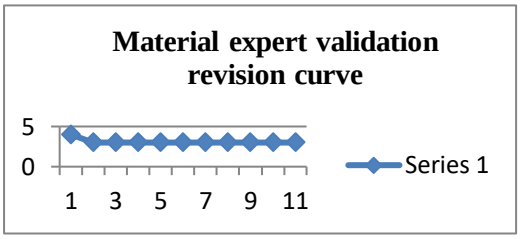


Fig 1. Cover Preview

At this stage, validation is carried out to determine the feasibility of the media based on the assessment of material experts and media experts, before testing the product on students. Media products that have been validated are then revised according to expert advice and input during the validation process. The interactive e-module was validated by the head of the history education department at the State University of Medan, namely Dr. Lukitaningsih, M.Hum as a test material and a lecturer in history education

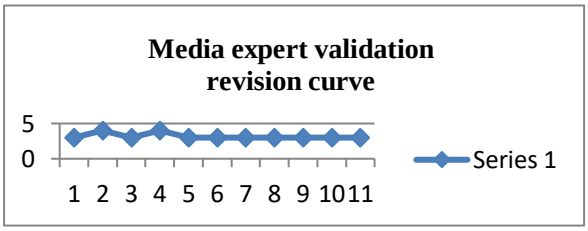
at the State University of Medan, namely Najuah, M.Pd as a media expert test by including an assessment questionnaire.

Material Expert Validation



The results of the material expert validation assessment show that the animated video learning media gets a score of 30 with a percentage of 75%, the category is valid. In this assessment, it has 3 aspect criteria, namely aspects of the feasibility of content, use of media, and presentation. In general, the revisions made such as the addition of more in-depth material, improvements to the clarity of the material displayed, and the completeness of the material must be adjusted. After repairs were made, the material expert validation sheet was redistributed, and the score changed to 34 with a percentage of 85% in the very valid category.

Media Expert Validation



The results of the media expert validation assessment showed that the interactive e-module based on video tutorials got a score of 34 with a percentage of 85% valid category. The assessment has 5 aspects, namely in the appearance of design, ease of use, format, utilization, and graphic quality. And in general, improvements have been made, such as changes in the appearance of more innovation and changes in the appearance of the video so that it is not cut and broken. After repairs were made, the media expert validation sheet was redistributed, and got a score of 35, with a percentage of 87.5% very valid category.

Small Scale Trial

A small trial was conducted on 5 students in the class of 2019, The purpose of this small group trial was to identify product deficiencies and perceptions of the interactive video tutorial-based e-module that had been developed after being validated by a team of experts. The results of the research that have been developed can be seen in table 1.2

Table 1.2. Percentage Results of Small Group Trials

Respondents	Total Score	Maximum Score	Percentage
1	45	52	86,54%
2	51	52	98,08%
3	46	52	88,46%
4	43	52	82,69%
5	48	52	92,31%
Total	234	260	449,4%
Total Percentage			89,88%
Information			**Valid**

The percentage of eligibility for the interactive e-module based on the video tutorial above can be categorized as "valid" (no need for revision) with a percentage of 89.88% with an average score of 46.8. Thus, it is feasible to use it as a learning resource.

Medium Scale Trial

The assessment was carried out by 10 students of the class of 2019 with the aim of seeing the response to the feasibility of the interactive video tutorial-based e-module developed. The results of student responses during the moderate trial of the media that have been developed can be seen in table 1.3 below:

Table 1.3. Percentage Results on Medium Scale Trials

Respondents	Total Score	Maximum Score	Percentage
1	52	52	100%
2	47	52	90,3%
3	46	52	88,4%
4	44	52	84,6%
5	45	52	86,5%
6	41	52	78,8%
7	41	52	78,8%
8	51	52	98,0%
9	47	52	90,3%
10	52	52	100%
Total	466	520	897,7%
Total Percentage			89,77%
Information			**Valid**

The percentage of the feasibility of the moderate group trial can be seen in table 1.3 above that can be categorized as "valid" with a percentage of 89.77% with an average score of 46.6. Thus, interactive e-modules based on video tutorials can be used as learning resources.

Large Scale Trial

Table 1.4. Percentage Results of Large-Scale Trials

Respondents	Total Score	Maximum Score	Percentage
1	48	52	92,3%
2	42	52	80,7%
3	52	52	100%
4	47	52	90,3%
5	41	52	78,8%
6	44	52	84,6%
7	43	52	82,6%
8	47	52	90,3%
9	46	52	88,4%
10	43	52	82,6%
11	40	52	76,9%
12	44	52	84,6%
13	49	52	94,2%
14	42	52	80,7%
15	52	52	100%
16	45	52	86,5%
17	20	52	38,4%
18	45	52	86,5%
19	41	52	78,8%
20	49	52	94,2%
21	48	52	92,3%
22	49	52	94,2%
23	44	52	84,6%
24	50	52	96,1%
25	52	52	100%
26	48	52	92,3%
27	48	52	92,3%
28	29	52	55,7%
29	28	52	53,8%
30	30	52	57,6%
Total	1306	1560	2510,3%
Total Percentage			83,67%
Information			**Valid**

The percentage of eligibility for learning media in the form of interactive e-modules during large group trials can be seen in table 1.4 above that the media is categorized as "valid" (no need to be revised) with a percentage of 83.67% with an average score of 43.53. Thus, this interactive e-module has succeeded

in achieving the goal of the research, which is to see the responses of 30 class A students, whether the developed interactive e-module can/feasible to be used as a learning resource.

Effectiveness Test

In addition to testing the use to determine the feasibility of the product, in large groups an effectiveness test is also carried out to determine whether the product is effectively used as a learning resource in history learning activities based on the number of students who have successfully completed the learning outcomes test. The value of learning outcomes is obtained by giving an objective test that has been validated to large groups and totaling 20 (twenty questions) multiple choice questions with judging criteria if students answer correctly they are given a value of 5 and if they are wrong they are given a value of 0. As for student learning outcomes in large groups accumulated and presented in the form of the following table.

Table 1.5. Effectiveness Test Results

No	Student Name	Score Percentage		Criteria
		Pretest	Posttest	
1	Lia	45	80	Very effective
2	Muhajirin Syah	35	85	Very effective
3	Mhd. Risky Syah Putra	30	80	Very effective
4	Ade Manurung	45	80	Very effective
5	Abdullah Jun Rabi	10	80	Very effective
6	Ikhsan	20	80	Very effective
7	Hairun	25	80	Very effective
8	Faisal Naizam Silaban	40	75	Effective
9	Suryadi Saputra Sibarani	10	80	Very effective
10	Ferdi Yansyah	25	80	Very effective
11	Dodi Syahputra	40	75	Effective
12	Verry Valentini Naibaho	15	70	Effective
13	Pida Maulina	30	90	Very effective
14	Muhammad Dandi	15	80	Very effective
15	Jumnati Huda	25	80	Very effective
16	Arida Sahpitri Hasibuan	45	80	Very effective
17	Nur 'Aini	35	85	Very effective
18	Yohana Marpaung	25	80	Very effective
19	Yusliana	35	85	Very effective
20	Rena Pramitha Simatupang	30	75	Effective
21	Arga Widitiya	40	90	Very effective
22	Dhalia	45	85	Very effective
23	Rahamnia Syahrani	45	80	Very effective
24	Hadi Setiawan	35	90	Very effective
Average		**31.04**	**81.04**	**Very effective**

Based on the results of the product effectiveness test with the number of respondents as many as 24 (twenty four) students in class C. The percentage of complete learning outcomes obtained is 81.4%. Thus, referring to the criteria of Sudjono (2012; 44), the use of interactive e-module media is included in the "effective" category.

IV. CONCLUSION

After the stage of the media development process has been carried out, which is in accordance with the steps of the Borg and Gall development model, the interactive E-module media developed has been validated and meets the criteria for good learning media and is suitable for use in learning, by obtaining a validation value of 85% from material experts and 87.5% from media experts. While the feasibility of each trial ranged from 89.88% for small trials, 89.77% for medium trials and 83.67% for large trials.Interactive E-Module based on practical video tutorials of learning models for the History learning strategy course as an innovative learning resource that has been developed has been effectively used to improve student learning outcomes in the learning process. This can be seen from the analysis of student learning outcomes who obtained a post-test score of 81.04%.

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