

# The Development Electronic Module Of History Using ADDIE Model

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## Abstract.

**Background** –Students need learning aids that are by the development of communication technology during the corona disease pandemics. In history subjects, there are not many electronic modules developed for unit semester learning outcomes.

**Purpose** – This study aimed to develop an Electronic Module of History (EHM/MES) using The ADDIE model as a learning aid for high school students and to determine its feasibility and attractiveness.

**Design/methodology/approach** – This study used to research and development method. The ADDIE development model includes 5 activity sequel steps. The steps must be carried out in order and cannot be randomized. We used interviews and questionnaires to collect data from education experts, Indonesian History teachers, and students.

**Findings** – The results showed that the MES developed could be used by XI grade high school students in the Indonesian History subject for semester 1. The product packaged in 4 separate chapters according to the curriculum analysis. Based on the results of data analysis and discussion of the MES development process, can be explained that (1) expert testing on the validation results of material experts was a very great criterion, media experts and learning design experts were very great criteria, (2) The level of attractiveness of the MES in individual trials of three Indonesian history subject educators gets an average result of with the category interesting. The small group trial from educators got results so attractive criteria, and the use of digital modules at the implementation stage, students had attractiveness test results highly attractive criteria.

**Research limitations**– The limitation of this study is that the MES developed has not been tested for its effectiveness because of the difficulty in controlling the test activities due to the learning system policy during the current pandemic and the development process is still using unpaid applications.

**Originality/value** –The novelty of value from this MES is that it can hyperlink and hypertext so that the display of the module becomes more attractive.

**Keywords:** ADDIE, Electronic Modules, History, Technology.

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## I. INTRODUCTION

Learning is a process experienced by humans throughout their life. Through this learning process, humans continue to experience changes to improve their quality of life. History has provided a real picture of how humans continue to experience life changes to keep up with the times. In the era of the industrial revolution, technological progress and the development of science are increasingly rapid. Therefore, the world of education is required to be able to face the challenges of technological progress to improve the quality of education. However, there are still many teachers who do not take advantage of technological developments in the learning process. of internal factors from the teacher himself and external factors. The headway of science and technology should increasingly encourage reform efforts in the use of technological results in the learning process. So those teachers are required to be able to use tools and learning materials that are following the developments and demands of the times. One way is to use an electronic module as learning. There are no more face-to-face meetings in class between teachers and students in the educational system now and changes the way teachers carry out the learning process. be included in the process of learning history at the upper-middle level. The learning process online using various online virtual spaces. The impact is the need to use a variety of electronic or digital learning aids (Handarini and Wulandari, 2020).

One of the learning aids that teachers can use in implementing online learning is by utilizing electronic modules. The use of electronic modules is useful in helping students in the learning process.

Belong to learning history. However, in reality, there are still many history teachers who have not developed and utilized electronic modules in their learning (Rizqon Halal Syah Aji, 2020). Besides though students need learning aids that are under the development of communication technology in this time of the corona pandemic that is following student learning needs. The results of a study of electronic school books published by the education and culture department (F S Azizha, N Umamah, 2020) show that the learning material contained in the book is less detailed and less attractive be composed of long texts and only equipped with images that do not move so that it is less appealing to students and in subjects history, There are many electronic modules in history subjects as the results of research conducted by students in their final assignments. The results are still in the scope of one material aspect and are local. (Nur Oktafiyani Heriyanto, 2019) ; (Ria Rosita, 2017). Thus, it is very significant to develop an electronic module of history subjects (2008-2495-2-PB.pdf Pengembangan modul sejarah) the writer calls the electronic module of history (EHM/MES) as a learning aid for students.

## II. LITERATURE REVIEW

The emergence and development of communication technology in learning and the corona pandemic forcing changes to the way humans carry out learning activities. The learning process in schools also changes suddenly and quickly. However, efforts to implement learning in schools must still do because schools are the most reliable public policy tools to increase the knowledge, attitudes, and skills of students (Rizqon Halal Syah Aji, 2020) In this pandemic atmosphere, the policy taken by the government is the implementation of an online learning system. It is a learning activity that requires an internet network with connectivity, accessibility, flexibility, and the ability to realize various learning interaction activities (Handarini and Wulandari, 2020). The online learning goals reached if the ability to use technology is good, and internet network access for both teachers and students is also available properly. Various problems arise during online learning, such as the limited use of information technology by teachers and students, inadequate facilities and infrastructure, limited internet access, and not enough provision of the budget from the government. This limitation certainly should be a significant concern for teachers, especially in designing learning.

The use of electronic modules in learning is very endowed in helping students in the learning process. Where the world of education needs to take advantage of technological advances by presenting electronic modules in the widespread use of gadgets in society (Suyoso dan Sabar Nurohman, 2014) , there are still many practitioners in the world of education, especially teachers who have not optimally. The electronic module can be interpreted as a form of presenting independent study materials that are systematically arranged into specific learning units, which are presented in an electronic format, where each learning activity is linked with a link as navigation that makes students more interactive with the program, equipped with video tutorial presentations, animation and audio to enrich the learning experience (Pembinaan *et al.*, 2017). The electronic module is a module development that is an adaptation from a print module to a digital or electronic module (Sugihartini *et al.*, 2017);(Pembinaan *et al.*, 2017);(Cheva and Zainul, 2020);(Molenda, 2003);(Ricu Sidiq ; Najuah, 2020). Each learning activity is linked together with a link as navigation, which students more interactive with the program developed, Modules equipped with text, video presentations, animation, and audio to enrich the student learning experience. The electronic module operated with a computer or other electronic media for the learning process. The presentation of learning materials packaged in electronic form becomes more practical, making it easier for teachers and students in the learning process by designing innovative learning.

One of the learning innovations that history teachers can do is to develop electronic learning aids to be used in history learning offline or online. The development of the electronic module of history is the development of a printed history module in digital form that allows students to learn, which is systematically arranged and contains a guide for self-study that is used by students in historical subjects (Putri, 2019). Electronic module development can be design using a variety of development models. One of them is the ADDIE model (Shelby Danks, 2011);(Molenda, 2003). This model is very suitable for a computer-based

learning product. Thus the development of an electronic history module is highly fitted to be developed using this ADDIE model.

### III. METHODS

This study used to research and development method. The ADDIE development model includes five activity sequel steps there are analysis, design, development, implementation, and evaluation. The sequel steps must be carried out in order and cannot be randomized. We used interviews and questionnaires to collect data from education experts, Indonesian History teachers, and students. The data are qualitative and quantitative. The data obtained were then analyzed qualitatively to obtained results in the form of comments and quantitative to obtainable results in the form of a percentage of the feasibility of using the product. Quantitative data analysis using the formula:

$$P = \frac{\sum x}{\Sigma x} \times 100\%$$

Information:

P = Percentage sought

$\Sigma x$  = The total value of the answer / respondent's score

$\Sigma x$  = Total ideal score / total result

**Table 1.** Level of Eligibility Qualification Based on Percentage

Score/Percentage	Criteria
80,0% - 100%	Very Worth
70,0% - 79,9%	Worth
40,0% - 69,9%	Decent Enough
20,0% - 39,9%	Not Worth
0,00% - 19,9%	Not Feasible

(Source: Daulay, 2017)

### IV. FINDING AND DISCUSSION

The product produced from this research is the Electronics Module History for class XI Senior High School for Semester 1. This product is divisible into four modules, which are do divided based on the results of curriculum analysis on these subjects. After the design is complete, The MES were validated by experts, historian teachers, and students. The results of the validation by material experts on the eligibility of MES in terms of various aspects show that MES is in very suitable criteria for use, can be seen from the following table of analysis results.

**Table 1.** Data of MES Assessment Results by Material Experts

Type of E-Module	Aspect			Score Percentage	MES Criteria
	Learning	Subject Matter	Language		
MES I	90	94.3	92	92.1	Very Worth
MES II	92	91.2	92.5	91.9	Very Worth
MES III	88	87.4	90.7	88.7	Very Worth
MES IV	83,2	85.3	89.2	85.9	Very Worth

The results of the validation tests conducted by media experts on the eligibility of MES show that MES is at the very appropriate criteria for use, as can be seen in the following table.

**Table 2.** Data of MES Assessment Results by Media Experts

Type of E-Module	Aspect			Score Percentage	MES Criteria
	Learning	Subject Matter	Language		
MES I	90.3	90.6	93	91.3	Very Worth
MES II	89.8	92.6	93.6	92	Very Worth
MES III	89.4	87.3	90.6	89.1	Very Worth
MES IV	85.7	84.6	88	86.1	Very Worth

The results of the validation by ten historian teachers from various cities in Indonesia, about the aspects of attractiveness, appropriateness, and correctness of the information, also the statement that MES is very suitable to be used, someone who can see in the following table.

**Table 3.** Data of MES Assessment Results by History Teacher in Indonesia

No	Name	MES I	MES II	MES III	MES IV
1.	N	88	89	88	85
2.	FS	90	90	89	87
3.	N	84	84	83	88
4.	S	86	86	86	84
5.	NA	89	88	89	88
6.	MR	91	92	92	90
7.	JS	92	93	90	89
8.	NF	90	89	90	86
9.	DH	94	94	93	90
10.	DS	92	91.35	91.2	89
<b>Average</b>		89.6	89.635	89.12	87.6
<b>MES Criteria</b>		Very Worth	Very Worth	Very Worth	Very Worth

The MES product trial stage by 15 students showed the following results.

**Table 4.** Data of MES Assessment Results by Students

Type of E-Module	Aspect		Score Percentage	MES Criteria
	Attractiveness	Practicality		
E-Module I	88.5	88.3	88.4	Very Worth
E-Module II	89.5	88.7	89.1	Very Worth
E-Module III	88.7	88.3	88.5	Very Worth
E-Module IV	88.4	88.2	88.3	Very Worth

Based on the data above, it can see that MES IV tends to get lower scores than the other three modules. It is necessary to carry out further studies on this matter. Even so, the results of the MES IV assessment still show that MES is very suitable for use. After ensuring that all the MES produced are fit for use through the validation, revision, and testing stages, the MES then enters the implementation stage. This implementation in a class of 24 students. The final result shows that MES can be said to be very interesting and very practical to use in learning. The following are the results of data obtained from students based on the value of product attractiveness and practicality.

**Table 5.** Data of MES Final Results by Students

No	Student	Score Percentage		Average	Criteria	Comment
		Attractiveness	Practicality			
1.	AP	93,3	86,67	90	Very Worth It	The MES is attractiveness and easy to use.
2.	A	93,3	73,3	83,3	Very Worth It	It's good.
3.	BD	80	93,3	86,67	Very Worth It	It's a fun MES with great videos.
4.	C	86,67	73,3	80	Very Worth It	It makes me really excited to learn, cause it's like watching videos on <i>youtube</i> .
5.	DI	93,3	80	86,67	Very Worth It	Good.
6.	DN	86,67	86,67	86,67	Very Worth It	It's a good e-module, but the capacity is too heavy.
7.	FA	73,3	80	76,67	Worth It	Easy to learn.
8.	FN	86,67	80	83,3	Very Worth It	The sound is nice and clear.
9.	F	73,3	80	76,67	Worth It	Very attractive, but so heavy capacity.
10.	HM	73,3	73,3	73,3	Worth It	The e-module display is good and suitable for learning history.
11.	IH	93,3	73,3	83,3	Very Worth It	This is good. It's makes learning history so fun.
12.	IAK	80	80	80	Very	Good, but needs to add more

					Worth It	videos.
13.	IY	80	80,67	83,3	Very Worth It	It feels like watching <i>youtube</i> , but doesn't need internet connection.
14.	KC	80	80	80	Very Worth It	Cool, because it's explained by voice, not just writing.
15.	KA	80	86,67	83,3	Very Worth It	It's a good e-module.
16.	K	86,67	93,3	90	Very Worth It	It doesn't make studying boring.
17.	IR	86,67	80	83,3	Very Worth It	It's a good e-module, but it would be better if the capacity could be made lighter.
18.	RA	86,67	86,67	86,67	Very Worth It	Good, because it can be used offline.
19.	R	80	73,3	76,67	Worth It	It doesn't make history lesson so tedious.
20.	MF	80	73,3	76,67	Worth It	I like it.
21.	SK	73,3	86,67	80	Very Worth It	It makes me more excited about studying history.
22.	SY	93,3	86,67	90	Very Worth It	It's suitable for independent study.
23.	RU	93,3	80	86,67	Very Worth It	Cool, made me learn just by listening to audio/watching video and not always having to read.
24.	S	53,3	73,3	63,3	Decent Enough	Cool, because it doesn't need internet connection to use.

#### A. Conclusion and Futher Research

This research concludes that the product developed, namely the Electronic Module Of History (EHM/MES) using the ADDIE model as a historical learning aid for class XI through a student-centered learning approach is very worth to use because it is able to attract learning interest and help students during the learning process. Even so, so far the effectiveness of the module cannot be stated. This is because researchers have difficulty controlling trial activities due to the online learning system implemented during the pandemic. As for further research, it is recommended to use professional / paid applications to facilitate the process of product development and use. Perhaps it is also necessary to test the effectiveness of its use.

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