Development of Electronic Module Hikayat Text Based on Project Based Learning (PJBL) Class X Students of High Schools

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ABSTRACT
This study aims to describe the development of a valid electronic learning module based on saga text based on Project Based Learning (in terms of content, presentation, linguistic, and graphic), practical (in terms of ease of use and suitability with time), and effective (in terms of activities students, learning outcomes, and affective students) used by high school students in class X. This type of research is research and development. This study uses a 4-D model (defining, designing, developing, and distributing). The subjects of this study were class X students of SMA Negeri 3 Padang, totaling 36 students. This research data consists of qualitative data and quantitative data. DaQualitative data were obtained based on filling out electronic module validation questionnaires, electronic module practicality questionnaires, and student activity observation sheets. Meanwhile, quantitative data were obtained based on student learning outcomes in learning to develop saga text. The results of this study indicate that the Project Based Learning -based saga text learning module electronics are valid, practical, and effective. This is evidenced from the results of the validity, practicality, and effectiveness of electronic modules. The validity of the electronic modules from the experts was 88,70 % so the category was very valid. Electronic module pre- activity was obtained from the practicality value of the teacher at 98.33 % with a very practical category and student practicality at 90.26 % with a very practical category. Student learning activities obtained by 93.61 % with a very active category. The effectiveness of electronic modules based on student performance test results on average the value obtained by students is 88.44 with the title of A. The effectiveness of the electronic module based on student knowledge the average value obtained by students is 91.53 with the title of A. The effectiveness of the electronic module based on the assessment of aspects the hood obtained a value of 88.89 with the title A categorized as very effective.

***Keywords*:** e-module, hikayat text, Project Based Learning

1. INTRODUCTION

Technological advances that are increasingly developing have an impact on the progress of education. One example of technological progress felt in the world of education is the use of instructional media. The Association of Education and Communication Technology (AECT) sets limits on the media as all forms and channels used to convey messages or information (Sardiman, 2007: 6).

In addition, government regulations No. 19 of 2005 emphasized that the use of communication information technology can support the learning process. Per government regulation No.19 year 2005 article 1 paragraph 8 reads "the standard of facilities and infrastructure is the national standard of education relating to the minimum criteria of learning spaces, places to exercise, places of worship, libraries, laboratories, workshops, playgrounds, recreation areas and other learning resources needed to support the learning process, including the use of information and communication technology. "

Therefore, one of the infrastructures that can be realized in education is to develop effective and efficient learning resources. However, the facts on the ground prove the lack of learning resources used by students . This is evidenced from the results of an interview conducted by a researcher with one of the X grade Indonesian teachers at SMA Negeri 3 Padang. Based on the results of interviews related to learning Indonesian in schools, especially learning resources used in learning are only based on Indonesian language books published by the Ministry of Education and Culture Edi 2017 revision. In addition to the knowledge gained is limited, the presentation of material in the book is also presented concisely and less

attract students. This certainly has an impact on student learning outcomes.

To overcome the above problems, one of the steps that can be taken is to develop teaching materials or learning resources that are practical, effective, according to students' needs, and easy to understand. One such learning resource is the learning module. Learning modules are teaching materials designed by teachers. By designing modules, teachers can prepare lessons carefully so that learning objectives can be achieved (Ramadhan, Asri, & Indriyani, 2018). At this time, learning modules are not only available in printed form, but in electronic form by utilizing various digital devices called electronic modules.
According Krisnayuni (2015), electronic module (E-module) is a book guidelines in the version of the digital, where a book that can be opened by using the device electronics such as laptops, computer, Ipad , Android and so on . It is not much different from the opinions of Prime , Sarwanto and Sukarmin (2017) states that the module electronics is a form of presentation of material to learn independently are arranged in a systematic become a unit of learning smallest to achieve the goal of learning is specific that is presented in the format of electronics .
In recent years, electronic module research has been widely carried out such as in the USA, Thailand, England, Saudi Arabia, Malaysia, and Indonesia. Based on the results of the developing research it can be concluded that the electronic module is very effectively used for learning in schools. Students become more interested and encouraged in learning because learning is more innovative and in accordance with technological developments.

The electronic module developed is equipped with a Project Based Learning model . Project-based learning is a learning model that involves a project that can make students more actively motivated to learn. Therefore, the teacher is only as a facilitator or evaluator of student performance results or outcomes that are able to be displayed from the results of the project being done so that students become the center of learning (Sugihartini & Jayanta, 2017).PjBL in giving students the opportunity to manage their own activities or activities to complete the task of training students to become independent (Indriyani & Ramadhan, 2017).

One of the appropriate Indonesian language learning materials integrated with the Project Based Learning model is saga material. Storybook is one of the materials students learn in class X and is most categorized as the most difficult material to understand. Rizki (2018: 179) states that the problem of writing folklore texts (saga) is still an obstacle for students. The problems faced have an influence on the students' daily test scores in understanding the saga text given by the teacher. The average student is only able to achieve a value of 73, while the KKM set by schools for Indonesian language subjects is 76. Thus, it can be concluded that there are still many students who have not yet completed the saga text or folklore material .

Therefore, it is important to develop an electronic module based on Project Based Learning in the learning of saga text. It is intended that students are able to understand the material well and can learn independently anywhere and anytime.

2. METHOD

This type of research is research and development . This research develops the electronic module of storybook learning which is used by high school grade X students. The process of developing this electronic module uses a 4-D model consisting of four stages, namely define, design, develop , and disseminate . This study was tested on students of class X SMA Negeri 3 Padang. Data generated from the trial are qualitative and quantitative data. Meanwhile, the instruments used were interview sheets, student analysis questionnaires, curriculum analysis questionnaires, concept analysis questionnaires, product validation sheets, electronic module practicality sheets, student activity observation sheets, performance tests, performance test assessment rubrics, and electronic module distribution questionnaires.

The data analysis technique in this research was carried out by describing the validity, practicality, and effectiveness of the electronic module of saga text learning based on Project Based Learning in class X SMA Negeri 3 Padang. The results of the study were analyzed using descriptive statistics to obtain an average value and percentage as detailed information needed. The data analysis of this study aims to determine the validity, practicality, and effectiveness of electronic learning modules.

3. RESULT AND DISCUSSION

Define Phase

Based on the facts in the field, it was found that the limitations of teaching materials became an obstacle in learning how to write saga texts. Students need practical teaching materials to support learning so d a pat understand the material well and able to do the exercises given. Students certainly want innovation in teaching materials that match their characteristics, both in terms of the use of letters, pictures, color combinations, until the use of communicative language. Therefore , researchers design electronic modules that are interesting, easy to understand, and in accordance with student needs. To support learning, electronic modules are developed based on Project Based Learning (PjBL). Through this project-based learning, students are guided by following seven steps. These steps are determining the fundamental questions, determining the project, managing the project plan, managing the project implementation schedule, implementing the project, preparing reports and presentations, and evaluating and project results.

Stage Design

Electronic module design starts with designing an electronic module framework. Then the framework that has been designed is designed so that it has an attractive appearance. Preparation of an electronic module framework tailored to learning Project Based Learning .

The designed electronic module consists of an introduction, learning activities, and evaluation.

Table 1. Framework for E-Learning Module Text Tale Based Project Based Learning

Preliminary Framework	**Fill in the Introduction Framework**
A. Core Competencies	The core competencies that are referred to are for compiling the contents of electronic modules
B. Basic competencies	Basic competencies that are used as a reference for compiling the contents of electronic modules
C. Orientation	Presentation of important points learned by students.
D. Precondition	Requirements that must be met before studying the electronic module
E. Usage instructions and time	Guide to using electronic modules for students and the amount of time needed to study e-modules.

Learning Activity Framework	**Contents of the Learning Activities Framework**
A Basic competencies	Basic competencies that are used as a reference to arrange the contents of e-modules
B. Indicator	Competencies that must be achieved by students every learning
C Learning objectives	Statement to be achieved by students every learning activity.
D Benefits of learning activities	Benefits obtained by students in each learning activity.
E Material description	Contains material related to indicators.
F Summary	Contains a summary of knowledge, concepts, principles about competencies contained in the description of the material.
G practice	Contains questions that aim to provide students with an understanding of the concepts just learned.
H Self-assessment	Assessment of student attitudes and behavior to measure strengths and weaknesses in achieving learning goals
I Supporting Information	Contains additional information for students.

Evaluation Framework	**Fill in the E-Module Evaluation Framework**
Performance test	Contains instructions for working on the test students will write, namely writing procedure texts.
Performance rubric Test rubric	The table contains aspects assessed, weighting, and level of performance, and a description of the level of score acquisition.
Performance test answer sheet	The link used to connect to the student's Edmodo account.
Guide to assessment of performance test results	Contains ways that can be used to calculate scores into values, formulas used, and benchmark reference assessment tables.

Development Phase

Validity test

The electronic module is validated by two experts who have been determined (validator). The electronic module validator is one lecturer in Indonesian Language and Literature and one lecturer in Education Technology. The validation aspects of the validator consist of four types, namely the appropriateness of the content, linguistics, the appropriateness of the presentation, and the graphics.

Table 2. Results of E-Module Validation by Experts

No.	Aspects of the Assessed	Acquisition	Validity (%)	Category
1	Eligibility for Electronic Module Content	89	89	Very valid
2	Linguistic Electronic Modules	28	87.5	Very valid
3	Electronic Module Presentation	72.5	90.6	Very valid
4	Kegrafikaan Module Electronics	49	87.5	Very valid
Amount		**298,2**	**88.7**	**Very valid**

Based on the analysis of these data, the validity of the electronic text module of the saga text was 88.7% with a very valid category. The translation of the validity values of each aspect that is validated is as follows. First, the validation of the electronic module content eligibility aspect by 89% with the category of very valid. Second, the validation of linguistic aspects of the electronic module is 87.50% with a very valid category. Third, the validation aspect of the electronic module presentation was 87.50% with a very valid category. Fourth, the validation of the electronic module aspect is 87.50% with a very valid category.

Practicality Test

The practicality of electronic modules aims to determine the practicality of electronic modules used by students.

Table 3. Description of E-Module Practicality Data by Teachers

NO	**Assessment Aspects**	**Total Score**	**Percentage**
1	Ease in Usage	58	96.66%
2	Time that is Used	12	100%
	Amount	**70**	
	Value of Practicality		**98.33%**

After analyzing the e-module practicality questionnaire filled out by practitioners, a practicality value of 98.33 % was obtained with a very practical category. The value is obtained from the calculation of the

score of each practical indicator. First , the ease of use has a practical value of 96.66 % with a very practical category. Second , the time spent has a practicality value of 100 % with a very practical category.

Table 4. Description of E-Module Practicality Data by Students

No	Assessment Aspects	Total score	Practicality Rating (%)	Category
1	Then in use	1288.30	89.19	Very practical
2	Time used	365.29	91.32	Very practical
Overall Practicality of E-Modules		**1,613,59**	**90.26**	**Very practical**

After analyzing the e-module practicality questionnaire filled out by students, a practicality value of 90.26 % was obtained with a very practical category. The value is obtained from the calculation of the score of each practical indicator. First , the ease of use has a practical value of 89.19 % with a very practical category. Second , the time spent has a practical value of 91.32 % with a very practical category.

Effectiveness Test

Effectiveness is the last step carried out in the development of electronic modules. Effectiveness is done in two ways. First , assessing the results of developing students' saga text. Second , the assessment is done after learning to develop the saga text is complete and students have been assigned to take a performance test to develop the saga text into a short story text. Knowledge assessment data developing saga text can be seen in figure 1.

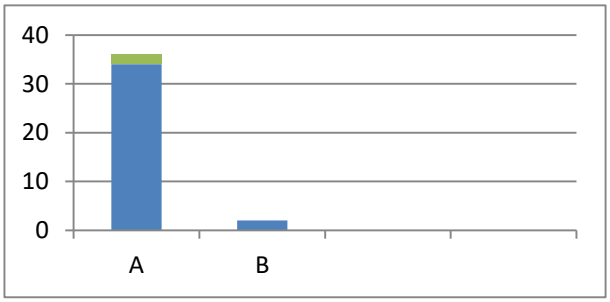

Figure 1. Histogram Assessment of Knowledge Text Tells

The overall average value of knowledge obtained by students is 91.53 % with the value of change A. So, it can be concluded that through the learning of saga text using electronic models is effective to achieve student learning outcomes to meet the standards above KKM. Procedure assessment text writing skills data can be seen in figure 2.

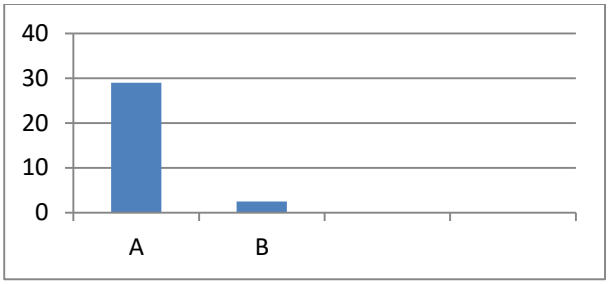

Figure 2. Histogram Evaluation of Performance Tests for the Text Tells

So, overall the average value of knowledge obtained by students is 88.84% with the value of change

Dissemination Stage

The distribution of electronic modules is done in two stages. First , it is done on a limited basis that is to other teachers besides the collaborators in the pilot class, that is, teachers who teach in other classes. The teacher receives a file or softcopy of an electronic module. In addition, the teacher is also given a questionnaire to disseminate electronic moudul. Second, the distribution of electronic modules is done to students by distributing electronic module files or softcopy as many as there are students.

This electronic module is designed for students to be able to learn independently and actively. Students are able to understand the saga text material according to the learning flow and are able to carry out and complete the activities of developing saga text according to their own abilities. Therefore, although Project Based Learning can be done in groups, in this electronic learning module students do all activities independently. It is intended that students can maximize their abilities in understanding and developing saga texts. In addition, independent learning is intended to get all students involved in the final outcome of the project, which is to produce a written product based on the saga that has been developed.

This electronic module certainly has differences compared to modules that have been developed before, including the following. First, this module is presented in the form of a learning application that can be read through a computer, laptop or smartphone so that it can be read anywhere and anytime. Second, this electronic module is equipped with video, animation, and learning audio that print modules do not have in general. Third, the exercises contained therein can be assessed automatically by the application, so students immediately know the results of their learning abilities. Fourth, although it is an electronic module but it can be used while offline so it does not require a lot of costs.

4. CONCLUSION

Based on the results of development, it can be concluded four things. First, the process of developing electronic modules at the defining stage. At this stage it can be concluded that there is limited teaching material, which causes problems that can hinder the achievement of learning objectives. This is evidenced by student learning

outcomes that are still below average or below the Minimum Mastery Criteria (KKM). Second, the process of developing electronic modules at the design stage. At this stage an electronic module module is designed and an electronic module is drafted. This design generally consists of study instructions, competencies to be achieved, the contents of the material, exercises, and worksheets. Third, the process of developing electronic modules at the development stage (develop). At this stage, it is proven by the results of the expert's validation of four aspects, namely these aspects of eligibility, linguistic, presentation, and graphic. Jevalidan this electronic module can be categorized with very valid. Fourth, the process of developing electronic modules at the dissemination stage. In this process the distribution of the electronic module is carried out in three stages, (1) Distribution to other teachers besides the research collaborator teacher at SMA Negeri 3 Padang. (2) Distribution to students by submitting electronic modules to the school library, namely the library of SMA Negeri 3 Padang. (3) Spread to friends.

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