



Development of Classical Aceh History Teaching Materials Based on Heyzine Flipbooks to Increase Learning Creativity at Syiah Kuala University's Department of History Education

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Abstract. The quality of education can be greatly impacted by the teaching materials used. Technology's rapid advancement also necessitates education that is globally competitive, digitally oriented, and capable of increasing students' creativity. The classical Aceh history learning module based on Heyzine Flipbook at Syiah Kuala University's Department of History Education is a learning tool that is being developed in this study in the hope that the learning process will be more interesting and compatible, thereby increasing students' creativity. This research is developmental, with the objective of discovering a novel idea that can be supported by science. The method chosen for this study is Research and Development (R&D), with the Decide, Design, Development, and Evaluation (DDD-E) model. In the decide stage, field observations and literature studies are used to make decisions. In the design stage, an outline of history learning is made. In the development stage, classical Aceh history teaching materials are made using Heyzine Flipbook. In the evaluation stage, the materials are tested to make sure they function properly. The developed learning tools are tested at the evaluation stage by subject matter experts, media experts, learning experts, and respondents (students). After the development and testing phases, it was determined that the Classical Aceh History learning module based on the Heyzine Flipbook at the Department of History Education of Syiah Kuala University was able to boost student creativity. Thus, universities and institutions can employ the aforementioned development of instructional materials to embrace the digitalization era.

Keywords: E-Learning Module · Heyzine Flipbook · Classical Aceh History · Creativity

1 Introduction

Several principles govern the learning process, including student-centeredness, cultivating student creativity, establishing pleasant surroundings, cultivating value-laden skills, offering different learning experiences, and learning by doing (learning by doing). In

order to meet the objectives of learning activities, educators must therefore be able to design effective, contextual, and meaningful learning [1]. Creativity development is a process that must be fostered by teachers through learning activities. According to the National Education System No. 20 of 2003, students can develop their potential, have a noble character, and are capable, creative, and independent through education. Creativity originates from the acquisition of cognitive skills and can be acquired through the teaching and learning process [2].

The majority of instructors in the world of education prefer students with high intelligence over those with creativity, according to empirical evidence. Education in schools, for instance, is more focused on the development of intelligence than creativity, despite the fact that both are equally vital for achieving learning success and success in life. In addition to cognitive factors, effective and psychomotor factors also play a part in defining a student's aptitude; when these three factors are combined, a student's creativity may be evaluated [3]. It is evident that learning difficulties in higher education are similar to those in schools, and lecturers frequently place greater value on students with high IQs than on those with creative abilities.

In the process of studying history, pupils must independently acquire the necessary knowledge. In reality, the learning process in the student class focuses on memorization without requiring students to comprehend and apply the information in everyday life. As a result, children's ability to think critically and systematically cannot be developed during the learning process, because thinking learning tools are not utilized effectively [4]. From the many concerns identified, it appears that many students are less motivated to study history, and lecturers rely solely on lecture tactics, making it harder for students to develop their creativity.

On this premise, it is necessary to build the concept of creative learning so that learning history does not become tedious and can become a favorite topic. Regarding the development of a teaching material as one of the creative and innovative endeavors in the field of education, numerous factors must be considered, such as the quality of students, the quality of teachers, the availability of teaching materials, curriculum, facilities, infrastructure, management, and others. Teaching materials as a component of education are one of the elements affecting education quality. When evaluated from the perspective of educational technology, numerous sorts of instructional resources are classified as learning media [5]. Teaching materials for students are reference materials whose contents are assimilated during the learning process in order to produce knowledge. As for teachers, instructional materials are a resource for imparting knowledge to students.

As a result of technological advancements, education has undergone significant transformations. It is anticipated that technology will bring about good improvements in the sphere of education, becoming an intelligent and optimal option for the distribution of learning materials and concepts [6, 7]. Utilizing technology in the realm of education will encourage students to acquire, analyze, manage, and apply knowledge and information [8]. However, the use of multimedia in the teaching realm of the History Education Department at Syiah Kuala University is still quite limited, particularly in the course on Classical Aceh History. The majority of instructional materials are offered in the form

of printed books with minimal text and graphic content, resulting in boring learning and a lack of student creativity.

This study attempts to create a teaching resource (module) in the form of an e-digital in response to learning issues that arise, in order to foster students' creativity and independence. The term "electronic module" refers to educational content that can be provided on its own by adhering to certain requirements of the digital format [9]. This module is thought to foster student creativity because it provides engaging learning content in the form of a limitless number of text, photos, and videos [10]. Canva and Heyzine Flipbook are two examples of apps (software) that may be used to create and construct electronic learning modules. This study makes use each of these applications to design and develop electronic learning modules.

Canva is a piece of software that allows users to not only create educational resources that include text, photographs, and videos but also to decorate digital displays with graphical designs. Heyzine Flipbook is used to transform Canva-created learning modules into a flip format, which is an electronic module page display that can be flipped over like a printed book in general. After the project is completed, it can be used or published in HTML (Hyper Text Markup Language) format, as well as in SWF (Shock Wave Flash) format.

The development of teaching materials in this study utilizing Canva with the assistance of Heyzine Flipbook is projected to be a solution to the difficulties of developing student creativity at Syiah Kula University's Department of History Education. Later, it can serve as a model for universities and schools both at home and abroad in establishing digital learning modules, allowing students' creativity to grow in parallel with the worldwide advancement of digital technology.

2 Methods

R&D research methods are the research methodologies utilized in this study to produce specific goods and test their effectivity [11]. The research and development model, according to Gall et al. (2007), is "a method used to generate and validate educational goods." Development research, on the other hand, aims to create and validate the learning tools. Sukmadinata makes the case that development research is a sort of research that aims to create a hardware or software product through a typical process that typically starts with a needs assessment, or needs analysis, goes through the development process, and concludes with an evaluation [13].

According to Rusijono and Mustaji, development activities in the field of education are a sort of research that strives to produce products that can be used to solve development research-related problems [14]. At the development stage, it is necessary to apply ideas, concepts, principles, and research findings to address difficulties, and then to begin the process of converting designs into physical form.

In this study, the research and development (R&D) model utilized is the 3D & 1E model. This development model provides a framework for the preparation of multimedia projects and does not exclude constructivist aspects in the preparation or development of particular projects. This development model also provides a flow for the process of preparing a project, but it can be tailored to meet specific requirements. The model is

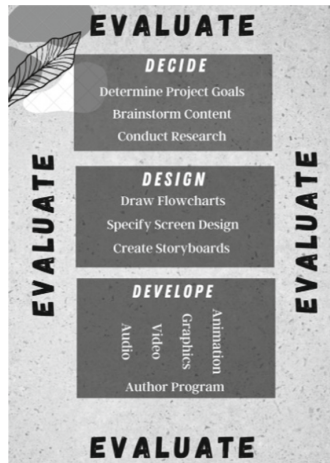


Fig. 1. Model Development Flow DDD-E.

divided into four stages: decide, design, develop, and evaluate (DDD-E) [15]. Figure 1 provides a visual representation of the stages involved in the production of the heyzine flipbook-based Classical Aceh History educational module.

This research uses qualitative data and quantitative data. The validation of the product by material specialists, media experts, lecturers, and students yielded qualitative data through their feedback and remarks. This qualitative information is necessary for revising the created product. While quantitative data is utilized to measure and acquire student creativity scores using surveys (Table 1).

In this study, all stages of determining the assessment were applied as follows:

$$P = \frac{\sum x_i}{\sum x_j} \times 100$$

Information:

P: Eligibility Percentage

$\sum x_i$: The total score of the validator's evaluation responses

$\sum x_j$: The highest number of answer score

Table 1. Eligibility Level Qualification Scale

No	Persentase	Qualification	Decision
1	0–54%	Not Feasible	Total Revision
2	55–64%	Less Worthy	Revision is Required
3	65–79%	Decent Enough	Should be Revised
4	80–89%	Worthy	No Revisions Required
5	90–100%	Very Worthy	No Revisions Required

Source: (16).

3 Results and Discussion

A. Classical Acehnese history lessons in the History Education Study Program are described

Traditional learning methods, such as lectures, discussions, group work, and question-and-answer techniques, continue to dominate the demonstration of the teaching and learning of Classical Aceh History. There are further problems associated with the limited use of learning media, such as the use of blackboards, infocus, blackboards, and manuscripts related to learning materials.

This approach will make learning less effective and result in uninteresting and monotonous tasks. The application of the discussion technique and group work will produce learning that is dominated by active students, while less motivated and interested students will tend to be passive participants in learning.

Based on the aforementioned issues, we can infer that learning tends to be tedious, uninteresting, and impacts students' lack of creativity when studying Classical Aceh History; therefore, modern innovation (technology) is required for the learning. In order to boost each student's creativity, researchers attempt to present educational materials (modules) that are informative or impart knowledge.

B. Development of a Learning Module for Classical Aceh History Using Heyzine Flipbook

Technology's quick progress has a big impact on how people live. The field of education has also been affected by the digital world. Teaching and learning in higher education institutions have benefited from the internet's presence and other related technology [17]. The flexibility of studying at any time and in any place is one of the many advantages of the online teaching and learning process. The educational system now allows for greater flexibility in determining where and when learning will take place [18].

Online education provides equal access and can combat the loss in student motivation [19]. This study presents the Heyzine Flipbook-based Classical Aceh History Teaching Materials as one of the approaches to education in the digital age. This instructional material provides a more engaging presentation of current learning information and simplifies it so that it is easier and quicker to comprehend. Students' cognitive, learning, and memory abilities are all taken into account in the development of lesson plans that are delivered in the form of modules.

The production of this material is broken down into four stages, which are the following: Decide, Design, Development, and Evaluate (DDD-E). The Decide stage is the initial stage to select the project that will be performed, and the implementation will consist of making observations at the Department of History Education, which is located at Syiah Kuala University. The findings from the observations are used as a reference in the development of instructional material products, which are referred to as modules. After that, the preparation of planning guidelines for the project is carried out. This stage is based on the observations that two-way interaction doesn't work as well as it could. One reason for this is that the learning materials that educators (lecturers) give to students aren't very interesting.

Design is a stage in a program that contains the contents of the project to be worked on. The Design phase follows the needs analysis, therefore the planning for the development of teaching materials (modules) based on the Heyzine Flipbook refers to a needs study. At this point in the process, should also define the background of the program as well as its goals. Canva was chosen as the design program for this study because it is an application that is popular in modern times. Canva is a feature that is completely free to use, in addition to having an application that is simple to operate. Canva, with the assistance of Heyzine Flipbook, will develop instructional materials (modules) in the form of digital books, which will facilitate integrating digital features in the form of display and module content (images & videos).

Development is the phase of a project's creation (teaching materials). At this stage, we demonstrate how to utilize Canva in conjunction with Heyzine Flipbook to create Aceh History instructional materials. The development of these instructional materials is supported by the Heyzine Flipbook product's three-dimensional e-book technology, which enables readers to flip between the pages of the e-book on the computer screen as if it were a physical book. This innovation is thought vital for learning in the digital age in order to combat monotonous learning and promote two-way learning by providing students with the freedom to explore the offered instructional materials.

Evaluate as the final stage, namely the stage of performing an assessment of the successfully developed project. This stage examines and verifies the results of the preceding stages of decide, design, and development. The goal of the assess stage is to develop instructional materials that are either flawless or extremely close to being flawless. After receiving validation from professionals, only then can the efficiency of learning devices (modules) be determined. An evaluation will be carried out following these four stages: 1) the evaluation of a material expert; 2) an evaluation of a media expert; 3) an evaluation of a learning expert or lecturer; and 4) a trial involving a student or respondent. A set of testing methods conducted by these specialists attempts to achieve adequate learning tools before they are released for use in the Classical Aceh History Class.

1) Material Expert Validation

Material experts attempt to evaluate five aspects of the assessment: 1) the suitability of the material, 2) the clarity and determination of the material, 3) evaluation questions or practice questions, 4) language, and 5) the effects on users. The outcomes of the material expert evaluation are shown in Table 2.

The following percentages can be used to determine the process of assessing material experts on the learning modules that have been created:

$$Percentage = \frac{\text{Total Count}}{\text{Highest Score}} \times 100$$

$$Percentage = \frac{80}{84} \times 100$$

$$Percentage = 95, 23\%$$

Table 2. Material Expert Validation Results

NO	Aspect	Indicator	Score			
			1	2	3	4
1	Material Suitability	The conformity of the content to core competencies and fundamental competencies.			✓	
		Conformity of indicators with essential and fundamental competencies				✓
		Consistency between content and evaluation of fundamental skills and indicators				✓
		The correspondence between the material and the learning objectives				✓
2	Accuracy in Content and Clarity	Accuracy of subject matter coverage				✓
		Clarity of fundamental ideas			✓	
		Ease of comprehension of the material				✓
		Systematic communication of content			✓	
		Material allurement				✓
		The compatibility of the abstract concept with students' cognitive growth			✓	
		Complete materials				✓
3	Evaluation or practice questions	The appropriateness of the practice questions in relation to the fundamental skills and indicators				✓
		It is not difficult to comprehend the instructions for the practice questions				✓
		Giving practice questions to test students' abilities			✓	
		The validity of the presumption underlying the question			✓	
		Varied questions				✓

(continued)

Table 2. (continued)

NO	Aspect	Indicator	Score			
			1	2	3	4
		A wide range of questions, each with its own unique level of difficulty				√
4	Language	Language usage that is both appropriate and consistent				√
		Ease with which one may comprehend the language				√
5	Effects for users	Foster greater understanding and insight among students			√	
		Provide assistance for student independence exercises				√
Amount			0	0	24	56
Total Count			80			

Based on the validation results from material specialists, the percentage value of feasibility is 95.23 percent, indicating that the decision is very practical and does not require adjustment.

2) Media Expert Validation

The Aceh Classical history module based on the Heyzine Flipbook entered the validation stage from media experts after receiving eligibility from material experts. This validation measures four assessment criteria: 1) visual appearance, 2) product effectiveness, 3) language, and 4) effect on user. In Table 3, the value has been converted based on the material expert's evaluation:

The validation from media specialists must pass two tests, as the initial stage of media feasibility validation received 76.92 percent eligibility with qualifications that were quite viable and a conclusion that required change. These are the outcomes of the initial phase of validation.

$$Percentage = \frac{\text{Total Count}}{\text{Highest Score}} \times 100$$

$$Percentage = \frac{40}{52} \times 100$$

$$Percentage = 76,92\%$$

On this basis, to obtain perfect learning tools, the researchers revised the learning tools and then re-validated by media experts. The second round of validation yielded 96.15 percent eligibility with highly respectable credentials; thus, the decision did not

Table 3. Media Expert Assessment Questionnaire

NO	Aspect	Indicator	Media Score 1				Media Score 2			
			1	2	3	4	1	2	3	4
1	Visual display	Appropriate color selection				✓				✓
		The appropriateness of the variety of fonts that were chosen			✓					✓
		Appropriate font size selection			✓					✓
		Suitability of background selection			✓					✓
		Attractiveness in design		✓					✓	
		The appropriateness of the image choice			✓					✓
2	Product effectiveness	Easiness of use			✓				✓	
		Clarity of instructions			✓				✓	
		Transparency of navigation				✓			✓	
3	Language	Appropriate and consistent language usage		✓				✓		
		Ease of language usage				✓			✓	
4	Efek bagi pengguna	Adding students' perspective, knowledge, and creativity				✓			✓	
		Provide assistance for student independence exercises		✓					✓	
Amount			0	6	18	16	0	0	6	44
Total Count			40				50			

require revision. The second phase of the media expert validation procedure is detailed below.

$$Percentage = \frac{\text{Total Count}}{\text{Highest Score}} \times 100$$

$$Percentage = \frac{50}{52} \times 100$$

$$Percentage = 96,15\%$$

3) Learning Expert Validation

The learning expert referred to by the instructor in this study has the authority to evaluate the Classical Aceh History Learning Module based on Heyzine Flipbooks. Experts

in learning attempt to evaluate five factors: 1) grouping of resources, 2) evaluation or practice questions, 3) teaching stuff, 4) language, and 5) user effects. The validation outcomes for learning specialists are shown in detail in Table 4.

Table 4. Questionnaire For The Assessment of Learning Experts

No	Aspect	Indicator	Score			
			1	2	3	4
1	Grouping of resources	Clarity of subject matter			✓	
		Content of interest				✓
		Complete material				✓
		Ease of comprehension of the material			✓	
2	Evaluation or practice questions	The question's compatibility with the learning material				✓
		Clarity of work procedures				✓
		Affordability of the question's level of difficulty				✓
3	Teaching stuff	Easiness of use				✓
		Transparency of appearance				✓
		Appealing appearance				✓
		The appropriateness of the choices of typeface and font size				✓
		The degree of aesthetic appeal of picture illustrations on the screen				✓
		Suitability of background selection				✓
		Appropriate color selection				✓
		Presentation package for images			✓	
4	Language	Appropriate and consistent language usage				✓
		Ease of comprehension of the language				✓
5	User effects	Adding students' perspective, knowledge, and creativity				✓
		Provide assistance for student independence exercises				✓
Amount			0	0	9	64
Total Count			73			

The following percentage represents the process of evaluating learning experts on the learning module of the Classical Aceh History Course that has been developed:

$$Percentage = \frac{\text{Total Count}}{\text{Highest Score}} \times 100$$

$$Percentage = \frac{73}{76} \times 100$$

$$Percentage = 96,05\%$$

From the findings of the feasibility test conducted by learning specialists, a value of 96.05 percent was reached with extremely respectable qualities, and the conclusion did not require amendment. Three of the 19 evaluated indications obtained a score of 3, while sixteen indicators received a score of 4.

4) Validation of respondents (students)

Validation is also assigned to students as users of the Heyzine Flipbook-based Classical Aceh History Learning Module. Two areas are evaluated, namely 1) learning stuff and 2) user effects, using a total of eight indicators. Table 5 contains the respondent's (student's) evaluation information.

The following percentages can be used to calculate the validation process conducted by respondents/students in the teaching module for Aceh Classical History:

$$Percentage = \frac{\text{Total Count}}{\text{Highest Score}} \times 100$$

Table 5. Questionnaire For Respondents (Students)

No	Aspect	Indicator	Score			
			1	2	3	4
1	learning stuff	Appealing appearance				√
		Content lucidity				√
		Instructional clarity			√	
		Ease of operation/access				√
		Language that is simple to understand				√
2	learning stuff	Increasing students' insight, knowledge, and creativity				√
		Provide support for student independence exercises			√	
		Increase student learning creativity.				√
Amount			0	0	6	24
Total Count			30			

$$\text{Percentage} = \frac{30}{32} \times 100$$

$$\text{Percentage} = 93,75\%$$

The validation results from respondents (students) indicated that the Classical Aceh History Learning Module based on Heyzine Flipbook had a feasibility value of 93.75 percent with very good qualifications, and the choice did not require change.

The Effectiveness of Classical Aceh History Teaching Materials Based on Heyzine Flipbooks to Enhance Learning Creativity at Syiah Kuala University's Department of History Education.

The researchers compared student learning creativity scores before and after using the heyzine flipbook-based history of classical Aceh teaching materials to determine the effectiveness of the teaching materials. The procedure of comparing values employs paired samples t test with the aid of IBM SPSS version 23. The data are presented as follows:

According to the output of Table 6. Paired samples statistics, the average value for student learning creativity data prior to using classical Aceh History teaching materials

Table 6. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest_Heyzine.Flipbooks	91.14	28	5.310	1.004
	Postest_Heyzine.Flipbooks	123.68	28	5.780	1.092

Table 7. Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest_Heyzine.Flipbooks & Postest_Heyzine.Flipbooks	28	.619	.000

Table 8. Paired Samples Test

		Paired Differences			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference
					Lower
Pair 1	Pretest_Heyzine.Flipbooks - Postest_Heyzine.Flipbooks	-32.536	4.857	.918	-34.419

Table 9. Paired Samples Test

		Paired Differences	t	df	Sig. (2-tailed)
		95% Confidence Interval of the Difference			
		Upper			
Pair 1	Pretest_Heyzine.Flipbooks - Posttest_Heyzine.Flipbooks	-30.652	-35.446	27	.000

based on the heyzine flipbook is 91.14 with 28 data points, the standard deviation is 5.310, and the standard error mean is 1.004. Using classical Aceh History teaching materials based on the heyzine flipbook, the students’ learning creativity data averaged 123.68, the quantity of data was 28, the standard deviation was 5.780, and the standard error of the mean was 1.092.

Table 7 Paired Sample Correlations yields a correlation value of 0.619 with a significance level of 0.000. Because the correlation value is close to 1, it can be concluded that the use of classical Aceh History teaching materials based on heyzine flipbooks has a close relationship with the acquisition of student learning creativity scores between before and after using classical Aceh History teaching materials based on heyzine flipbooks.

Based on the results of Table 8 Paired samples test, it is possible to conclude that there is a difference in the value of student learning creativity before and after using classical Aceh History teaching materials based on heyzine flipbooks with the acquisition of the value of -t arithmetic -t table ($-35,446 < -2,052$). This can also be demonstrated by comparing the average value (mean) before and after using the heyzine flipbook-based Classical Aceh History instructional materials. The usage of classical Aceh History teaching materials based on heyzine flipbooks can also be regarded as increasing student learning creativity (Table 9).

4 Conclusion

The near-perfect ratings from material experts, media experts, learning experts, and responders (students) indicated that the heyzine flipbook-based Classical Aceh History Teaching materials were appropriate for use in the teaching and learning process. The effectiveness of presenting material to pupils via heyzine flipbook-based Classical Aceh History Teaching materials can inspire greater creativity among students. The acquisition of paired samples test output values that the value of -t count -t table ($-35,446 < -2,052$) is accompanied by the acquisition of data on the average value (mean) between after applying heyzine-based Classical Aceh History teaching materials flipbook is greater than before applying heyzine-based Classical Aceh History teaching materials flipbook. On the basis of this, the heyzine flipbook-based teaching materials for Classical Aceh History can be applied in learning at Syiah Kuala University in

particular, and they can also be used as a reference for the development of teaching materials for other subjects based on heyzine flipbooks in universities both in Indonesia and elsewhere in the world.

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