

Audio-visual-based history learning media materials about human life in the literary age

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ABSTRACT

This study aims to develop and test the feasibility of audio-visual-based learning media in history learning class X in senior high school. This study is a research and development (R&D) type with the analyze, design, development, implementation, evaluation (ADDIE) model. The research involved 96 students of class X IPS or social science at State Senior High School 1 Bandar Lampung, Indonesia. The data collection techniques as well as the instruments employed questionnaires, observation, interviews, and documentation. Data analysis techniques employed qualitative and quantitative analysis. The results of the study show that: i) The development of audio-visual-based learning media on material about human life in Indonesia's literacy period was made using the Adobe Photoshop application; and ii) The feasibility of the validation results of media experts, material experts, and learning experts (history teachers) successively with an average result of 4.73 (very good), 4.28 (very good), 4.50 (very good) and the results of the assessment students at 4.37 (very good). Then, the audio-visual-based learning media is declared feasible to use. This audio-visual-based historical learning media has its charm in being able to encourage students to become higher in learning history.

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1. INTRODUCTION

Education is designed to create quality human resources [1]–[10], the purpose of national education is to develop the potential of the pupils to believe in Almighty God and be devoted, to have noble character, to be competent and creative. Developing creative human resources, we are independent in order to develop students with a home-loving personality [11]–[18]. Changes in the industrial revolution 4.0 in social life are influential in the world of education, where these changes create something new in learning media [19]–[25].

The independent curriculum in Indonesia in the 21st-century demands that digital media and technology be used as learning tools in all subjects [26]–[28]. Implementation of the independent curriculum, namely using a multi-strategic approach as well as multimedia, teachers, and students must work together to make the most of learning tools. In addition, teachers are also required to be able to master many competencies such as the competence to plan lessons and create learning media [29] that are to the needs of students and the times, so that the learning process becomes fun [30], [31]. Learning activities are processes carried out by a person in reciprocal interactions between educators and students, with this process educators [32]–[34] and students experience educational interactions, in educational interactions not only limited to conveying a value of knowledge. However, also the value of life where the effectiveness of a lesson can be achieved depends on the teacher's ability to manage the learning management [35]–[41].

The reality of learning history in schools is that there are still many problems that often occur because history is less attractive to students, giving rise to a negative stigma. History is always considered as boring and less useful learning, because the study is only theory and also only discusses material in the past, considered to have no future goals [42], [43]. Whereas history in a broad context has historical, educational, and clear future values to learn, with this, students must be interested in learning history with the teacher's creative abilities to apply learning media that are by the needs of the current era.

The results of preliminary observations conducted by researchers at State Senior High School 1 Bandar Lampung, Indonesia show that students' interest in learning history tends to be low because the media used by the teacher only focuses on printed books and some internet sources using the lecture method. This problem can make students feel bored when learning history is in progress. In the process of learning history, teachers should use their innovations to teach them so that students are not bored with history and are interested in learning history.

The success of teachers in learning history is determined by several factors, namely the application of strategic methods, and the use of media in learning [44]. Learning media helps a teacher in improving the learning quality of students so that they are more familiar with the subject of history lessons [45]. Learning media is very important in helping a teacher to attract the attention of students in understanding the material being presented and also so that they like history lessons [46], [47]. Not only that, but the use of this media can also facilitate the teacher in the learning process so that it can generate regular thoughts by students and a sense of interest so that the material delivered by the teacher is not easily forgotten by students [48], [49].

Teachers can develop innovative learning media by utilizing technological support [50]–[52]. Technology-based learning media such as computers, laptops, and mobile phones are also supported by software (hardware) that can produce moving images (video and audio) and can also be used as a teacher's tool in conveying history subject matter. History lessons should continue to innovate and be in harmony with existing technological developments so as not to be left behind by the rapid development of information technology in the 21st-century [53]. Using educational media can also improve student performance and motivation to learn because history is more interesting. Learning history through technology allows for a digitization that can be visually combined with multiple images and animations. Attractiveness of appearance greatly influences the learning process, and the more attractive the media looks, the more motivated students will be to learn and the more they will influence their learning outcomes. It is believed that one of the media used for learning (such as audio-visual media) can increase students' interest in the learning process [54]. Learning history through audio-visual media can be more interactive and allow for more reciprocal communication in the learning process [55].

The presentation of Indonesian history material for class X in literacy only focuses on textbooks that have been applied by history teachers at State Senior High School 1 Bandar Lampung, Indonesia. The script period in Indonesian history has historical value and good fighting spirit because at that time humans always struggled to settle down and humans had started to recognize the writing. Human life during the scriptural period can be studied easily because many written remains can serve as evidence of the events that occurred at that time. The substance of this literacy material should be that students can understand and know how early humans began to recognize and understand writing so that they can provoke critical thinking and are also active in this material. Previous research explained that developing audio-visual media in learning history, can provide positive value to students so that it can increase students' interest in learning history. This study aims to develop and test the feasibility of audio-visual-based learning media in history learning class X in senior high school.

2. RESEARCH METHOD

The research method uses research and development (R&D) [56], with the analyze, design, development, implementation, evaluation or ADDIE development model [57], [58]. The first is analyze. Researchers analyze the needs in the content of audio-visual-based learning media and analyze device needs. Secondly is design. Researchers develop and compile designs for audio-visual-based learning media teaching materials, create media titles, and select pre-literate materials. The third is development. Researchers create media based on storyboards and flowcharts using the Adobe Photoshop application and test the application through two stages, namely the testing stage by a supervisor, and testing phase by expert validation. Fourth is implementation. After the learning media developed was declared feasible by expert validation, then it was tested in a limited trial in class X IPS or social science involving 36 students. The last is evaluation. This stage is where the data obtained are then analyzed and re-evaluated to improve the product developed which is said to be feasible or not based on observations, interviews, and questionnaires.

The design stages of this research trial are: i) The expert validation phase included media experts, material experts, and history teachers [59]; and ii) The small group trial phase involved 36 students of class X IPS, where the selection of students was random with high, medium, and low abilities. The goal is to get

student assessments and responses to the developing learning media products and the results of the assessments are used as reference material for the revision of the developed products.

Data collection techniques and instruments used are: i) Questionnaires for media experts, material experts, questionnaires for teachers and questionnaires for students; ii) Observation to observe students' attitudes during the product testing process and to find out the attractiveness of the product developed for students; iii) Interviews were conducted in a semi-structured manner following the interview guidelines that had been made, interviews were used as a data collection tool from a history teacher; and iv) Documentation for looking for data on variables in the form of books and journal articles that are useful for strengthening the data that has been obtained in the field.

Data analysis techniques are divided into two, namely qualitative analysis techniques and quantitative data analysis techniques. Qualitative analysis techniques consist of data collection, data reduction, data display, and conclusion, used on data obtained from suggestions, input, and corrections by product validators, namely media experts, material experts, and learning experts (history teachers). Quantitative data analysis techniques using descriptive statistical analysis techniques are used to process data from questionnaires or questionnaires in the form of scores. Regarding the feasibility of audio-visual-based learning media, Table 1 presents the criteria.

Table 1. Eligibility interpretation criteria [60]

Scale	Category	Value	Interval score	Range
5	Very good	A	$X > Mi + 1.80 Sbi$	$X > 4.20$
4	Good	B	$Mi + 0.60 Sbi < X \leq Mi + 1.80 Sbi$	$3.40 < X \leq 4.20$
3	Fairly good	C	$Mi - 0.60 Sbi < X \leq Mi + 0.60 Sbi$	$2.60 < X \leq 3.40$
2	Poor	D	$Mi - 0.60 Sbi < X \leq Mi - 0.60 Sbi$	$1.80 < X \leq 2.60$
1	Very poor	E	$X \leq Mi - 1.80 Sbi$	$X \leq 1.80$

3. RESULTS

3.1. Early product development

This research develops audio-visual-based media products using sophisticated technology, utilizing audio and also images that involve the senses of hearing and sight. The purpose of developing this audio-visual media is to make history learning not boring, the learning media developed in this study is applied to the material for pre-literate humans in Indonesia. There are several steps for developing instructional media. Analysis is the first step. It is carried out at this stage is the first needs analysis, this analysis stage is carried out to find out the problems that exist in the field, namely at State Senior High School 1 Bandar Lampung, Indonesia where researchers conduct interviews with history teachers and also see learning used. The results of interviews conducted by researchers there are several problems, namely in learning history on the material of pre-literate human life in Indonesia still using the lecture method, and using PowerPoint media, it should be delivered clearly and interestingly. The existing technology in schools has not been fully utilized to the fullest, even though all students in the class and at State Senior High School 1 Bandar Lampung already have cell phones. In addition, the school already has wifi facilities as well as a large number of computers, which can invite students to learn not only in class, but can also use the computer lab room. Analysis of needs, Senior High School 1 Bandar Lampung applies an independent curriculum, including history lessons. History subjects are classified as social studies subjects so special history lessons contain material in the scope of studying Indonesian national history from pre-literacy to reformation.

Secondly is about the design. Based on the needs analysis in the previous subchapter, the researcher then designs the needs in the development of audio-visual media as: i) Develop a media model to be applied, namely audio-visual media; ii) Develop a learning implementation plan (RPP) based on the media audio visual which refers to the 2013 curriculum RPP; iii) Determine the learning media used, namely learning media in the form of audio, material soft files, game soft files in the form of questions and supporting images; iv) Prepare material that will be presented into audio-visual media, namely material about pre-literate human life in Indonesia by referring to and involving sources in the form of books as reference material to be presented; v) Develop a questionnaire instrument grid for the feasibility of audio-visual media to be tested on learning experts, learning technology experts; and vi) Arrange a grid of instruments to measure the feasibility of the media to students.

The third is at the develop stage. The researcher develops audio-visual learning media in history learning with the following steps: i) The initial appearance of the video, the initial part of this video contains the title of the media, where the title is taken from the *Sanskrit* language where the initial appearance is in design using the Adobe Photoshop application, then there is also a menu to start learning materials, games, core competency or KI and basic competency or KD of these materials; ii) The material section, this material

section contains material about the life of the pre-literate human era which contains writing and sound as well as animated images that are designed based on that era; and iii) Game section, this game section is about questions that discuss the material that has been explained on the menu of the pre-literate material section. The implementation stage is the fourth stage. The audio-visual media about pre-literate human life in Indonesia for class X students is carried out at State Senior High School 1 Bandar Lampung, namely in class X IPS. This is done to determine the feasibility of audio-visual media in the learning process. The evaluation stage is the last. It is carried out to improve the audio-visual media that has been applied at the implementation stage. The audio-visual media that has been developed is improved according to the criticisms and suggestions of experts to produce appropriate media.

3.2. Product trial results

The results of product trials obtained are the result of the validation of assessments from expert lecturers of learning media, learning material experts and teachers of history subjects. Assessment and responses from students were carried out in small group trials (limited trials). All development tools used in this study were validated by experts and practitioners before being tested on students.

3.2.1. Research instrument validation

The research instruments used in the development of audio-visual-based learning media on material about pre-literate human life in Indonesia for class X students include a questionnaire instrument for assessment of learning media experts, learning material expert instruments, and student questionnaires. Validation of this research instrument aims to explore information in the form of criticism and suggestions regarding the development of audio-visual-based learning media on material about pre-literate human life in Indonesia for class X students. The validation of research instruments is carried out by lecturers and practitioners who are experts in the field of learning as well as learning media experts, the results of the validation of research instruments include in the Table 2. Based on the table, all of the research instruments were declared suitable for use with revisions. The revision that the validator recommends is to clarify the learning context and the purpose of developing the instrument so that experts and students can use the instrument.

Table 2. Assesment instrument validation results

No.	Name of assessment	Instrument validator			Conclusion LD/TLD
		LDTR	LDR	TLD	
1.	Questionnaire for assessment of learning media experts		√		LD
2.	Expert assessment questionnaire for learning materials		√		LD
3.	Student questionnaire		√		LD

Appropriate to use without revision (LDTR), worth using with revision (LDR), not worth using (TLD), worth using (LD)

3.2.2. Validation of learning media experts

The validation of learning media experts was carried out to determine the feasibility of implementing the development of audio-visual-based learning media on material about pre-literate human life in Indonesia for class X students. At the stage of assessing the feasibility of this audio-visual-based learning media, there are two aspects of the assessment. The first is the assessment of the quality aspects of the content and objectives of audio-visual-based learning media and the second is the ease of applying audio-visual-based learning media to students. The results of the learning expert assessment are presented in Table 3.

Table 3. Results of scores from media experst

No.	Indicator	Total score	Average	Classification
1.	Audio	21	4.4	Very good
2.	Technical design	15	4.5	Very good
3.	Display format	16	4.8	Very good
	Total score	52	4.56	Very good

Based on the table, the overall audio score is 21, with an average of 4.4, a very good classification. The technical design index has an overall score of 15 and an average of 4.5, which puts it in the very good category. In presentation form, it has a total score of 16 and an average of 5, which puts it in the very good category. The sum of the aspects evaluated yielded a total score of 52, with an average rating of 4.56, which

is very good. Therefore, based on the learning media validation results, the learning media is declared operational and ready for testing at a later date.

3.2.3. Validation of learning material experts

Validation carried out by learning materials experts was carried out to determine the feasibility of implementing the development of audio-visual-based learning media on material about pre-literate human life in Indonesia for class X students. Table 4 presents the results of the validation of the learning material experts. Based on the table, it can be seen that in terms of the quality of content and learning objectives, the total score is 23 with an average of 4.6 very good classifications. In the aspect of instructional quality with a total score of 17 with an average of 4.25, it is included in the very good classification, and in the aspect of presentation method, the total score is 8 with an average of 4, the classification is a good category. The overall total of the assessed aspects obtained a total score of 48 with an average of 4.28 in the very good classification. Therefore, based on the results of the validation of the learning material, it is declared feasible to use and ready to be tested at the next stage.

Table 4. Results of scores from material experts

No.	Indicator	Total score	Average	Classification
1.	Quality of content and learning objectives	22	4.5	Very good
2.	Quality of Instructional/learning	16	4.3	Very good
3.	Presentation method	10	4.1	Good
	Total score	48	4.30	Very good

3.2.4. Validation of history subject learning

After the learning media development product has been validated by media expert lecturers and learning material experts, it will then be tested by the history subject teacher at State Senior High School 1 Bandar Lampung to get an assessment and get input and suggestions for the developed history learning media. Table 5 presents the results of the validation by the history subject teacher. Based on the table, the media aspect for the audio indicator has an average of 4.3 in the very good category, the technical design indicator has an average value of 4.7 in the very good category and the display format indicator has an average of 4.8 in the very good category. In the material aspect with three indicators, namely the quality of the content and learning objectives, the score is 4.6 with a very good category, the instructional quality indicator with an average of 4.4 in the very good category, and the presentation method indicator with an average of 4.6 in the very good category. The overall total of the assessed aspects obtained a total score of 48 with an average of 4.5 in the very good classification. Therefore, based on the results of the value obtained from the history teacher on the aspects of media and learning materials, it was declared feasible to use and ready to be tested at a later stage.

Table 5. Results of scores from history teachers

Aspect	Indicator	Total score	Average	Classification
Media	Audio	21	4.3	Very good
	Technical design	16	4.7	Very good
	Display format	16	4.8	Very good
	Total score	53	4.6	Very good
Material	Quality of content and learning objectives	21	4.4	Very good
	Quality of instructional/learning	19	4.6	Very good
	Presentation method	8	4.7	Very good
	Total score	48	4.5	Very good

3.2.5. Limited trial results for students

At the test stage for students, testing was carried out by involving and involving 36 students to be able to get responses related to audio-visual media-based learning media on material about pre-literate human life in Indonesia for class X State Senior High School 1 Bandar Lampung students. This test is done by testing two aspects which include media aspects and material aspects. The data on the results of the assessment provided by students in the small group test are revealed in Table 6.

Based on the test results on the media aspect, the audio indicator obtained test results with very good criteria, it was based on the test results indicated an average value of 4.52, as well as on the technical design indicators obtained test results with a very good classification or category with a value of 4.31, and the

display format indicator scored 4.54 with a very good category. Subsequent test results on the material aspect with indicators of the quality of content and learning objectives obtained a value of 4.46 with a very good category, and on the quality of learning showed a very good category indicating a value of 4.29 and the way of the presentation obtained a very good score based on the results of the calculation test with a value of 4.67. The overall total of the assessed aspects obtained a total score of 1730 with an average of 4.43 with a very good classification. Based on the test results, it can be understood that this media is very suitable to be used as a medium of learning material about pre-literate human life in Indonesia.

Table 6. Student assessment small group test

Aspect	Indicator	Total 36 students	Average item	Average final (n=36)	Classification
Media aspect	Audio	659	171.02	4.52	Very good
	Technical design	574	151.21	4.31	Very good
	Display format	489	134.79	4.54	Very good
	Total	1.722	152.34	4.46	Very good
Material aspect	Quality of content and learning objectives	576	146.74	4.29	Very good
	Quality of instructional/learning	632	169.89	4.67	Very good
	Presentation method	522	139.67	4.32	Very good
	Total	1.730	152.10	4.43	Very good

4. DISCUSSION

Audiovisual learning media are considered valid if the analysis results meet the specified criteria. As explained by Pertiwi *et al.* [60], a learning medium is valid if the results meet the criteria in the sense that there are similarities between the results obtained and previously established criteria, considered to be. This study qualitatively interprets the raw data obtained as numbers and uses rating scales to measure the degree of plausibility.

Based on the results of observation and explanation of the above theory, the developed audiovisual learning media aspect shows the feasibility level of the verification results of experts, teaching material experts and learning experts (history), so the developed audiovisual learning media fills the relevant categories teachers). The average score was 4.56 (very good), 4.30 (very good), 4.46 (very good), and the student evaluation score was 4.43 (very good) in a row. All aspects of the assessment are in a very valid category, allowing the audiovisual learning media to be used for further development i.e., field testing in face-to-face classes. However, based on the verifier's notes on each component verified, minor improvements or necessary adjustments are required according to the notes provided.

Because all aspects of the assessment are in the very valid category, audio-visual-based learning media can be used for further development, namely field trials in classroom learning [61]–[63]. However, based on the notes provided by the validators on each validated component, minor improvements or necessary adjustments are needed according to the notes provided. Development of audio-visual based learning media according to research conducted by Purba [54], the development of audio-visual learning media makes history learning more enjoyable, students are more interested in participating in history learning, expands knowledge and improves learning ability have a positive impact on Enthusiasm of students to participate in learning. The development of audio-visual-based historical learning media that is being developed at this time has a novelty, namely using the Construct 3 application and equipped with image designs using Adobe Photoshop, while audio uses Adobe Premiere Pro. This audio-visual-based historical learning media product with material on pre-literate human life in Indonesia can be used via the web and also applications that are available on students' and teachers' smartphones [64]–[66].

5. CONCLUSION

The development of audio-visual-based historical media on the material about literate age human life in Indonesia for class X senior high school is carried out by the ADDIE development procedure. They are: i) Analysis, researchers analyze the needs in audio-visual media content and analyze device requirements; ii) Design, researchers develop, and arrange the design of audio-visual media teaching materials, make media titles, and select pre-literate materials; iii) Development, researchers made media based on storyboards and flowcharts using the Adobe Photoshop application and tested the application through two stages, namely the testing stage by the supervisor, and the testing stage by expert validation; iv) Implementation, after the learning media developed, was declared by expert validation, then in a limited trial in class X IPS involving 36 students; and v) Evaluation, in this stage the data obtained is then analyzed

and re-done for product improvement that is developed based on the layout or not based on observations, interviews, and questionnaires.

The feasibility level of the results of the validation of media experts, material experts, and learning experts (history teachers) respectively with average results of 4.73 (very good), 4.28 (very good), 4.50 (very good), and student awards of 4.37 (very good). Thus, the learning media developed is suitable to be used as a medium for learning material about pre-literate human life in Indonesia. The implications of this research for audio-visual media teachers can be used and applied to make learning history more interesting according to the needs of the times. For schools, this audio-visual media can be used as a training reference for teachers to utilize digital-based learning.

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