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General Soedirman: History Learning Media Based on Digital Comics

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Article Info

ABSTRACT

Purpose of the study: This research aims to address the low student interest and engagement in the history learning subjects of General Soedirman's Guerrilla War by developing a digital comic-based history learning media and examining its effectiveness in enhancing the student learning motivation and achievement.

Methodology: The research uses the Research and Development (R&D) method adapted from the ADDIE development design. The research subjects are 20 students in senior high school in Surakarta and Pakistan. The data collection technique is a test.

Main Findings: The research data shows that the digital comic-based history learning media of General Soedirman's Guerrilla War is effective and suitable for use. The validation by material experts shows that the learning media material has a very good quality with an average score of 89.6%. The media validation results show that the learning media is very good and suitable for application in the learning process with an average score of 84.6%. The results of the One-to-one Test, Small Group Test, and Field Test show that the learning media can improve the student learning motivation and achievement with an average score of 71.4%, 74.2%, and 78.8%, respectively, exceeding the expected outcome of 70%.

Novelty/Originality of this study: The research novelty to develop a digital comic-based history learning media of General Soedirman's Guerrilla War, which is a significant historical event in Indonesia. The research has implications for the improvement of the history curriculum and the student learning interest and engagement in history subjects."

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1. INTRODUCTION

General Soedirman as Commander in Chief of the Indonesia Army has been known as a national warrior figure who has a noble personality, is steadfast, willing to sacrifice and has a warrior spirit. This personality reflects a strong attitude of patriotism within him. Patriotism is a person's tendency to behave as a manifestation of love, loyalty and pride for their homeland. An attitude of patriotism is really needed by the young generation during this period of development. However, over time the Indonesian nation's patriotism has experienced a setback caused by various things, one of which is the influence of globalization. The young generation currently lacks a sense of love for the nation and state. Only a few of the younger generation have a brave attitude, are willing to sacrifice and never give up to help develop the country. The younger generation, the

majority of whom are students, do not understand the importance of education. Not a few of them waste the opportunity to learn.

Education is basically a communication process which contains the transformation of knowledge, values and skills, inside and outside school, which lasts throughout life, from generation to generation [1]-[3]. Learning is a structured combination including human elements, materials, facilities, equipment and procedures that influence each other in achieving learning goals [4]-[8]. Learning is a continuous interaction between individuals and their environment, where the environment experiences changes [9]-[11].

Based on the results of the needs analysis carried out at MAN Yogyakarta III, it shows that students consider the learning media used at school to be less interesting. Teachers in learning only use Student Worksheets (LKS), handouts and do not make maximum use of the learning facilities in the classroom. In teaching, teachers are still conventional, namely students are teacher-centered. As a result, learning activities tend to be boring, students become sleepy and less motivated.

Along with the development of science and technology, education should not be conservative. Education can be done through various media, whether mass media such as magazines, books, newspapers, or through electronic media such as radio, television, internet and digital comics. One interesting learning media that has not been widely used and developed in schools is digital comics.

Digital comics can be an interesting learning medium. Digital comics are a medium that is simple, clear and easy to understand [12]-[14]. The existence of digital comics as part of the world of art is basically the result of human power, creativity and initiative from a combination of stories and images that can make readers imaginative and entertained [15]-[17]. Compared to textbooks which contain writing in too formal language, using digital comics will make it easier for students to understand the meaning of the material presented [18]-[20].

Gap in this research are does not mention the previous studies that have compared the digital comic-based history learning media with other media in the history learning subjects of General Soedirman's Guerrilla War. The research also does not explain the theoretical framework and the rationale behind the digital comic-based history learning media and how it relates to the history learning objectives and outcomes. Based on the description above, the development of digital comics as a history learning medium was chosen in compiling this research. This research will develop digital comic-based historical learning media about General Soedirman's Guerrilla War.

2.   RESEARCH METHOD

This research method uses research and development methods which are better known as Research and Development (R&D). This research uses the ADDIE development model. The ADDIE model is a learning system design model which consists of 5 stages, namely Analysis, Design, Development, Implementation, Evaluation [21], [22]. The development of digital comic media using the ADDIE model begins with conducting a needs analysis to identify obstacles in learning, designing an initial media design (digital comic draft), developing digital comic media at senior high school in indoensia and paksitan, and implementing digital comic media senior high school in indoensia and paksitan.

The research was conducted at senior high school in indoensia and paksitan. Data collection in this research used interviews and questionnaires. Interviews were conducted to find out the results of product assessments by experts. A questionnaire is used to collect data from the feasibility test.

Data analysis used in research and development research is descriptive statistics from quantitative data without making hypotheses. Quantitative descriptive data analysis will be divided into 2 stages. The first stage is data analysis from media experts and material experts to explain the results of product development and demonstrate its feasibility. The second stage will present the results of the use test to users to show the feasibility of the product being developed.

3.   RESULTS AND DICUSSION

The digital comic media design concept for General Guerrilla War was created by researchers. This concept includes determining the storyline, narrative and dialogue. However, for the depiction process, the researcher collaborated with an artist. To match the images and narratives, the researchers also collaborated with the artists so that the resulting media was better and in line with the development objectives.

The next stage is a validation test by material experts and learning media experts. Before the competency test is carried out, the media first needs to be validated by a material expert. The purpose of validation is to minimize errors when applied in the learning process. Evaluation from media experts will be used as a guide in improving further material [23]-[25]. The material experts in this digital comic-based history learning media are two lecturers from the History Education master's study program. He is a lecturer in the

Learning Evaluation and Indonesian History courses, so he really understands the history material, especially about General Soedirman's Guerrilla War.

Material expert validation includes aspects of communication assessment, technical design and display format. The results of the evaluation by material experts are in the form of scores using a Likert scale ranging from 1 to 5. The compatibility evaluation is in the form of suggestions and/or comments regarding the digital comic-based learning media product General Soedirman's Guerrilla War that was developed. The results of the assessment by material experts can be seen in the table below.

Table 1. Material expert validation results

Validator	Score	Mean	Description
1	64	4.57	Very good
2	61	4.36	Very good
Total	125	4.47	Very good

The validation results from learning media material experts have a total score from validator 1 of 64 with an average of 4.57, while the total value of material expert validation from validator 2 is 61 with an average of 4.36. So the total score for the two materials is 125 with an average of 4.47. Based on the guideline table for converting quantitative data to qualitative, overall this learning media material is declared very good. Next, media expert validation was carried out to obtain information as input for product quality revision.

Media expert validation includes aspects of communication assessment, technical design and display format. Compatibility evaluation in the form of suggestions and/or comments regarding the digital comic-based learning media General Soedirman's Guerrilla War that was developed. The results of the assessment by media experts can be seen in the table below.

Table 2. Material expert validation results

Validator	Score	Mean	Description
1	55	4.23	Very good
2	55	4.23	Very good
Total	110	4.23	Very good

As a result of validation from media experts, this learning media has a total score of 110 with an average of 4.23 and if the quantitative data is converted into qualitative, overall it is declared very good and suitable for application in the learning process with revisions according to media expert suggestions. This was then continued with the trial phase to determine the feasibility of the digital comic learning media being developed. The trial was carried out on students in three stages, namely one-to-one test, small group test, and field test.

One-to-one Test was carried out on three students of senior high school in indoensia and paksitan, with the criteria of 1 student with high ability, 1 student with medium ability, and 1 student with low ability in Indonesia and Pakistan. The results of the one-to-one test are shown in the table below.

Table 3. One-to-one Test Results

Ability Criteria	Score	Mean	Description
High	48	3.69	Good
Moderate	46	3.54	Good
Low	45	3.46	Good
Total	139	3.56	Good

Based on data from the results of the One-to-one Test, overall it can be concluded that the learning media based on the digital comic General Soedirman's Guerrilla War that the researchers developed is sufficient according to students. This can be seen from the average number of assessments converted into quantitative data, namely 3.56. The suggestions and product revisions given by students were to add background music (Soundtrack), because music can help improve concentration. Next, a small group trial assessment (Small Group Test) was carried out.

The Small Group Test was carried out on 6 students of senior high school (3 Indoensia and 3 Paksitan) with the criteria of 2 students with high abilities, 2 students with medium abilities and 2 student with low abilities. Below is a table of students in the Small Group Test.

Table 4. Small Group Test Results (Small Group Test)

Ability Criteria	Score	Mean	Description
High	99	3.85	Good
Moderate	96	3.69	Good
Low	92	3.54	Good
Total	287	3.71	Good

Based on data from the results of the Small Group Test, overall it can be concluded that the learning media based on the digital comic General Soedirman's Guerrilla War that the researchers developed is good. This can be seen from the average number of 3.71. The students' suggestions and product revisions were to add sound effects so that they could better understand the atmosphere depicted in the digital comic. Next, a field test assessment (Optional Field Test) is carried out.

Field Tests are based on input from reviews of learning media experts, material experts, One-to-one Tests and Small Group Tests, so the next step is to carry out Field Tests. (Optional Field Test) on 20 students in Indonesia and Pakistan. The results of the Field Test (Optional Field Test) are presented in the form of a response table containing the score and average score. A description of student responses in the Field Test (Optional Field Test) can be seen in the table below:

Table 5. Field Test Results (Optional Field Test)

F	%	Mean	Description
16	80	3.69	Good
3	15	2.54	Enough
1	5	1.46	Bad
20	100	3.56	Good

Based on the data from the Field Test results, overall it can be concluded that the learning media based on the digital comic General Soedirman's Guerrilla War that the researchers developed is good according to students. This can be seen from the average number of assessments converted into quantitative data, namely 3.94.

Learning media in the form of digital comics meets the required media criteria. Comics are images in the form of cartoons, which are simple in presentation and contain story sequence elements that contain a large message but are presented concisely and easily digested. Comics are simple in their presentation, and have story sequence elements that contain a large message but are presented concisely and easily digested, moreover equipped with dialogic verbal language.

This research method uses research and development methods which are better known as Research and Development (R&D). The design for the development of digital comic-based history learning media, General Soedirman's Guerrilla War, adopted the ADDIE model development design. Analysis is the first step of the ADDIE model. The analysis step goes through two stages, namely: (1) work analysis which is carried out to find out and clarify whether the performance problems faced at senior high school in Indonesia and Pakistan such as lack of use of school facilities by teachers, or limited facilities owned by the school require a solution in the form of implementing learning programs or management improvement, (2) Needs analysis is a necessary step to determine the abilities or competencies that students need to learn to improve their performance or learning achievement. Based on the results of field studies conducted by researchers, it is known that the implementation of history learning at senior high school in Indonesia and Pakistan tends to be monotonous and less interesting. Researchers in this case will develop digital comic media, these comics will be presented via Prezi. So that students will gain new learning experiences and the material taught can be maximally accepted.

Design is the core of the work steps of studying the problem and then finding alternative solutions that have been identified through the needs analysis step. Important steps that need to be taken to determine the learning experiences that students need to have while participating in learning activities. Steps that must be able to answer the question, whether the learning program can overcome the problem of student ability gaps. The gap here is the difference between the abilities that students have and the abilities that students should have.

The steps taken in media design are determining history lesson material for class XII IPS. The standard competency taken is "Analyzing the struggle of the Indonesian people from the Proclamation until the birth of the New Order" with the Basic Competency, "Analyzing Economic, Financial and Political Developments in the Early Period of Independence until 1950". The theme that will be used is "General Sudirman's Guerrilla War". After the material is arranged, the next step is to arrange the media devices. The media used is digital comics, which will later be presented via Prezi. The researcher then created a basic concept for the media draft which would be developed based on the literature obtained, namely including storyline, narrative text and dialogue text. Researchers collaborate with illustrators who are experts in creating comics. The researcher did not leave it

entirely to the illustrator because the researcher also gave directions so that it was appropriate to the learning material. This is done to produce a quality learning media product to be applied in learning activities.

Development is the third step in implementing the ADDIE learning system design model. The development step includes activities to create, purchase and modify teaching materials. In other words, it includes the activity of selecting, determining appropriate methods, media and learning strategies to be used in delivering program material or substance. In carrying out development steps, there are two important objectives that need to be achieved, namely: (1) producing, purchasing or revising teaching materials that will be used to achieve previously formulated learning objectives; (2) selecting the best media that will be used to achieve learning objectives; (3) the selection of SK, KD is adjusted between teachers, students and researchers (4) carrying out validation tests aimed at whether the media is suitable for application in learning. The finished media draft is then consulted with material experts and learning media experts. The purpose of the consultation was to obtain validation from the two expert teams in the form of a feasibility assessment and suggestions for improvement.

Validation is carried out by showing the initial product that has been developed along with its assessment instruments to media experts and material experts. Media experts are asked to provide input from presentation aspects, linguistic aspects and display aspects [26], [27]. Meanwhile, material experts are asked to provide input and assess in terms of learning aspects and content aspects [28]. Material experts suggest that the accuracy of chronology needs to be improved. It is important to improve this because the chronology method helps show how events, movements, customs or institutions developed to become what they are today.

The chronology method avoids confusion because it utilizes elements of continuous sequence in a series of events. Meanwhile, advice from media experts is that the first display contains important identities of the media such as title, target user, developer. This corresponds to the title page of the book which contains information about the book, namely the book title, author's name, publisher's name, publisher's logo, printing, place and year of publication.

Implementation or delivery of learning material is the fourth step of the ADDIE learning system design model. The main objectives of this step are: (1) guiding students to achieve goals or competencies (2) ensuring problem solving occurs to overcome gaps in learning outcomes faced by students, (3) ensuring that at the end of the learning program, students need to have the knowledge competencies , skills and attitudes required, (4) in this stage the activities carried out are small group trials stages I and II, large group trials. This is done to avoid media incompatibility, so a team consisting of media experts (Media Specialist) and teachers as users who also master the subject matter (Content Specialist) are needed. Students provide suggestions in the form of adding musical sounds. When listening to music, the brain's nerve cells are busy working to transmit sound data. This never-ending brain activity becomes more active if musical stimulation is given continuously. This condition will stimulate brain development faster and the brain's potential will be increasingly awakened. Thus, the use of music tends to improve brain function [30]-[32].

After improvements have been made from various input obtained from material experts, media experts, and student trials, the next stage is testing the validity and reliability of the research instruments. The validity test aims to determine whether the research instrument provided is appropriate and appropriate to the cognitive abilities of students. Meanwhile, reliability testing is carried out with the aim that if the research instrument is tested several times it will produce the same results.

The research is novel because it is the first to develop a digital comic-based history learning media of General Soedirman's Guerrilla War, which is a significant historical event in Indonesia. The research also contributes to the development of the R&D method and the ADDIE development design, which involve the systematic and iterative process of analysis, design, development, implementation, and evaluation. The research also applies the digital comic-based history learning media to two different groups of students, one in Surakarta and one in Pakistan, which may have different characteristics and needs from other students in other regions or countries. The research has implications for the improvement of the history curriculum and the student learning interest and engagement in history subjects. The research has some limitations, such as the small sample size of 20 students, the lack of a control group or a comparison group, and the short duration of the research, which only consists of two cycles. The research also does not measure the long-term effects of the digital comic-based history learning media on the student learning outcomes and attitudes. The research also does not consider the cultural and contextual factors that may influence the student learning interest and engagement in history subjects.

Evaluation is the final step of the ADDIE learning system design model. Evaluation is a process carried out to provide value to a learning program. Evaluation of the learning program aims to find out several things, namely students' attitudes towards learning activities as a whole, increasing competence in students. At this stage, learning media based on the digital comic General Soedirman's Guerrilla War is ready to be applied to the process of history learning activities to see the effectiveness of this learning media.

4.   CONCLUSION

Based on the research results, the conclusion that can be put forward in this research is that the development of digital comic-based history learning media for General Soedirman's Guerrilla War carried out several assessments to obtain feasibility. The first feasibility can be seen from the validation results of material experts and media experts. Based on all the assessments given by material experts, media experts and students in field trials, the digital comic-based history learning media of General Soedirman's Guerrilla War was declared suitable for use as a history learning media. This can be seen from the media suitability assessment criteria which show a minimum good score.

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