

Innovative Context-Based Sociology Learning Media Assisted by Smart Apps Creator for High School Students

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ABSTRACT

Difficulty in understanding the meaning and benefits of the material studied in sociology concepts underlies the need for innovative learning models, especially by integrating technology. This study aims to develop Context-Based Learning Media Assisted by Digital Applications SAC (Smart Apps Creator) for high school students through a thorough needs analysis process. The research was conducted using a research and development approach. The development model used is the ADDIE model. Data collection techniques were carried out through observation, interviews, and questionnaires using observation sheets, interview guides, and questionnaires as instruments. Respondents involved in this study included principals, teachers, and students from 2 high schools in 2 regencies, namely Ogan Ilir Regency and North Ogan Komering Regency, with a total of 82 respondents. Data analysis was conducted using qualitative and quantitative analysis. The results of the needs analysis indicate that the development of interactive, context-based learning media is necessary to support more contextual and meaningful Sociology learning. The validation results on the aspects of media, content, and language show that the developed media has high validity in all three aspects with an average score of 4.6. The study also shows that the developed media is effective in improving students' learning outcomes, with an N-gain of 0.67, which is categorized as moderate. These results can serve as a reference for ideas in analyzing the practicality and effectiveness of using learning media as one of the development products in educational technology.

Keywords: Sociology, Contextual, Smart Apps Creator

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INTRODUCTION

Sociology education has an important role in shaping students' understanding of social phenomena, national values, critical attitudes, and empathy towards the environment. Sociology learning not only aims to increase knowledge but also to broaden students' perspectives on community life, requiring a creative and innovative approach. However, the facts show that students' interest in sociology lessons is still relatively low (1)(2)(3), sociology learning is still considered monotonous, and the lessons mostly contain theoretical material that only presents concepts, making them tend to be verbalistic. In addition, the learning approach is still conventional, one-way, and has minimal interaction, dominated by lecture methods without involving students.

The difficulty in understanding the meaning and benefits of the material studied in sociology is what underlies the need for innovative learning models, one of which is Joyful Learning (4) (5) (6) (7) (8). The Joyful Learning model is an alternative approach that emphasizes a fun, active, and participatory learning process. Moreover, if the joyful learning model is combined with a contextual approach, learning becomes more meaningful and

relevant because it connects the material with the students' daily lives (9)(10)(11)(12)(13)(14). Students not only understand social theory but are also able to relate it to their experiences and social environment. The combination of joyful and contextual approaches offers a cheerful method through games, quizzes, and other physical activities in the appropriate context. In this way, learning can enhance students' ability to actualize their potential and understand their role in social life.

On the other hand, the limited availability of engaging and relevant learning media for students with the characteristics of today's digital native generation is a problem that cannot be ignored. In fact, teachers play a role in designing learning tools by creating modules, determining and selecting learning media, with consideration to make it easier for students to understand the lessons, both inside and outside the classroom, which is inevitable (15). Moreover, technological advancements also provide opportunities to present interactive learning media and can shape the learning environment to prepare graduates who are ready to face 21st-century competition (16) (17) (17)(18)(19).

Learning innovation through the integration of media assisted by digital technology has been proven to contribute to improving learning effectiveness (20)(21)(22)(23)(24)(25). Moreover, innovation in learning is also important to prevent education disruption, which is the inability of education to adapt learning to the pace of technological development, thereby causing technology to be considered a disruption to the stabilization of education (26).

One of the applications that can be integrated into a creative and innovative digital-based learning model is SAC (Smart Apps Creator). The use of the digital SAC application is aimed at developing learning media that enhances student engagement in learning. Smart Apps Creator (SAC) is a platform that supports the creation of Android-based mobile applications without requiring advanced programming skills. Smart Apps Creator can integrate various media components, such as animations, narrated audio, short videos, as well as interactive elements in the form of games or quizzes. This platform also allows for the systematic structuring of applications and providing feedback to boost student motivation.

In addition, this application is lightweight, has a simple and easy-to-use navigation design, and can run on various types of Android devices commonly used by students, both online and offline, without being hindered by internet connection limitations. All the design and functions of the application are arranged according to the principles that match the characteristics of students.

Research on the development of digital learning media has been widely conducted (27)(28)(29). Previous studies have largely examined how to develop media in various forms of teaching materials that can be accessed in learning and looked at their impact and effectiveness. Studies on contextual approaches have also been conducted extensively on how this approach is used (30)(31), as well as its implementation at the operational level (32).

The same applies to research on the implementation of joyful learning (33)(34). However, the use of this approach has not yet been fully applied in sociology learning, especially in providing understanding about social roles and awareness. Thus, the novelty of this study is that the synergy of the joyful learning concept and the contextual approach will be further enhanced by the addition of digital technology elements in the form of learning media assisted by the SAC application to improve learning effectiveness, particularly in fostering students' social awareness.

The development of a contextual-based Joyful Learning model assisted by the SAC digital application is important to be developed in Sociology learning in high schools. This model is expected to increase students' motivation, active involvement, as well as learning outcomes in understanding and analyzing social phenomena.

However, the advantages of the digital-based joyful learning model in sociology education have not been optimally utilized in teaching. This phenomenon certainly presents a challenge for educators to design meaningful learning models by linking them to aspects of technology, pedagogy, and content. In this way, the education sector can adapt to the development of knowledge and technology through the use of technology as a form of innovation in learning (35). Learning models based on various digital multiplatforms have also

become a trend in current development, as their presence can make the learning process more effective, engaging, and not monotonous (36)(37).

METHOD

This research was conducted using the Research & Development (R&D) method. This method was chosen because it allows for the design of learning materials to be effective and practical, while emphasizing active involvement from experts. This method will produce a design or concept of learning materials that is innovative and can be implemented in teaching. The ADDIE model used in this research provides high validity for the resulting product because each stage involves thorough analysis and continuous evaluation. The clear structure and development stages in the ADDIE model also help to create a learning model that meets students' needs. In accordance with the development model used, the research stages are illustrated in the following flowchart.

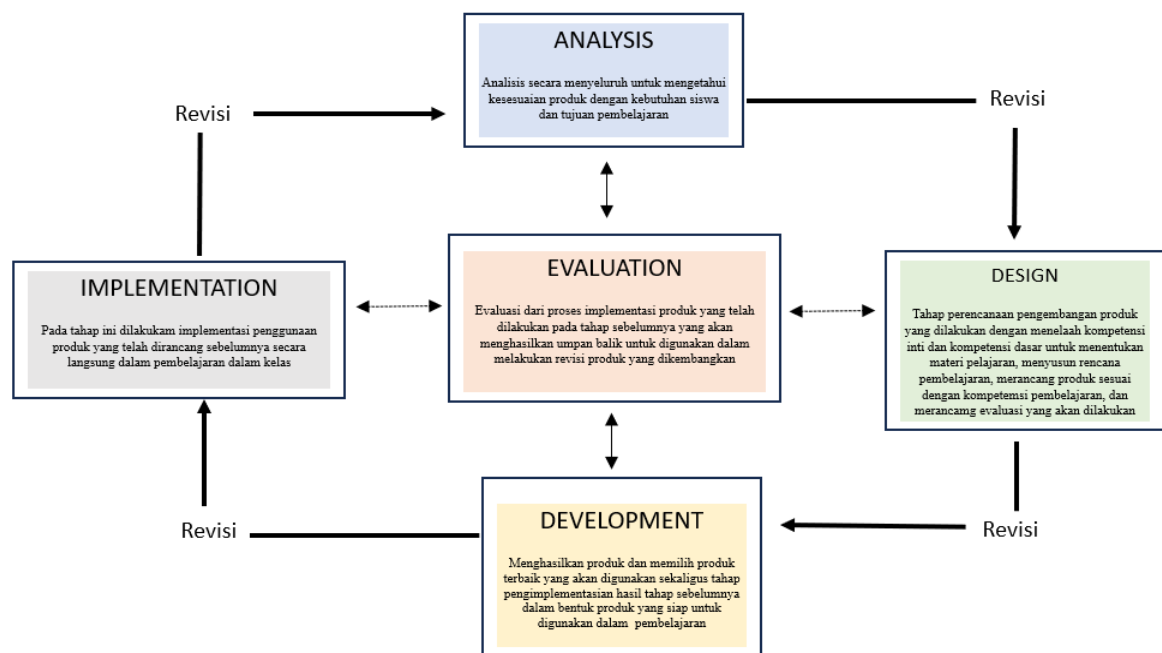


Figure 2. Research Stages

The subjects of this study are principals, teachers, and students from two senior high schools in two regencies, namely Ogan Ilir Regency and North Ogan Komerling Regency. The selection of research subjects was carried out using a purposive random sampling technique. The total number of respondents was 82, consisting of 10 teachers and 72 tenth-grade students, selected based on the researcher's considerations.

The instruments used in this study include questionnaires, judgment rubrics, and tests. Meanwhile, the data will be analyzed using descriptive statistical approaches, content analysis, and thematic analysis.

RESULT AND DISCUSSION

Needs Analysis

Needs Analysis Needs analysis is used as the basis for developing Contextual-Based Learning Media Assisted by the SAC (Smart Apps Creator) Digital Application for high school students, and it is an initial activity before media development. The analysis conducted includes a literature study on interactive multimedia with a contextual approach and an analysis of material concepts. Needs analysis is carried out using a questionnaire consisting of several aspects, including identifying learning styles, the need for learning media, learning strategies,

the use and sources of teaching materials, the suitability and effectiveness of media, the needs and readiness for learning media, media content and features, as well as challenges and expectations of media use. Needs analysis is conducted by collecting data using questionnaires. Respondents involved include teachers and students. The results of the needs analysis on the aspect of needs analysis in Sociology learning at Senior High Schools are shown in detail in Table 1 below.

Table 1. Analysis of Learning Media Needs

No	Aspect	Indicator	Average Score	Percentage
1	Student learning style	Understanding through pictures, videos, and animations	4	80
2	The Need for Learning Media	Interest in trying interactive learning media	4	80
3	Pedagogical approach	Understanding material that is related to social life and the environment	5	100
4	The use and sources of teaching materials	The use of context-based interactive media in learning	5	100
5	Suitability and effectiveness of teaching materials	The suitability of teaching materials with a contextual approach	4	80
6	Needs and readiness for learning media	The need for contextual-based interactive media	4	80
7	Media content	media integrates contextual issues	4	80
	Media feature	Media must support interactivity, accessibility, and multimedia	5	100
8	Challenges of using media	Adequacy of supporting facilities	4	80

Research results with student respondents show that the students' learning style is dominated by an audiovisual style, with an average score of 4 and a percentage of 80 percent, indicating that students find it easier to understand the material through images, videos, and animations. This learning style trend leads to 80 percent of students showing interest in trying interactive learning media. Regarding the content aspect of the material, all students want Sociology material to be presented contextually and linked to social life and the surrounding environment of the students. This is indicated by a score of 5 points. As for the needs analysis with teacher respondents, it includes aspects of the use and sources of teaching materials, the suitability and effectiveness of teaching materials, the needs and readiness for learning media, media content, media features, and challenges in using media. In the aspect of the use and sources of teaching materials, out of 10 teachers participating in the study, a score of 5 was given, which indicates that teachers want the use of context-based interactive media in learning. Furthermore, 80 percent of teachers also want teaching materials to be aligned with a contextual approach so that sociology learning becomes more meaningful and not boring. In terms of needs and readiness for learning media, teachers stated that 80 percent of them expressed a need for contextual-based interactive media. Furthermore, 80 percent of teachers want media that integrates contextual issues into the content aspect of the media. As for the media aspect, 100 percent of teachers want media that supports interactivity in its use; the desired media are highly accessible and contain various elements that can accommodate different student learning styles. Regarding the challenges of using media, teachers feel that it is quite feasible to implement this multimedia in schools. This is because there is already adequate supporting facilities at 80 percent with an average score of 4. The results of this needs analysis indicate that

the development of contextual-based interactive learning media needs to be carried out to support more contextual and meaningful Sociology learning. The development of interactive multimedia that is highly accessible and has various elements that can accommodate different student learning styles needs to be carried out. *Desain Media Pembelajaran*

The second stage is designing interactive learning media based on contextual principles. At this stage, the media structure is designed in the form of a framework for interactive contextual-based media and adjusted to the needs of the curriculum. The learning media design is made more attractive using Canva to create the layout. Illustrations, videos, letters, and audio in the videos are adjusted to the chosen theme. The contextual aspect is highlighted in this learning media by linking the material to everyday life that is close to the students. The contextual aspect is also applied by adding cultural elements that are familiar to the students through the addition of ornaments from South Sumatran culture and traditional local songs. From the material aspect, contextual elements are added by providing examples that are relevant to the students.

Development Media

During the development stage, the structure of the learning media flow that was previously planned is organized in the form of a product, namely the flow of learning media content. The results of the product development are then validated by expert validators and subsequently revised according to the suggestions provided. The product development is carried out by combining sociology materials with local cultural values, integrated based on learning syntax that aligns with the syntax of contextual learning. The first step taken is to create the interface section according to the theme of the contextual learning approach for high school students (Figure 1).



Figure 1. Initial Media Display

The image above shows the initial display of the media and the media usage instructions displayed in the instruction menu. This menu provides information on the use of buttons available in the media. The interactive elements in the media are also presented in the form of links that allow learners to access all existing menus. Furthermore, to get an overview of the features available, learners can view them on the Menu page.



Figure 2. Menu Page

Students will learn the stages of learning by accessing a menu feature that displays all learning media content, including instructions, the competencies students are expected to achieve after studying the learning media, material, games as a form of formative evaluation to measure

student understanding, and an evaluation feature as a form of summative assessment to measure the achievement of learning objectives. The following is a page that shows the presence of formative and summative evaluations in the learning media.



Figure 3. Display of Formative and Summative Evaluation Menu

The learning procedure is designed to follow the stages of contextual learning, starting from modeling, investigation, questioning, forming study groups, constructing knowledge from experiences gained, and reflecting. The learning media will guide students to reflect on the activities they have engaged in so far. When students study this media, they indirectly go through all the stages of contextual learning. The following are some displays in the material menu that follow the syntax of contextual learning.



Figure 4. Initial view of the learning material menu

After the development process, the next step is validation by the validator to test the feasibility of the product that has been developed. At each stage of development, revisions will be made to obtain a research product that is feasible for use. Validation is carried out on three aspects: media, material, and language. During the validation process, the researcher also undertakes a series of revisions to the substance and systematic structure of the developed product based on improvements and suggestions from expert validators.

Content validation is carried out by assessing the feasibility of using media in the learning process in terms of the format that outlines the substance, format, and systematics. In addition, content validity also considers the feasibility of the media content in stating the suitability of the instructional material contained in the video with various learning outcomes as well as the arrangement of activities displayed. Validity also examines the feasibility of interactive videos in terms of usefulness, which indicates positive impacts both instructionally and in terms of accompanying effects that can be obtained after the interactive video is used in learning. All assessment indicators are outlined in the validation sheet.

The following Table 1 presents the results of interactive video validation based on expert opinions.

No	Aspect	Result Score	Interpretation
A.	Media Display		

	Visual Display	4.7	Very valid
	Media Convergence	4.6	Very valid
	Technical and Functionality	4.7	Very valid
		4.7	Very valid
B.	Material Appropriateness		
	Relevance of Material to the Curriculum	4.4	Very valid
	Depth and Scientific Accuracy	4.2	Very valid
	Readability and Comprehension	4.0	Very valid
		4.2	Very valid
C.	Language Proficiency		
	Language Proficiency	4.6	Very valid
	Suitability with Student Development	5.0	Very valid
	Compliance with Language Rules	5.0	Very valid
		4.8	Very valid
	Average score	4.6	Very valid

The validation results in Table 2 above show the validation conducted by media experts, material experts, and language experts. Validation of the media aspect covers three sub-aspects: visual appearance, media integration, and technical and functionality. The validation result for visual appearance received a score of 4.7, while for media integration it received a score of 4.6. As for the score for technical and functionality, it was 4.7. The average score for the media validation given by the experts is 4.7, which indicates that the developed media has a high level of validity from the media aspect.

Regarding the expert validation results on the material aspect, it includes three sub-aspects: the suitability of the material with the curriculum, the depth and scientific accuracy, as well as readability and comprehension. From these three sub-aspects, the scores obtained were 4.4, 4.2, and 4.0, respectively, with an average score of 4.2. These results indicate that in terms of material, the developed media also has a high level of validity.

Next, for the language aspect, expert validation was carried out covering three sub-aspects, namely language feasibility, suitability with student development, and conformity with language rules. In the sub-aspect of language feasibility, a score of 4.6 was obtained, which means that the developed media has very good language feasibility. In the sub-aspect of suitability with student development, a score of 5.0 was obtained, which also means that the developed media is very appropriate for high school student development. In the sub-aspect of conformity with language rules, the expert validation stated that this media is highly in accordance with language rules, with a score of 5.0. Overall, the language aspect shows that the developed media has a high validity in terms of language, with a score of 4.8. Overall, the validation results conducted by the three experts indicate that the developed media has a very high level of validity, with an average score of 4.6.

The results of developing Contextual-Based Learning Media Assisted by the SAC (Smart Apps Creator) Digital Application for high school students show that the needs analysis process is crucial to produce media with high validity. According to Seels and Glasgow (Sanjaya, 2008), needs analysis is the process of gathering information about gaps and determining the priorities of those gaps to be addressed. An appropriate needs analysis process will identify performance gaps that occur, allowing for a clear explanation of what is required to achieve improved performance and reach the ideal performance conditions. Thus, the needs analysis conducted in this study indicates that the development of Contextual-Based Learning Media Assisted by the SAC (Smart Apps Creator) Digital Application is an appropriate solution to address learning difficulties in Sociology subjects.

Next, the validation process is carried out as a procedure to ensure that the learning media developed truly meets the needs of students in terms of media, content, and language.

Valid media allow the learning process to be more effective in achieving learning objectives. This aligns with many studies that have shown that interactive learning media are effective in improving student learning outcomes, as seen from the improvement in average scores (Iskandar, 2023).

At the small group stage, it was tested on six students selected based on different levels of thinking ability (high, medium, low). Students were asked to provide feedback and suggestions that were used as input to revise the product. Based on the scores given by the six students in the small group test, an average score of 0.84 was obtained in the high practicality category. The improvements from the small group stage became the final product, which was then implemented through field testing to assess its effectiveness.

The results of the improvements in the small group stage were field-tested on 10th-grade students at SMA Negeri 1 Indralaya and SMA Negeri 4 Ogan Komering Ulu, with 35 respondents each. The purpose of conducting the field test was to determine the effectiveness of the developed interactive media. To assess the effectiveness of the developed interactive media, a pre-test was given before the learning started and a post-test was given after the learning process was completed. The following is a table of Pre-Test and Post-Test scores.

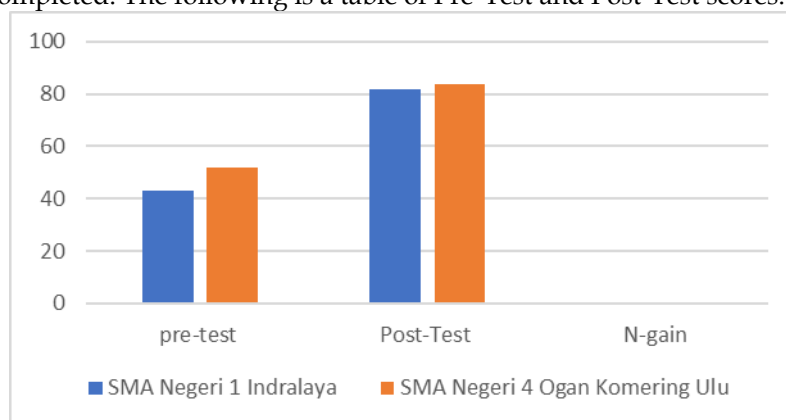


Figure 1. Recapitulation of Pre-Test and Post-Test Results

Pre-tests were conducted before starting learning using interactive media, while post-tests were conducted after learning. From the data presented in Table Figure 1, it shows that the pre-test score obtained by 10th-grade students at SMA Negeri 1 Indralaya was 43, while at SMA Negeri 4 Ogan Komering Ulu it was 52. After learning using the media, there was an increase in scores to 82 for students at SMA 1 Indralaya and 84 at SMA 4 OKU. Data analysis using the N-gain formula showed an increase in learning outcomes of 0.68 for students at SMA Negeri 1 Indralaya and 0.66 for students at SMA 4 OKU. If the averages are calculated, there is an increase in learning outcome scores of 0.67, categorized as moderate. This aligns with Meltzer's (2002) opinion that if there is an increase in students' learning outcomes, it means that students have learned more compared to before. It can be concluded that the interactive media in this field test has proven to be effective because effectiveness refers not only to the process or activities of the students but also to the outcomes, namely the achievement rankings obtained through tests.

CONCLUSION

Based on the validity test, the results showed that the Contextual-Based Learning Media Assisted by the Digital Application SAC (Smart Apps Creator) for high school students is declared very feasible or highly valid based on each assessment aspect in terms of construct and content, including media, material, and language, making it suitable to be used as a learning resource for students. Overall, this means that the media is considered very feasible in every assessment aspect and as a whole, with the aim of increasing students' mastery of concepts in the Sociology subject through social research. The results of this study also indicate that the developed media is effective in improving student learning outcomes, with a N-gain of 0.67, which is categorized as moderate. This research can serve as a reference or idea in analyzing the

practicality and effectiveness of using learning media as one of the development products in educational technology.

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