



## Development of smart apps creator based learning media for integrated thematic learning in grade V

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#### Abstract

This study is supported by the results of observations made in elementary schools that the learning media used by teachers were less varied, thus affecting student motivation and interest in the learning process. The media used by teachers were traditional media such as textbooks and teaching aids available at school. The purpose of this research is to provide relevant and practical learning materials based on Smart Apps Creator for grade V elementary school students. Development research (R&D) employing the ADDIE development model was the research methodology used in this study. The type of data collected in this study was to determine the level of validity and practicality. The results of the learning media development research using Smart Apps Creator showed that the material validation test obtained a percentage of 88.85%, the language validation test obtained a percentage of 99%. Furthermore, the practicality test results from the teacher response questionnaire showed a result of 93%, while the student response questionnaire obtained a result of 96.5%. Based on these validation and practicality findings, it was concluded that the Smart Apps Creator-based learning media developed for integrated thematic instruction in fifth-grade elementary schools was both valid and practical, making it suitable for use in the classroom learning process.

Keywords: learning media; smart apps creator; integrated thematic; ADDIE.

#### **INTRODUCTION**

The function of learning media in the educational process is an integral aspect that is inseparable from the realm of education. As stated by Tazlizaro Tafonao (2018: 103), learning media encompasses anything that can be utilized to convey the sender's message to the receiver, thereby stimulating the thoughts, emotions, focus, and interests of students in their learning. Learning media serves as a resource to facilitate the educational process, both within and beyond the classroom. It serves as a component of learning resources and as a tangible medium that encompasses educational content, aiming to enhance students' motivation to engage in learning (Mardhatilla & Amini, 2023).

One of the key components of the teaching and learning process in schools is the use of educational media. The use of media is essential because it helps achieve learning objectives. Consequently, one of the responsibilities of educators is to develop learning materials. Factors to consider regarding learning media include the educational goals, the types of tasks and responses that students should be able to achieve after the learning experience, and the learning context, which encompasses the characteristics of the students. In this context, a key role of learning media is to act as a teaching resource that also influences the conditions, atmosphere. and learning environment created by the teacher. Various forms of media can be developed during the student learning process, one of which is derived from technology that meets the student's needs.

As stated by Akbar (2016: 117), the following are the criteria for learning media: (1) it should align with learning objectives, (2) it should match the characteristics of the students, (3) it should be compatible with available learning resources, (4) it should be both efficient and effective, (5) it should be safe for use, (6) it should promote activeness and creativity, (7) it should foster a positive learning environment, and (8) it should be of high quality. To address the challenges that emerge from the rapid progress of technology, educators need to develop innovative solutions to support students, enabling them to learn at any time and from any location. This is essential for capturing students' interest in their studies. This research offers an innovative and practical approach to the use of learning media, with a particular emphasis on technology- and communicationbased educational resources.

This educational media is implemented as an Android application. It is anticipated that the Android platform will facilitate teachers in developing innovative and more effective learning resources for students. Learning using learning media such as Android is considered fun and interesting for students. One of the innovations that utilize Android is the creation of a mobile learning application that leverages mobile devices for learning purposes. Educational applications facilitate a learning process that is both practical and adaptable, enabling learning to occur at any location and at any time. Commonly used devices include cell phones. personal computers (PCs), and Tablets.

Mobile learning tools can enhance students' motivation to learn in comparison to traditional learning methods. Various software and websites are available to create learning media in the form of easy and interesting applications, one of which is Smart APP Creator. Creating applications using Smart APP Creator is quite easy because it does not require specialized skills in computer programming. With the availability of a network and a laptop or computer, the application can be created easily. In this case, Smart APP Creator has provided an application creation template, making it easier for teachers to enter the material to be conveyed in the form of text, images, or videos.

The idea of learning using Android is expected to help teachers meet the demands of technological advances and enhance the appeal of learning materials through the use of Android apps.

Preliminary findings were derived from observational studies and interviews with fifth-grade educators from four separate schools, revealing certain insights into the use of learning media by fifth-grade teachers. On November 1, 2021, the author conducted observations and interviews at SD Negeri 11 Tanjung Alai. Throughout the observation activities, the author found that the teacher continued to use conventional teaching methods, such as lectures and assignments. The educational materials used by the teachers were primarily visual, including images from thematic books, those displayed in the classroom, and images obtained from the internet and shown at the front of the class. In addition, the incorporation and utilization of technology as a learning resource had not been adopted despite the school offering LCD projectors, speakers, laptops, and wifi networks for teachers' use.

On June 14, 2022, the author carried out observations and interviews at SD Negeri 19 Ambacang Anggang. During these activities, the author discovered that facilities such as LCD projectors, laptops, and wifi networks were available for teachers to utilize in presenting learning materials, but these resources were not being utilized. In the teaching process, the teacher relied solely on learning media consisting of pictures and teaching aids that were accessible at the school. The learning media utilized were limited to images, specifically those found in thematic books and those shown within the classroom.

Furthermore, on June 15, 2022, the author carried out observations and interviews at SD Padang Sarai. During Negeri 07 the observation and interview sessions, the author discovered that the school had equipped itself with facilities such as LCD projectors, speakers, and wifi networks available for teachers' use. Teachers have utilized LCD projectors to present educational videos on specific topics. The teachers' ability to use technology has emerged, particularly through the use of YouTube and Google for conducting lessons and assigning tasks to students.

According interviews the to author conducted with the four class teachers, it was discovered that integrated thematic learning utilizing Smart Apps Creator had not been implemented at the school. The application of technology in education has not been fully optimized; therefore, researchers need to develop effective learning media. The research is titled "Development of Smart Apps Creator Based Learning Media on Integrated Thematic Learning in Grade V Elementary School."

In previous research Smart Apps Creator has been used in making learning media. Research conducted by Rahma Esa Pangesti and Risda Amini (2021) with the title "LKPD development using the scientifically based Smart APPS Creator application in Grade III Elementary School" describes the results of the research developed to obtain LKPD validity results with an overall validation of 86.6% (very valid). According to the results of the LKPD practicality test, the instructor 89.28% response questionnaire scored (efficient), while the 24 student response questionnaire scored 90.52% (efficient).

Therefore, it is determined that LKPD's use of the scientifically based Smart Apps Creator program is highly legitimate and helpful for the educational process..

The relevance of Rahma Esa Pangesti and Risda Amini's research (2021) to the research that the researchers conducted is that they both use Smart Apps Creator and use the ADDIE model. The difference is that it lies in the research subject and learning material, the research to be carried out is aimed at grade V elementary school students while previous research is aimed at grade III elementary school students.

The relevance of Rahma Esa Pangestu and Risda Amini's research (2021) to the research that the researchers carried out is that they both use Smart Apps Creator and use the ADDIE model. The difference lies in the subject of research and learning materials, research that will be conducted is intended for students of Grade V Elementary School while the previous study was intended for students of Grade III Elementary School.

Yuberti, et al (2021) conducted a study entitled "Development of Mobile Learning Based on Smart Apps Creator as Physics Learning Media" describing the study's findings suggest that a mobile learning based platform on innovative app development is an effective teaching tool for high school physics. According to the research's findings, the material specialists' assessment resulted in an 87.76 score. The product is highly viable, as evidenced by an average score of 84 among technology experts and 94.58 among media professionals. The appropriateness of the developed mobile learning materials was assessed by educators, yielding an average educator response score of 89.04. Furthermore, the average student interest response was 82.403. The results of the interest response assessment for mobile learning indicate that the created media can effectively motivate students during their learning process.

The relevance of Yuberti's research, et al (2021) with the research conducted by researchers is that both conducted research on the development of learning media using Smart Apps Creator using the ADDIE model. The difference is that it lies in the research subject, the previous researcher was aimed at high school students, the material used in physics learning. While the research to be carried out is aimed at elementary school students, the material used is integrated thematic learning.

A study carried out by Qoulan Syadida and Yeni Erita (2022) titled "Learning Media Development Using the Smart Apps Creator Application in Integrated Thematic Learning for Grade IV Elementary Schools" outlines the findings of the research, which indicate that the learning media created with the Smart Apps Creator application is both valid and practical for educational use, achieving a validity rate of 89.1% and a practicality rate of 90.6%.

The relevance of research conducted by Qoulan Syadida and Yeni Erita (2022) with the research that researchers do is both using Smart Apps Creator, using the ADDIE model and integrated thematic learning materials. The difference is that it lies in the research subject and learning material, the research to be carried out is aimed at grade V elementary school students, while previous research is aimed at grade IV elementary school students.

#### **RESEARCH METHODS**

The type of study employed by researchers is Research and Development (R&D) development research. The study focuses on creating a new product that enhances existing products. R&D involves a structured process aimed at enhancing the features and performance of an already existing product (Amin & Mayasari, 2015). To produce a specific product, research is necessary to analyze the market needs. Products in research and development are not always from physical objects or hardware; they can also include software (Sukmadinata, 2009).

According to several experts referenced earlier, development research involves creating a product that must initially be evaluated for its effectiveness in the learning process. To develop a product, a needs analysis is performed to assess the product's efficacy. Development research encompasses various models; however, this study adopted the ADDIE model, which comprises analysis, design, development, implementation, and evaluation.

The product trial subjects chosen for this study were fifth-grade students from SD Negeri 11 Tanjung Alai and SD Negeri 19 Ambacang Anggang. The author's consideration of choosing this test subject stems from the school environment's support for the research, specifically the availability adequate school facilities of and infrastructure, as well as the absence of Smart Apps Creator-based learning media development in the school.

The data utilized in this research comes from the outcomes of validating learning media through Smart Apps Creator, carried out by experts or validators. Additionally, the data type used in the practicality trial results was gathered during the implementation of learning in class V at SD Negeri 11 Tanjung Alai and SD Negeri 19 Ambacang Anggang.

Data collection tools comprise instruments for verifying learning media and assessing the practicality of learning media. The validation instrument employed is a learning media validation tool that assesses the appropriateness of the material and design validation, specifically utilizing a validation sheet to gather data on the validity of the Smart Apps Creator-based integrated thematic learning media that have been developed. The

learning media practicality instrument is utilized to gather data regarding the developed practicality of the learning media. The tool utilized is a questionnaire students' aimed at gathering opinions regarding the effectiveness of the integrated thematic learning media developed using Smart Apps Creator. Students complete this instrument after the learning process is finished, and a separate questionnaire for teachers has also been created to assess the practicality of the Smart Apps Creator-based integrated thematic learning media. The teacher completes this instrument after participating in the learning process.

The information gathered in this research consists of data derived from the validation results of integrated thematic learning media assessed by experts through trials, which encompass data regarding the validity and practicality of the integrated thematic learning media created with Smart Apps Creator.

Based on the analysis of the acquired learning media, an evaluation was conducted of all aspects, presented in a tabular format using a Likert scale. According to the validation sheet, The assessment for each category is outlined in Table 1.

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(Learning	Media	Validation	Scoring)
(Lear mig	muua	vanuation	Scoring)

Category	Score
Inadequate	1
Less Adequate	2
Adequate	3
Excellent	4

Modified from Ridwan (2019: 89)

Based on the scores obtained, it can be calculated using the formula from Purwanto (2013) as follows:

$$\mathbf{P} = \frac{f}{n} \times 100\%$$

To evaluate the computation and ultimate value of the validity outcomes, the equation presented by Ridwan and Sunarto (2015) is utilized, as outlined below:

$$\overline{X} = \frac{\sum x_i}{n} \times 100\%$$

Additionally, the percentage results of the media validation are categorized into score criteria according to a Likert scale, establishing the following validity level criteria:

Table 2		
(Learning Media Validity Category)		

Range %	Category
81,26 - 100,00	Highly Valid
62,51 - 81,25	ModeratelyValid
43,76 - 62,50	MarginallyValid
25,00 - 43,75	Not Valid

(Modified by Fauda, 2015)

Practicability analysis technique is useful for analyzing data from observations of the implementation of teacher response questionnaires and learner responses. Data on teacher responses and learner responses to the learning process were analyzed using the provisions confirmed in the rubric as shown in the following table:

Table 3(Teacher and Students Questionnaire<br/>Rating Scale)

	0
Score	Category
1	Strongly Disagree
2	Disagree
3	Moderately Agree
4	Completely Agree

Modification of Arikunto (2014: 285)

The final value of the questionnaire data calculation was analyzed using the formula from Purwanto (2013), which is as follows:

## $NP = \frac{R}{SM} \times 100\%$

The learning media practicality category based on the calculation of the final score can be seen in the following table:

# Table 4(Category of Practicality of Integrated<br/>Thematic Learning Media)

Thematic Learning Meula)		
Score in Percent (%)	Category	
0% - 25%	Impractical	
>25% - 50%	Limited	
	practicality	
>50% - 75%	Practical	
>75-100%	Very Practical	

Modification of Ridwan (2010:89)

#### **RESULTS AND DISCUSSION** *Analysis*

#### **Need Analysis**

The needs analysis conducted by the involved researchers observations and interviews with four different elementary schools in Cluster IV, Lubuk Sikaping District. On November 1-2, 2021 at SDN 11 Tanjung Alai, on June 14, 2022 at SDN 19 Ambacang Anggang, on June 15, 2022 at SDN 07 Padang Sarai and on June 16, 2022 at SDN 31 Kampung Perawas. The results of the problems found by researchers are (1) the presentation of learning materials that are less interesting and monotonous, students are required to understand the content of the material only from textbooks, (2) The Learning media used are generally limited to the form of learning aids and images from theme books or class displays, (3) the delivery of learning materials that primarily use the lecture method and seem less interesting, (4) the potential of the school to facilitate the use of more interesting learning media.

#### **Curriculum Analysis**

The curriculum that researchers use in developing this learning media is the 2013 revised curriculum, as revised in 2018. This aims to provide an overview of the design suitable for developing data presentation learning media by the 2013 curriculum.

#### **Material Analysis**

The learning analysis conducted by researchers focuses on integrated thematic learning for Class V, Semester I, of the 2013 curriculum. In developing this learning media, researchers focus on the material of Theme 1, Animal and Human Movement Organs, Sub-Theme 1, Animal Movement Organs, and Learning 3 and 4.

#### Design

At this design stage, researchers design learning media using the Smart Apps Creator application. Researchers develop learning media to help and facilitate students in understanding learning materials.



**Opening view** 



Figure 2 Initial View



Figure 3 Home View



Figure 4 Learing Material Display

#### Development

The development stage of learning media using Smart apps Creator includes validation of teaching media conducted by material experts, linguists, media experts. After being validated, revisions will be made from the validation results of the three experts or validators.

Table 5		
(Expert Validation Results Before Reision)		
Assessed	Percentage	Description
Aspect		
Material	80,5%	Valid
Language	95%	Valid
Media	86%	Valid
Average	87,2%	Valid

 Table 6

 (Expert Validation Results After Reision)

Assessed	Percentage	Description
Aspect		
Material	888,8%	Valid
Language	95%	Valid
Media	99%	Valid
Average	94,2%	Valid

Based on the data from the second validation by the validator, the overall validity percentage of Smart Apps Creator-based learning media on integrated thematic learning is 94.2%, categorized as "Highly valid."

#### Aplication

The final product of Smart Apps Creatorbased learning media on integrated thematic learning, which has been validated and revised, is then tested in two schools with one class each. The trial was conducted in the fifth grade of SD Negeri 19 Ambcang Anggang and SD Negeri 11 Tanjung Alai. The test subjects at SD Negeri 19 Ambcang Anggang consisted of 16 students, comprising seven boys and nine girls. The research subjects at SD Negeri 11 Tanjung Alai consisted of 18 students, comprising eight boys and 10 girls.

#### Evaluation

The evaluation stage is the final stage of this research. Evaluation is obtained from the implementation stage, specifically through questionnaires for teacher responses and questionnaires for student responses regarding the learning media that has been made.

The results of the evaluation of the media's practicality, which include overall assessments from teachers and students, are very positive. The practicality test assessment by teachers at SD Negeri 19 Ambacang Anggang yielded a percentage of 91%, while SD Negeri 11, Tanjung Alai, achieved a percentage of 95% with a very practical category. As for the results of the students' practicality assessment at SD Negeri 19, Ambacang Anggang achieved a percentage of 96%, and SD Negeri 11 Tanjung Alai obtained a percentage of 97%, both in the very practical category.

According to the research findings mentioned earlier, the process of developing learning media with Smart Apps Creator for integrated thematic learning in Class V SD is consistent with the ADDIE model utilized in this study.

Learning media is a crucial tool for learning (Permendikbud, 2016). Learning media is a tool that teachers use to help pupils learn by conveying information to them (Audie, 2019). Learning media plays an important role in enhancing the quality of learning. According to Rahma and Arwin (2021), learning media play a crucial role in the teaching and learning processes. Without communication channels between good teachers and students, the learning process, which is fundamentally a communication activity, does not function optimally. As a result, selecting high-quality learning media is critical for having a substantial impact on the educational process.

Evaluation of learning media based on Smart Apps Creator for integrated thematic learning in fifth-grade elementary school can be utilized.

Learning media is considered appropriate for use if it fulfills valid criteria. Valid media, as stated by Fauda (2015), is defined as media that attains an assessment percentage ranging from 81.26% to 100.00% based on the outcomes of the media validity test, which includes material validation, language validation, and media validation; thus, the resulting learning media is regarded as suitable for application in this research.

The assessment of learning media using Smart Apps Creator for thematic learning is very good, as indicated by the results of the media validity test, which includes the validity assessments of material experts, linguists, and media experts. The material aspect validity test obtained a percentage score of 88.8% in the valid category. The validity test of the language aspect obtained a percentage score of 95% in the valid category. The media aspect validity test obtained a percentage score of 99% in the valid category. The percentage results based on material, language, and media validation obtained an average percentage of 94.2% in the valid category. The outcomes of the media practicality evaluation, which includes the overall assessment from both teachers and students, are very good. The practicality test assessment by teachers at SD Negeri 19 Ambacang Anggang yielded a percentage of 91%, while SD Negeri 11, Tanjung Alai, achieved a percentage of 95% with a very practical category. Regarding the results of the students' practical assessment at SD Negeri 19, Ambacang Anggang achieved a percentage of 96%. In comparison, SD N 11 Tanjung Alai obtained a percentage of 97%, both in the very practical category.

The results obtained from this study are learning media based on Smart Apps Creator, integrated with thematic learning in grade V elementary school, which have been developed to meet the criteria of validity and practicality. This study demonstrates that utilizing learning media developed with Smart Apps Creator has a positive influence on integrated thematic learning for fifth-grade students. In the learning process, using Smart Apps Creator can provide numerous benefits, including serving as a learning medium. There are animations. videos. and explanations that are easy to understand, making students excited and motivated to learn.

### CONCLUSION

The process of developing Smart Apps Creator-based learning media for integrated thematic learning in grade V runs well and meets the expectations of researchers. The first process of development is the creation of learning media using Smart Apps Creator. Then validation of material, language and media by each validator.

The creation of learning media using Smart Apps Creator for integrated thematic learning in fifth-grade elementary school, following the ADDIE model, has resulted in valid educational resources, and the validation outcomes from expert evaluators of the learning media evidence this. Material 88.8% with the category "Highly valid", linguists 95% with the category "Highly valid" and media experts 99% with the category "valid" so that the average level of validity of the learning media is 94,2% with the category "Highly valid". These results illustrate that the learning media developed is valid and can be used in learning. The development of learning media using Smart Apps Creator for integrated thematic education in grade V results in highly practical learning resources. This is evident from the feedback received from both teachers and students. The outcomes of the teacher's feedback indicated a practicality rate of 93% within the "very practical" category, while the students' feedback revealed a practicality rate of 96.5%. These findings illustrate that the developed learning media can assist in the classroom learning process.

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