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Development of Interactive Learning Media Based on Smart APP Creator on The Material of Building Self-Identity In Diversity to Improve the Learning Outcomes of Fourth Grade Elementary School Students

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ABSTRACT

This study aims to develop interactive learning media based on smart apps creator on the material of building identity in diversity to improve the learning outcomes of grade IV elementary school students. The research method uses Research and Development (RnD) with the 4D model (Define, Design, Develop, and Disseminate). This research was conducted at SDN 057224 Paluh Gusta with the subjects of grade IV elementary school students as many as 25 students. Data were collected through a validation questionnaire of material, media, and language experts to assess feasibility, then a practicality questionnaire assessed by teachers and tests that intend to expose student learning outcomes. The results showed the level of feasibility by material experts 90%, media experts 92%, and linguists 91%, with a classification of "Very Good". Practicality reached 93% with a classification of "Very Practical". Then, student learning outcomes increased significantly from pretest 65 to posttest 90 with the n-gain test reaching 0.714 with a classification of "Very High". So it is concluded that the interactive learning media based on smart apps creator on the material of building identity in diversity developed is feasible and valid and able to improve student learning outcomes.

Keywords*: *learning media, smart apps creator, diversity, learning outcomes

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INTRODUCTION

The development of science and technology has a major impact on education, changing the learning process, which now requires teachers to follow the changes (Salsabila et al., 2021; Maritsa et al., 2021; Mulyani & Haliza, 2021). The independent curriculum, based on existentialism, allows students to build an identity in diversity through an interest and talent approach (Mutia et al., 2022), enriching their understanding of appreciating differences and building an attitude of tolerance (Indarta, 2022). According to (Fallensky et al., 2021) through an independent curriculum based on existentialism, students can independently explore their potential by choosing subjects that focus on the arts and culture of various ethnic and religious groups. This helps expand knowledge of diversity, build a strong identity, and appreciate differences. (Nasution & Setiawan, 2020) emphasize learning materials to build identity in diversity; the hope is that students grow into tolerant, open individuals and interact well in a multicultural society. Education is considered an important means of forming individuals who are positive contributors to the development of a harmonious and sustainable society (Yaelasari & Astuti, 2022). In developing a harmonious and sustainable society, the utilization of technology in education has a crucial role.

The utilization of technology in learning can significantly improve student learning outcomes with certain materials. The use of multimedia, video, gamification, and interactive applications creates engaging learning, helping students understand abstract concepts. Visualization and hands-on experience actively engage students and increase their motivation. Thus, technology-based learning methods are not only fun but

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also effective for student development (Clarisa, 2023). In addition, Indah & Kasman (2021) also stated that to improve student learning outcomes, the role of the teacher is crucial. The teacher must be a facilitator who supports and encourages students to understand the material. With a variety of learning methods, learning style adjustments, and constructive feedback, teachers create a motivated and confident environment for students (Dewi & Fauziati, 2021).

Based on the results of observations conducted at SDN 057224 Paluh Gusta, This school is implementing the Merdeka curriculum and has supporting facilities to conduct research. In addition, classroom teachers at the school have a desire to innovate in the learning process. However, overall learning in this school is not optimal, especially in terms of test scores on the material on building identity through diversity at SD Negeri 057224 Paluh Gusta, which is still unsatisfactory. It appears that student learning outcomes have not yet reached the predetermined KKTP of 75. Out of 25 students, there are 19 (76%) with scores below the KKTP, which is an average of 65, while the remaining 6 students (24%) get an average score of 80. This achievement is not in line with the wishes that have been set by the school, so it is necessary to pay serious attention to this problem, one of which is using interactive learning media in the learning process.

Furthermore, the class teacher in civics learning said there were several problems when delivering the material, one of which was student boredom. The cause of the boredom is the lack of variety in delivering the material and the use of school facilities that have not been maximized. At SD Negeri 057224 Paluh Gusta, the use of Smart Apps Creator (SAC)-based learning media is still minimal in the teaching and learning process carried out by teachers. The methods used by teachers in this school tend to be monotonous and less varied, including the use of learning media. In addition, one of the obstacles faced in delivering material is student boredom.

The development of interactive learning media based on Smart Apps Creator (SAC) is very relevant in today's education. This media, with animation, audio, video, and interactive elements, not only improves the quality of learning in an interesting way but also overcomes the challenges of conventional learning, such as boredom and lack of student interest (Lestari et al., 2023; Valentina & Sujana, 2021; Sari et al., 2021). This opinion is in line with the views of Hidayat & Mulyawati (2022), Learning media makes a practical contribution, especially in the implementation of the learning process by teachers, because it can facilitate the delivery of material. Supported by Arnandi (2022) that learning media helps clarify meaning, improve understanding, and achieve learning objectives. With technology, students can learn through materials, videos, pictures, practicums, and multiple-choice exercises. Computers facilitate the presentation of interesting civic materials with illustrations, graphics, and animations. Some application software related to this is Adobe Flash Player, Macro Flash Player, Macro Flash MX, Macromedia Captivate, and Smart Apps Creator (SAC). One of these applications that can be used to create simulations or animations is Smart Apps Creator (SAC). This program allows the creation of various types of animations, presentations, games, and learning tools (Khasanah & Rusman, 2021; Massofia et al., 2023).

In media development planning, it must be able to create interesting and different products so that when implementing it with Smart Apps Creator (SAC), which is one of the computer software for designing animations (Fahri, 2022). According to Mahuda (2021), *Smart Apps Creator (SAC)* has many advantages in the learning process, including improving the teaching system, comfort, ease of teaching, and saving time. In the learning process using Smart Apps Creator (SAC), students not only imagine but can also directly see the concepts explained by the teacher (Apriyani & Ramdhan, 2022). By using this media, learning materials can be presented completely and interestingly, saving time, and animations in Smart Apps Creator (SAC) learning media will increase student interest and learning outcomes in grade 4 SD Negeri 057224 Paluh Gusta. Therefore, this study aims to develop interactive learning media based on smart app creators on the material of building identity in diversity that can improve the learning outcomes of fourth grade elementary school students in the independent curriculum.

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METHOD

This study is a research and development (RnD) study using the 4D development model (Define, Design, Develop, and Disseminate). The research was conducted at SDN 057224 Paluh Gusta with the subjects of grade IV elementary school students, as many as 25 students. Data were collected through questionnaires of material, media, and language experts aimed at assessing the feasibility of the products developed, then teacher assessment questionnaires aimed at assessing the practicality of the product, and finally student test sheets aimed at knowing student learning outcomes and product effectiveness. Then the data is analyzed through descriptive-quantitative analysis, which means describing or describing the results of the assessment and learning outcomes in order to determine the feasibility, practicality, and effectiveness of the product. To calculate the feasibility of the product, the following formula is used:

$$P = \frac{x}{xmak} x\ 100\%$$

Description:

P	:	percentage score
X	:	number obtained
Xmax	:	maximum score

After knowing the percentage of the product feasibility score, the results are converted to determine the feasibility classification using the following table:

Table 1. Percentage Scale of Feasibility of Learning Media

Percentage	Classification
85% ≤ P ≤ 100 %	Very Decent
75 %≤ P≤ 84 %	Feasible
65% ≤ P ≤ 74%	Less Feasible
55% ≤ P ≤ 64 %	Not Eligible
0% ≤ P ≤ 54 %	Very unfeasible

And then to determine the level of product practicality, the following formula is used:

$$RTP = \frac{\sum_{f=1}^{n} Aj}{nj}$$

Description:

RTP	:	Average total assessment
Aj	:	Assessment score of each indicator
nj	:	Number of indicators

Then, after knowing the percentage of the product's practicality value, the value is converted to determine the practicality classification using the following table:

Table 2. Criteria for Practicality

Level of Achievement	Practicality Classification
85 ≤ RTP ≤ 100	Very Practical
75 ≤ RTP ≤ 84	Practical
65 ≤ RTP ≤ 74	Fair
55 ≤ RTP ≤ 64	Moderately Practical

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0 ≤ RTP ≤ 54	Not Practical

And finally, to determine the effectiveness of the product based on the increase in student learning outcomes before and after using the product. As for calculating its effectiveness, the following formula is used:

$$g = \frac{posttest - pretes}{100 - pretes}$$

After knowing the gain value, it is then converted to the normalized gain classification as follows:

Table 3. Classification of Normalized Gain

Normalized coefficient	Classification
G<0,3	Low
0,3 ≤g<0,7	Medium
g≥0,7	Very High

RESULTS AND DISCUSSION

This study produces products such as interactive learning media based on smart app creators on the material of building identity in diversity to improve the learning outcomes of grade IV elementary school students with the 4D development model (Define, Design, Develop, and Disseminate) and its stages of defining, designing, developing, and disseminating.

The presentation of trial data explains the results of feasibility, practicality, and effectiveness of product development in the form of interactive learning media based on smart app creators on the material of building identity in diversity. The results of the validity of the development of interactive learning media based on smart app creators on the material of building identity in diversity include the assessment of material, media, and language experts to determine the level of product feasibility. Then, to find out the practicality of the product assessed by the teacher and test the product to determine its effectiveness with the following stages:

1) Definition

This stage determines and defines the requirements of the development, such as the basic needs of the development of interactive learning media based on smart app creators for grade IV students of SDN 057224 Paluh Gusta. Thus, several different analyses are needed in order to find out the basic problems, namely needs, environment or facilities, and learning. To analyze student needs, an instrument is used to find out the basic needs of students. At this stage, an observation was conducted in class IV of SDN 057224 Paluh Gusta, which was useful to get an overview of learning styles, cognitive levels, and what problems the teacher faced in class. In line with the results of observations, it is known that the average value of grade IV students is in learning Pancasila, especially the material on building identity through diversity. Then, interviews with teachers also provide an overview of the lack of low learning outcomes in Pancasila subjects due to students' lack of focus when learning, and the impact of their scores is not maximized or low compared to other subjects. In line with the results of the questionnaire, it is also known that students say that Pancasila lessons are still difficult when learning using print media and that they need other media, such as digital media.

2) Design

The design of interactive learning media based on smart app creators has a framework that must be designed, such as design concepts, media, and scripts. The target users are students aged 10 and over, and this smart app creator-based learning medium intends to advance education. When used by students, teachers can connect with laptops, computers, and other digital tools to use interactive learning media based on smart app creators in the classroom. The media concept is produced in the form of software by sharing links with users

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so that they can use the media anywhere and anytime. The shooting script is said to be the entire script in smart app creator-based interactive learning media, which includes a complete description of each material, music, sound effects, instructions, image and sound linkage, animation, and evaluation that are interlinked to facilitate the use of interactive learning media.

3) Develop

At this stage, there are several important processes, including the manufacturing process, implementation, and assessment and evaluation. In the production process of interactive learning media based on smart app creators, it produces products in the form of learning media that are entered into the software. The production stage itself has stages such as collecting materials or materials that will be included in interactive learning media. Then make a framework or arrangement of instructions for using learning media. The results of product development are as follows:

Figure 1. Initial display of interactive learning media

Figure 2. Menu display on interactive learning media

Figure 3. Material display on interactive learning media

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After the interactive learning media based on smart app creators is completed, the material of building identity in diversity is followed by product implementation, which intends to determine the feasibility, practicality, and effectiveness of the developed product. In implementing the product, product trials were conducted with material, media, and language experts to determine the feasibility level of the product. After that, it was tested on teachers to determine the level of practicality and on students to determine the effectiveness of the developed product.

Furthermore, interactive learning media based on smart app creators on the material of building identity in diversity was developed in the field trial on grade IV students of SDN 057224 Paluh Gusta. Before the interactive learning media based on smart app creators is implemented with students, a test is conducted, which is useful for knowing the initial value of students or measuring students' cognition of the material of building identity in diversity before using interactive learning media. The test used for the pretest is a question that has gone through selection in the form of validity, difficulty, and normality tests, for a total of 20 tests. Implementation of interactive learning media based on smart app creators on the material of building identity in diversity is carried out in one meeting with an allocation of 90 minutes.

Then, in the final stage, the assessment is useful to assess the feasibility of the product that has been made by testing material, media, and language experts. The product feasibility test intends to explain the level of product feasibility, then the practicality will be assessed by the teacher, and the effectiveness test intends to assess the level of product effectiveness. The results of data analysis from the development of interactive learning media based on smart app creators will be described in several stages, namely feasibility analysis, practicality, and effectiveness, as described in the following table:

Table 4. Product Feasibility Results

No	Expert	Percentage	Classification
1	Material	Very good	Very good
2	Media	Very good	Very good
3	Language	Very good	Very good
	Mean	91%	Very good

From table 4 above regarding the results of product feasibility, it is known that the material expert obtained a percentage of 90% classification of "very good." Then the expert obtained a percentage of 92% classification "very good," and finally the linguist obtained a percentage of 91% classification "very good." So that the average feasibility expert assessment is 91% classified as "very good," it is concluded that interactive learning media based on smart app creators is very feasible to use when learning. Furthermore, the teacher's assessment as a practitioner expert to determine the practicality of the product will be presented as follows:

Table 5. Product Practicality Results

No	Expert	Assessment	Classification
1	Teacher	93	Very Practical

From table 5 above regarding the results of product practicality, it is known that the teacher, as a practitioner, gave an assessment of 93 in the classification "Very Practical." So it is concluded that interactive learning media based on smart app creators is very practical to use while learning. In addition, the results of the feasibility and practicality of the expert will be illustrated in the following figure:

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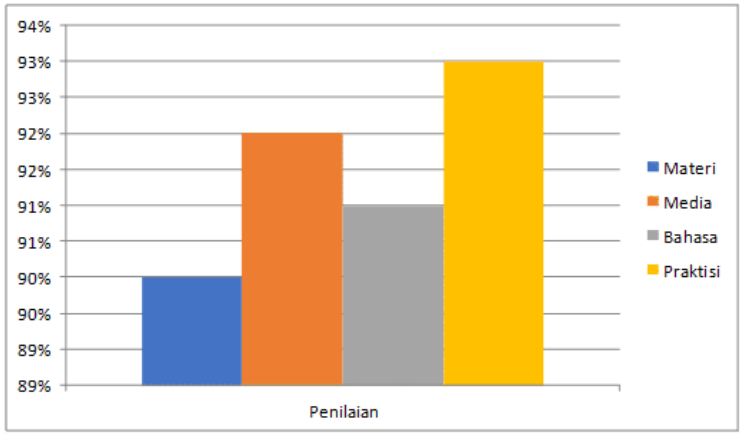

Figure 4. Results of Product Feasibility and Practicality

Then, in order to determine the effectiveness of interactive learning media based on smart apps, creators developed multiple-choice tests. Multiple-choice test questions are used to get data on learning outcomes before and after the application of interactive learning media based on smart app creators. In addition, it intends to determine the level of effectiveness of interactive learning media based on smart app creators in improving learning outcomes with the normalized gain test. The results are as follows:

$$g = \frac{posttest - \ pretes}{100 - pretes}$$

$$g = \frac{90 - 65}{100 - 65}$$

$$g = \frac{25}{35}$$

$$g = 0{,}714$$

Based on the results of calculations using the gain test, the value is 0.714 with a classification of "very high," so it is concluded that interactive learning media based on smart app creators has a "very high" level of effectiveness in improving the learning outcomes of IV students of SDN 057224 Paluh Gusta on the material of building identity in diversity. This is in line with the statement (Nurrita, 2018) that the use of technology-assisted learning media and appropriate learning models, by following the times, can be used by students in conducting active learning independently, thereby enriching insight and knowledge on academic performance in the form of student learning outcomes.

CONCLUSIONS AND RECOMMENDATION

Based on the results of the study and discussion of the development of interactive learning media based on smart app creators on the material of building identity in diversity for IV students of SDN 057224 Paluh Gusta, the material expert's 90% classification was "Very Good." Media experts 92% classification is "very good," and linguists 91% classification is "very good." So that the average obtained is 91% "very good," it is concluded that interactive learning media based on smart app creators is very feasible to use when learning. Then, the teacher, as a practitioner expert, gave a score of 93 in the "Very Practical" classification. So it is concluded that interactive learning media based on smart app creators is very practical to use when learning. And the average pretest results obtained were 65 and posttest 90, so that when the normalized gain test was carried out, a value of 0.714 was obtained with an effectiveness level of "very high," so it was concluded that interactive learning media based on smart app creators had a "very high" level of effectiveness in improving the learning outcomes of IV students of SDN 057224 Paluh Gusta on the material of building identity in diversity.

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