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Development of Android-Based Learning Media Using the CapCut Application in Integrated Thematic Learning in Grade IV Elementary School

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Abstract

This research is motivated by the limited use of interesting and easy-to-understand media that can stimulate students in learning. The purpose of this research is to determine the validity and practicality of media-based learning. Android using the CapCut. This type of research is development research (R&D) using a 4-D consisting of define, design, develop and disseminate. Given the limitations of space, time, and research costs, this research was only carried out until the develop. The subjects of this study were 3 experts and 1 fourth grade teacher and 14 fourth grade students at SDN 24 Parupuk Tabing, and 1 fourth grade teacher and 10 fourth grade students at SDN 09 Air Tawar Barat. The instruments used are expert validation sheets, teacher and student response questionnaires. The results of the study were stated to be very valid with the average value of material experts 96%, media experts 92.6% and linguists 95%. Based on the results of teacher and student responses at the research school, the percentage of the fourth grade teacher responses at SDN 24 Parupuk Tabing was 95% and the fourth grade teacher responses at SDN 09 Air Tawar Barat 90%. The percentage of student responses at SDN 24 Parupuk Tabing was 96% and student responses in grade IV at SDN 09 Air Tawar Barat were 93% and were stated to be very practical.

Keywords: Learning media, CapCut, 4-D Model.

Introduction

Advances in information and community technology (ICT) are one of the triggers that cause changes in the scope of education (Fakhruddin, M., Ananda, R., & Istiningsih, 2013). The era of the industrial revolution 4.0 is an era of change from an analog life system to a digital life system which is marked by the development of technology as the foundation of people's lives so that it has an impact on the education system (Rahmatina, et al 2019). In line with the opinion of (Y Ningsih et al, 2019) explaining "In the 21stcentury , there is no limitation on instructional model and done by the helping of technology information and communication. Indonesia education and instruction showed the significant development especially with the development of technology information system (IT)".

This poses new challenges in the era of the industrial revolution 4.0 which requires new innovations in the learning process in the classroom so that it demands a change from traditional learning systems to modern ones (Rahmatina et al, 2019). One form of application of Industry 4.0 is the use of robots to replace human labor so that it is cheaper, more effective, and efficient. Therefore, it triggers new challenges and opportunities to encourage innovation and creation in education (Ghufron, MA 2018). Thus, one of the efforts in the revolution that can be done in educational

programs is by improving the quality of teachers who have competitiveness in accordance with expectations and responsibilities.

The teacher is a major role in aspects of education and learning in schools. Teachers are facilitators for students to learn effectively and efficiently. Therefore, the teacher plays an important role in helping students to learn and the learning objectives are conveyed (Amin, 2017). With the development of the industrial revolution 4.0, teachers also have to reform or rearrange their learning by taking advantage of the results of the industrial 4.0 (Adnyana, PB, Citrawathi, DM, & Dewi, 2020). Agreed as explained by (Y Ningsih et al, 2019) technological developments in the field of science that encourage teachers to seek innovative use of technology in the learning process.

This is in line with the opinion of the National Education Technology Standards (NETS) (Sharon, Deborah, & James, & 2014) explains that an effective teacher means a teacher who can design, implement and shape a learning environment to improve student abilities. Teachers are also required to have standard skills or abilities such as (1) facilitating and inspiring students to learn creatively, (2) designing and distributing digital media for learning experiences and assessments, (3) and utilizing digital media in work and study. Thus, teachers should be able to take advantage of digital media in order to support the learning system. (Amelia, V., 2021).

The learning process cannot be separated from the media, methods, and learning outcomes. Media as a means of providing material presented by the teacher to students. Learning media are also part of learning resources with various types of media used so that they can help teachers add insight in providing knowledge to students (Nurrita, Teni, 2018). The use of the right media is able to convey information or messages conveyed by the messenger so that it can be clearly received by the recipient of the message. This is supported by Saputra (2018) explaining that the use of synchronous media in the learning process can help students understand learning so that students can be motivated and grow interest in learning (Divine, L. R. & Desyandri, 2020).

In creating a media, the manufacture of media should adapt to the needs and circumstances of students (Miranda & Muhammadi, 2021), because we are in the development of technology and students have also begun to blend in in its development, the teacher as a facilitator who also acts as a provider of learning media can also adjust media with the development of various technologies. One of the learning media updates by utilizing technological developments is learning videos.

Elementary school students are generally aged 7 to 12 years, they are in the concrete operational stage (Heruman, 2013). The ability that appears at this stage is the ability in the thought process to operate logical rules, even though they are still tied to concrete objects. The concrete object is captured by the five senses. According to Piaget (Yanti, 2018) every child has a stage of cognitive learning development starting from birth to adult children in grade IV, namely students who have an age range of 8-11 years. According to Wina (Lubis, JW, & Masniladevi, 2020) The thinking process of children aged 8-11 years has limited reasoning power and has not yet reached hypothetical or abstract reasoning.

Based on the results of observations and interviews conducted by researchers on September 28, 2021 at SDN 09 Air Tawar Barat and on October 29, 2021 at SDN 24 Parupuak Tabing. There is some information and some problems that the researchers obtained, namely the school has facilitated teachers with LCD projector and laptop facilities to support the learning process, but has not been fully utilized as a learning medium. However, classroom teachers still use the lecture method a lot in delivering learning materials, besides that, teachers also use pictures as learning media or use simple teaching aids/tools that are around the educator's environment (Dwijayani, 2019). This is because there are still limited teacher capabilities and several obstacles in using media that are developing in industry 4.0 so it is not always used in the learning process. One of the uses of learning media that has been used by several teachers in industrial development-based 4.0 that is like taking learning resources in the form of learning videos from YouTube so that in conveying the learning objectives there will be a slight difference with the learning objectives made by the teacher himself.

In the article (Miaz, Y. Gustina, Y Ningsih, & Helsa, 2020) and (Amelia, V., 2021) found several problems related to learning media, including (1) teachers still use conventional learning media such as cardboard and pictures, (2) delivery of messages and materials impressed unattractive and not varied, namely by way of lectures and instructing students to understand the material in student books, (3) teachers have not followed the development of science and technology in developing learning media, (3) teachers have limited ability in developing IT-based learning media.

Based on these problems, it is necessary to have new innovations in making learning media, one of which is media in the form of learning videos. (Rusman et al, 2015) The use of videos can make lessons more effective because they are open and have a wide reach (Amelia, V., 2021). As technology develops, making learning video media not only uses a laptop or computer but an Android or IOS can also be used in making media, one of which is the application provided by the Play Store or App Store for free, namely (Choirun, L., Nur, N., Arifah, YL, & Agustina, 2021) Explaining Capcut is an excellent video editing application, where we can add clips, cut clips, add music and stickers. This is supported by the opinion of (Dewi, 2021) explains that the CapCut application is an application that is used as an application for making learning videos where the use of the application is very easy and has features that can support to produce an interesting and more innovative learning video. Therefore, the making of learning video media needs new innovations in developing integrated thematic learning media according to the needs of students, therefore the researchers chose the Capcut application as a solution to the problems described above.

Method

The research to be carried out is a development research or known as Research and Development (R&D). According to Sugiyono (Desyandri & Dori Vernanda, 2017), the research method used to produce a particular product and test the effec (Setyosari, 2010), the purpose of implementing development research is to evaluate industrial revolutions that occurred over a period of time by using certain methods and observing a set of subjects for some time. In this case the author will develop a product in the form of a learning media based on the CapCut android application.

This research will be tested on a small scale in class IV in two schools, namely SDN 24 Parupuk Tabing which consists of 1 homeroom teacher for class IV and 12 students, and SDN 09 Air Tawar Barat consists of 1 homeroom teacher and 10 students. The development model that the researcher will use is the 4D model. According to Thiagarajan (Trianto, 2010) the stages in this development model are definition (define), design (resign), development (develop), and dissemination (disseminate). However, considering several things, the stages of developing learning media are simplified according to the needs and limitations of the study, so in this study the authors only arrived at the development stage.The instrument used is a validation sheet to see the validity of the media carried out by 3 validator experts and a practicality sheet in terms of teacher responses and student responses.

Result and Discussion

Validation data taken is validation data after revision of the learning media. The validity of the developed media can be analyzed using the Purwanto (2012) formula as follows:

$$NP = \frac{R}{SM} \; x \; 100\%$$

NP = Value percentage score
R = Total score given by respondents
SM = Maximum score
100 = Fixed number

Validity is carried out by 3 expert validators who are experts in their fields, namely media experts, linguists and material experts, the validity analysis can be seen in the following table:

a. Results of Data Analysis Validation of Media Experts

Validation is done by giving a questionnaire assessment of the design form presented in the media.media validation questionnaire contains 16 questions.

Table 1. Media Expert Validation Results

No.	Aspects studied	Assessment I	Assessment II
	II. Feasibility of Content		
1	Learning media refers to KI	4	4
2	Learning Media refers to Indonesian KD:	5	5
	3.7 Explores new knowledge contained in text 4.7 Delivers new knowledge from non-fiction texts into writing in their own language.	5	5
	Science: 3.3 identify various forces, including: muscle force, electric force, magnetic force, gravitational force, and frictional force	5	5
	4.3 Demonstrating the benefits of force in everyday life, for example muscle force, electric force, magnetic force , gravitational force, and frictional force.	5	5
3	The material in the learning media refers to the theme, sub-theme, and learning Theme: 7 (The Beauty of Diversity in My Country) Sub-Theme: 3 (The Beauty of Unity and Unity in My Country) Learning: 1	4	4
4	Learning media according to the needs of teaching materials fiction, three-dimensional art and the relationship of force to motion	4	4
5	The truth of the substance of learning materials	4	4
	III. Language		
6	Readability of the text	4	5
7	Use of reading effectively and efficiently (Clearly and concisely)	3	4
	IV. Presentation		
8	Clarity of purpose (indicator)	2	4
9	Order of systematic presentation	4	5
10	Learning media can provide motivation and attraction	4	5
11	Provide interaction (providing stimulus and response)	4	5
12	Provide information	4	5
	V. Graphics		
13	Use of fonts: Type and proportional writing size	2	5
14	*Lay Out* or good layout	2	4
15	Images and photos are clear	2	5
16	The display design is attractive and not monotonous	3	5
	Total Scores Obtained	70	88
	Total Maximum Score	95	95

From the data above it can be seen that the total value of the media validator after being revised and analyzed using the formula, the percentage obtained for media validation is 92.6% and is in the "very good" category so that it can be said to be valid and can be tested.

b. The results of the Analysis of the Validation of the Experts on the

Validation Material are carried out by providing an assessment sheet in the form of a questionnaire. The media validation questionnaire for material experts contains 10 questions. Material validation is carried out to see the suitability of the series of materials in the media that has been developed.

Table 2. Media Expert Validation Results

No	Aspects assessed	Assessment I	Assessment II
1	1. The material is relevant to the competencies that students must master	5	5
	2. The completeness of the material is in accordance with the level of student development	5	5
	3. The material is sufficient to meet the demands of the curriculum	4	5
	4. Illustration media according to the level of student development	4	5
2	The material presented is in accordance with the truth of the scientist	5	5
3	The material presented is in accordance with the latest developments	5	5
4	The material presented is in accordance with everyday life	5	4
5	The material in the learning media refers to the theme and learning	4	5
6	Learning media in accordance with the needs of teaching materials for fiction, three-dimensional art and the relationship of force to motion	5	5
7	Presenting the competencies that must be mastered	5	4
Total scores obtained		47	48
Total Score Maximum		50	50

From the data above, it can be seen that the total value of the material validator after being revised and analyzed using the formula is obtained the percentage for material validation is 96% and n is in the "very good" category so it can be said to be valid and can be tested.

c. Linguistic Expert Validation Results Validation

Validation linguistic are carried out by providing an assessment sheet in the form of a questionnaire. The language validation questionnaire for linguists contains 4 questions. Language validation is carried out for the suitability of the series of material in the media that has been developed.

Table 3 Validation Results of Linguists

No	Aspects assessed	Assessment I	Assessment II
1	The language term used is appropriate and in accordance with the characteristics of the fifth grade elementary school students	4	5
2	Vocabulary and language use is easy to understand in accordance with the flow of material	4	4
3	Use of polite language and in accordance with EYD	4	5
4	The language used is simple and easy to understand by fourth grade elementary school students	4	5
Total Score Obtained		**16**	**19**
Maximum Score		**20**	**20**

From the data above it can be seen that the total value of the material validator after being revised and analyzed using the formula is obtained a percentage for material validation is 95% and is in the "very good" category so that it can be said to be valid and can be tested.

The trial was conducted on a limited scale on fourth grade students at SDN 24 Parupuk Tabing with 1 teacher and 10 students, while at SDN 09 Air Tawar Barat there were 1 teacher and 12 students. This trial was conducted to obtain information about the practicality of learning media.

d. Practical Results of Student Responses

Table 4 Practical Results of Student Responses at SDN 24 Parupuk Tabing

No	Student Name	Obtained Question Score										Total Score
		1	2	3	4	5	6	7	8	9	10	
1	BMW	4	4	4	3	4	3	4	3	4	4	37
2	Aira	4	4	4	4	4	4	4	4	4	4	40
3	Risako Putri A.	4	4	4	4	4	4	3	4	4	4	39
4	Daffa Aryka	4	4	4	4	3	3	4	4	4	4	38
5	Septia Praya K	4	4	4	4	3	3	4	3	4	4	37
6	Nayla Septri A	4	4	4	4	4	3	4	4	4	4	39
7	Devon Kiano A	4	4	4	4	3	4	4	4	4	4	39
8	M. Abrar R	4	4	3	4	4	4	3	4	3	4	37
9	Willy Rey P	4	4	4	4	4	4	4	4	3	4	39
10	M. Zaki Alfarisi	4	4	3	4	4	4	3	4	4	4	38
11	Ihsan Nasriza	4	4	4	4	4	4	4	4	4	4	40
12	Ari Pramana	4	4	4	4	4	4	4	4	4	4	40
Total Score of All Respondents (R)												**463**
Maximum Number (SM)												**480**

From the final score of the practicality of the responses of fourth grade students at SDN 24 Parupuk Tabing, which is 96% above, it can be said to be "very practical" in the assessment category of (Riduwan & Sunarto, 2012) which is the first category with a percentage of 81-100% for that the results of the practicality of android-based learning media using the CapCu application t is otherwise practical to use.

Table 5. Practical Results of Student Responses at SDN 09 Air Tawar Barat

No.	Name of Students	Obtaining Question Score										Total Score
		1	2	3	4	5	6	7	8	9	10	
1	Maulana	4	4	4	3	4	3	3	4	4	4	37
2	Ezelyn Felysa	4	4	4	3	3	4	4	4	4	3	37
3	Ridwan Dwi S	4	3	4	4	4	4	4	3	3	4	37
4	Lindung Zatin	4	4	4	3	4	3	4	4	3	4	37
5	Shifa Dwi W	3	3	4	4	4	3	4	3	4	4	36
6	Safara	4	4	4	4	4	4	4	4	3	4	39
7	Azkhia Claudia	4	4	4	3	4	3	4	3	4	4	37
8	Ardiansyah	4	3	3	3	4	4	4	3	4	4	36
9	Dwipa Pangestu	4	4	4	4	3	3	4	3	3	4	36
10	Rehan	4	4	4	4	4	4	4	4	4	4	40
Total Score of All Respondents (R)												372
Maximum Number (SM)												400

From the final value of the practicality of the responses of fourth grade students at SDN 09 Air Tawar Barat, which is 93% above, it can be said "very practical" in the assessment category of (Riduwan & Sunarto, 2012) which is the first category with a percentage of 81-100% for that the results of the practicality of android-based learning media using the CapCut application are declared practical to use.

e. Results Practicality Teacher's Response

Table 6 Results Practicality Teacher's Response to SDN 24 Parupuk Tabing and SDN 09 Air Tawar Barat

No	Assessed Aspect	Class IV Teacher Assessment	
		SDN 24 Parupuk Tabing	SDN 09 West Freshwater
1	Language used in learning according to EYD	4	4
2	Presentation sentence understood by the teacher	4	4
3	Learning media make it easier for teachers to teach Theory pda student	3	4
4	Placement illustration right picture in accordance with order Theory	4	4
5	Learning media make it easier for teachers to interesting interest student in learning	4	3
6	Picture in learning media make it easier for teachers to help student understand Theory	4	4
7	Picture in learning media materials make it easier for teachers to help participant educate in understand Theory	4	4
8	Learning media used contain planting easy value entered into the self	4	3

	participant educate		
9	Learning media could increase emotional student	3	3
10	Presentation Theory in learning media make participant educate motivated	4	3
Amount Score given _ Respondent (R)		38	36
Amount Score Maximum (SM)		40	40

From value end practicality SDN 24 Parupuk teacher response Tabing i.e. 95% and the teacher's response at SDN 09 Air Tawar Barat is 90% above could said " very " practical " on category evaluation (Riduwan & Sunarto, 2012) namely category first with percentage 81-100% for that results practicality of learning media android based using application CapCut declared practical used

Conclusion

Learning media developed in accordance with curriculum guidance, indicators on learning media were formulated to determine the material presented in accordance with student development. Learning media is also designed with attractive colors so that it can motivate students to take part in learning well.

The validity of the learning media based on the CapCut application was carried out by 3 validator experts so that an average of 92.6% validity results were obtained by media experts, 96% by material experts and 95% by linguists with the three categories classified as valid. It is said that the learning media developed is valid and can be used in learning.

Practicality is carried out by the teacher, namely SDN 24 Parupuk Tabing with a level of practicality of learning media 95% categorized as very practical while at SDN 09 Air Tawar Barat 90% with a very practical category. The results of the student response questionnaire in both schools, namely SDN 24 Parupuk Tabing, were 96%, while the student response questionnaire at SDN 09 Air Tawar Barat was 93% with a very practical category. With that, making learning media using the CapCut application really helps students in the learning process.

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