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Development of Contextual Teaching and Learning Based on Flash Card Media in Grade IV Elementary School Science Learning

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Abstract

This research aims to develop a product in the form of Flash Card learning media based on Contextual Teaching and Learning in the science subject of grade IV students that meets the criteria of valid, practical, and also effective. This research uses a research and development (R&D) approach with the ADDIE model which consists of five stages including the analysis, design, development, implementation, and evaluation stages. The product design process is done with the help of the Canva application which is customized based on the Learning Outcomes and Learning Objectives Flow of the Independent Curriculum. This design stage includes three main activities, including the preparation of benchmark reference tests, media selection, and design selection. The results of this study are based on the results of validation tests conducted by 3 validators using Aiken's V calculations, showing the assessment of language validators of 0.93, media validators of 0.81, and material validators of 0.96, with a very valid category. As for the trial assessment of the practicality sheets of teachers and students, it was found that the Flash Card learning media based on Contextual Teaching and Learning has very practical criteria with an average score of 94.58%. Then for the effectiveness assessment trial involving 22 students in Class IV of SD Negeri 2 Rantau Bingin, an average N-Gain of 0.74 was obtained with a high category. Thus, it can be concluded that the data from the results show that Contextual Teaching and Learning-Based Flash Card learning media is very feasible and very practical to be used in the learning process of IPAS students in grade IV elementary school.

Keywords CTL, Development, Flash Card, IPAS.

INTRODUCTION

Education in general is the process of developing human potential through learning, teaching, and experiential activities. Education functions as the main pillar in shaping the lives of human beings who are knowledgeable, characterful, and able to adapt to the times. The

educational process is a deliberate and planned effort to create a learning environment that encourages students to develop optimally, both from cognitive, affective, and psychomotor aspects (Rahman et al, 2022:2). In order for educational goals to be achieved optimally, a learning process that is systematically designed and adjusted to the needs of students is needed.

Learning is an important part of the educational process that serves to facilitate students in acquiring knowledge, skills, and attitudes through targeted interaction between teachers and students. Learning does not only focus on delivering material, but also includes efforts to organize and organize the learning environment in order to foster motivation and encourage students to be active in the learning process. In its implementation, teachers need to adjust learning strategies to the abilities and needs of diverse students, so that the learning process can take place effectively and meaningfully (Pane & Darwis, 2017:5). In order for the learning process to be more meaningful, learning activities should be able to connect knowledge with the real experience of students. One of the applications of such learning is found in science learning.

Science learning in elementary school is a learning that is designed to help students understand the relationship between science and social sciences, which includes the study of nature, technology, environment, geography, history, and culture. The material in the science subject contains abstract and theoretical concepts, thus requiring teachers to use learning methods so that students can more easily understand the material presented. The application of the right learning method needs to be supported by the appearance of ideal learning media. Such as media that can help students relate the subject matter to their real-life experiences (Suhelayanti, et al., 2023:4).

Based on the results of observations conducted by the researcher with teachers and students on September 28, 2025 at Sekolah Elementary Negeri 2 Rantau Bingin together with grade IV teachers, researchers found that the use of learning media is limited so that learning activities tend to be monotonous and less attractive to students. Teachers are still dominant in using the lecture method, rarely reflect at the end of learning, and lack the use of creative and contextual media. This condition has an impact on low motivation to learn and active participation of students in learning activities. Students here tend to feel bored and bored during the learning process.

The results of interviews and questionnaires conducted by researchers with grade IV teachers, teachers revealed that one of the subjects that is considered the most difficult for students is IPAS because of many abstract terms and concepts that are difficult to understand. In addition, teachers also face problems such as lack of student focus, low motivation to learn, and students' difficulties in understanding theoretical material. In the learning process, teachers generally use lectures, questions and answers, and group discussions, but they are not optimal in relating the material to the context of daily life. The learning media used is still limited to package books, whiteboards, and simple pictures, so students are less interested and quickly get bored. Teachers hope that there will be new learning media that are more interesting, practical, and contextual to help students understand the material easily and fun.

To overcome the problems found, there is a need for media that can support IPAS learning. The solution that can be proposed is to use the media Flash Card based Contextual Teaching and Learning. According to Budiyanto & Hotimah (2022:49) Flash Card It is a form of educational media in the form of cards that contain pictures and words whose size can be adjusted to the students they are facing and to get them can make their own or use ready-made ones.

This is in line with research conducted by Hayati, et al. (2021:197) with the purpose of this research for media development Flash Card in the subject of IPAS Subject on Ethnic Diversity and Indonesian Culture for grade IV students at SDN Pucangsari II, Purwodadi District, Pasuruan Regency. This research uses a research and development (R&D) approach with the ADDIE model. Data were collected using observation and questionnaires. The questionnaire consisted of media validation questionnaires, material validation, student responses, and teacher responses. The data analysis techniques used are qualitative and quantitative data. Media eligibility Flash Card measured based on the results of media validation assessments and material validation carried out at the development stage. Meanwhile, the practicality of Learning media Flash Card measured based on the results of student responses and teacher responses carried out at the implementation stage. The validation results obtained a percentage of 90% for language validation, a media percentage of 86.67% for media validation, and a percentage of 92% for material validation.

Based on the results of the description that has been explained, a media is needed to overcome the existing problems. The researcher will develop learning media in the form of "Development of Contextual Teaching and Learning Based Flash Card Media in Social Science Learning Class IV SD Negeri 2 Rantau Bingin".

METHODS

The type of research carried out is research and development or often known as research and development. The development model is used as a framework for developing a product that is produced. The various stages contained in the development model are guidelines that function in perfecting products, be it learning media, teaching materials, or other products. There are many development models for this type of research and development, and the ADDIE model is one that can be used.

ADDIE's development model is a model for the development of a learning medium. ADDIE's development model consists of five stages, namely analysis, design, development, implementation, and evaluation. These steps help in structuring, building, and evaluating learning media in a systematic manner.

The ADDIE development model was chosen in this study because of its systematic framework with logically structured steps ranging from analysis to evaluation. This helps ensure that every stage of the learning media development process is detailed and carefully prepared. This is in line with the idea Hamzah (2019:33) The development of the ADDIE model is a sequential development process, that is, the results of each stage of evaluation can

be used for the development of the next stage. The cycle process that is carried out develops from time to time and is continuous from the entire learning planning and implementation process.

The data planning technique for this study uses observation, interviews, questionnaires, tests, and documentation to collect data. Meanwhile, the analysis techniques used are 1) Analysis of the Validity of Flash Card Media; 20 Analysis of the Practicality of Flash Card Media; 3) Analysis of the Effectiveness of Flash Card Media.

FINDINGS AND DISCUSSION

In this study, the presentation of trial data was carried out by validating the developed product. Validation was carried out by three experts, namely linguists, material experts, and media experts. After the validation process is carried out, then a trial process is carried out on one grade IV teacher of SD Negeri 2 Rantau Bingin, a one-to-one trial, a small group trial, and a large group trial on all grade IV students of SD Negeri 2 Rantau Bingin.

Validation Test Results

Contextual Teaching and Learning-based Flash Card learning media has been tested for language, media and material validation by several experts who have the authority to describe the values, suggestions, comments and inputs on Contextual Teaching and Learning-based Flash Card learning media.

Table 1. Material Validation Assessment Analysis

Assessment Aspects	Assessment Indicators	Many Items	Rata-Rata Shoes Aiken's V	Aiken 's Coefficient Criteria V
Quality of content and purpose	Material suitability	4	0,93	Height
	Material accuracy	3	1	Height
	Material updates	1	1	Height
	Encourages curiosity	2	0,87	Height
	Presentation technique	2	1	Height
	Presentation support	1	1	Height
	Total Average (V)		**0,96**	**Height**

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Based on table 1 above, the value of V = 0.96 is obtained which is included in the "High" category so that it can be said to be valid. After obtaining the results of language validation, the author re-evaluates before proceeding to the next stage by following the suggestions given by the validator to tidy up the arrangement of the material, so that the delivery of material to students is coherent and structured.

Flash Card learning media based on Contextual Teaching and Learning is considered valid for use in learning with assessment results from language validators of 0.93, media validators of 0.81, and material validators of 0.96. These three assessments show that the

media meets the validity criteria in terms of language, media, and materials so that it is suitable for use in learning.

Results of Teacher and Student Practicality Tests

a. Results of Teacher Practicality Tests

The teacher practicality test was carried out by Mrs. Enti Sumarni, S.Pd, as a grade IV teacher of SD Negeri 2 Rantau Bingin. The trial was carried out by giving a score on the teacher's practicality questionnaire which consisted of 16 assessment items starting from positive statements and negative statements. Teachers are also asked to provide criticism and suggestions on the products developed. The following are the results of the teacher's response which can be seen in tables 2 and 3 below.

Table 2. Results of the Teacher Practicality Trial Assessment

Assessment Indicators	Score	Clasification
Clarity of learning outcomes	5	Very Practical
Accuracy of the description of learning outcomes in the flow of learning objectives	5	Very Practical
Suitability of learning objectives	5	Very Practical
Suitability of learning objectives with the level of development of students	5	Very Practical
Suitability of the content of the material with the media	4	Practical
Design attractiveness	5	Very Practical
The attractiveness of the image	5	Very Practical
The Precision of the Color Combination	4	Practical
Practicality of material presentation	5	Very Practical
Linkage of image presentation and concept	5	Very Practical
Accuracy of the material with learning	5	Very Practical
Suitability of the media with the material	4	Practical
Ease of learning using media	5	Very Practical
Ease of reading and comprehension of writing	5	Very Practical
Clarity of sentence structure	5	Very Practical
Language suitability with the level of development of students	5	Very Practical
Quantity	**77**	

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b. Results of One to One Trial

The one-to-one trial was carried out on 3 students with heterogeneous abilities, namely high, medium, and low. The following results of the one to one evaluation trial can be seen in the following table 4.15.

Table 3. Results of One to One Practicality Trial Assessment

No	Students	Total Scores Obtained	Maximum Score Amount	Level of Practicality	Clasification
1	S-1	12	12	100%	Very Practical
2	S-2	11	12	91,67%	Very Practical
3	S-3	10	12	83,33%	Very Practical
Quantity		33	**36**	**275%**	
		Average		**91,66%**	**Very Practical**

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Based on table 3 above, it can be seen that the average student response in the individual trial is 91.66% which is included in the very practical category.

c. Small Group Trial Results

The small group trial was carried out by 6 students with various abilities, namely high, medium, and low. The results of the students' responses can be seen in table 4 below.

Table 4. Results of Small Group Practicality Trial Assessment

No	Students	Total Scores Obtained	Maximum Score Amount	Level of Practicality	Clasification
1	S-1	12	12	100%	Very Practical
2	S-2	12	12	100%	Very Practical
3	S-3	11	12	91,67%	Very Practical
4	S-4	11	12	91,67%	Very Practical
5	S-5	10	12	83,33%	Very Practical
6	S-6	10	12	83,33%	Very Practical
Quantity		**66**	**72**	**550%**	
		Average		**91,66%**	**Very Practical**

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Based on table 4 above, it can be seen that the average response of small group trials, which is 91.66%, which is included in the category of very practical.

d. Recapitulation of Teacher and Student Practicality Test Results

The overall results of the practical assessment of Contextual Teaching and Learning-based Flash Card learning media provided by teachers and students can be seen in table 5 below.

Table 5. Recapitulation of Practicality Trial Assessment

No	Appraiser	Total Score	Total Scores obtained	Presentase	Category
1	Enti Sumarni, S.Pd	80	77	96,25%	Very Practical

No	Appraiser	Total Score	Total Scores obtained	Presentase	Category
2	3 students of Grade IV SD Negeri 2 Rantau Bingin	36	33	91,66%	Very Practical
3	6 Grade IV Students of SD Negeri 2 Rantau Bingin	72	66	91,66%	Very Practical
	Average			**94,58%**	Very Practical

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Contextual Teaching and Learning-based Flash Card learning media is considered practical to be used in learning with the results of the teacher's practicality test percentage of 96.25%, the One to One practicality test of 91.66%, and the small group practicality test of 91.66% with an average score of 94.58% of the practicality test, so it can be concluded that the Flash Card learning media is based onThe Contextual Teaching and Learning meets the criteria of practicality and is suitable for use in learning.

Results of Large Group Trials

The assessment of the large group trial involved 22 grade IV students of SD Negeri 2 Rantau Bingin. Flash Card learning media based on Contextual Teaching and Learning is applied to learning and then pretest and posttest activities are carried out. The results of the pretest and posttest were then calculated using the N-Gain (g) formula. Then the N-Gain (g) results were classified to determine the level of effectiveness of the pretest and posttest result data. The effectiveness analysis using the N-Gain formula (g) provides a clearer picture of the extent to which the Flash Card learning media based on Contextual Teaching and Learning developed is effective in improving student learning outcomes. The results of the effectiveness trial can be seen in table 6 below.

Table 6. Recapitulation of Pretest and Posttest Results of Effectiveness Trials

NO	Students	Pretest Scores	Nilai Posttest
1	S-1	45	85
2	S-2	60	100
3	S-3	50	85
4	S-4	55	95
5	S-5	45	90
6	S-6	45	85
7	S-7	70	100
8	S-8	50	85
9	S-9	45	90
10	S-10	40	80

11	S-11	50	95
12	S-12	45	85
13	S-13	40	80
14	S-14	45	90
15	S-15	60	100
16	S-16	40	80
17	S-17	45	86
18	S-18	25	55
19	S-19	35	80
20	S-20	45	85
21	S-21	50	90
22	S-22	40	80
Quantity		**1025**	**1901**
Average		**46,59**	**86,41**
N-Gain Score		**0,74**	
Criteria		**Height**	

Flash Card learning media based on Contextual Teaching and Learning is considered effective to be used in the learning process with a pretest score of 1025 with an average of 46.59 and a posttest score of 1901 with an average of 86.41 so that the N-Gain value from the effectiveness test of 0.74 can be known, in this case the Flash Card learning media Based on Contextual Teaching and learning, it shows that the media is effective in improving the learning outcomes of grade IV students of SD Negeri 2 Rantau Bingin.

Data Analysis Results

The results of data analysis from this study are a description of the results of data analysis conducted to test the validity, practicality, and effectiveness of the Contextual Teaching and Learning Based Flash Card learning media developed by the author. The results are presented as follows:

Validation Trial Analysis

a. Linguist

The validation trial was carried out by one of the lecturers at PGRI Silampari University, Mrs. Dr. Indah Puspita Sari, M.Pd The results of the calculation based on the questionnaire that had been filled out and calculated using the Aiken's V formula with a total of 13 statements were assessed so that a V of 0.93 was obtained with a high classification or can be said to be very valid. Linguists provide comments and suggestions on punctuation and commas.

b. Media Member

The media validation trial was conducted by one of the lecturers at PGRI Silampari University, Mr. Dr. Dodik Mulyono, M.Pd. The results of the calculation based on the questionnaire that had been filled out and calculated using the Aiken's V formula with a

total of 18 statements were assessed so that a V value of 0.81 was obtained with a fairly high classification or can be said to be valid. Media experts provide comments and suggestions on media usage instructions, materials must be adapted to the surrounding environment and make a media box.

c. Material Expert

The material validation test was carried out by the fourth grade teacher of SD Negeri 2 Rantau Bingin, namely Mrs. Enti Sumarni, S.Pd. The results of the calculation based on the questionnaire that had been filled out and calculated using the Aiken's V formula with a total of 13 statements were assessed so that a V value of 0.96 was obtained with a high classification or can be said to be very valid.

d. Validator Assessment Analysis

Based on the overall validation assessment given by 3 experts, namely linguists, media, and material experts described above, it shows that the Contextual Teaching and Learning Based Flash Card learning media that has been compiled and developed and produced obtained a language validator score of 0.93, media validator of 0.81, and material validator of 0.96 which is adjusted to the Aiken's V validity interpretation table included in the range of $0.60 \leq v \geq 0.80$ with a valid classification, thus it can be concluded that Contextual Teaching and Learning-Based Flash Card learning media is valid for use in the learning process.

Practicality Test Analysis

a. Teacher Practicality Test

The teacher practicality test was carried out on January 21, 2026 by a grade IV teacher of SD Negeri 2 Rantau Bingunya , namely Mrs. Enti Sumarni, S.Pd. The trial was carried out by giving a score on the teacher's practicality questionnaire consisting of 16 questions and providing criticism and suggestions on the developed product. The percentage obtained is 96.25% which is included in the classification is very practical.

b. Individual Practicality Tests (One to One)

The one-to-one trial was carried out by involving 3 students on January 21, 2026 with heterogeneous ability levels, namely high, medium, and low. In the one-to-one trial, the author explained how to use Contextual Teaching and Learning-Based Flash Card learning media, then students were asked to assess the developed media. The assessment was carried out by students filling out a student response questionnaire containing 12 questions, the percentage obtained of 91.66% was included in the very practical classification.

c. Small Group Practicality Trials

The small group practical test was carried out by 6 fourth grade students of SD Negeri 2 Rantau Bingin. The test subjects consisted of students with heterogeneous abilities, namely 2 high-ability students, 2 moderate-capable students, and 2 low-ability students. The trial data collection was carried out on January 22, 2026 by explaining how to use Contextual Teaching and Learning-Based Flash Card learning media, then students were asked to assess the developed media. Data collection using a student response

questionnaire containing 12 questions, the percentage obtained was 91.66% included in the very practical classification.

d. Practicality Assessment Analysis

Based on the assessment of practicality that has been tested by teachers and students on the media described above, it shows that the Flash Card learning media based on Contextual Teaching and Learning that has been compiled and developed obtained an average score of 94.58% with very practical criteria. Therefore, based on the recapitulation of the teacher's response questionnaire, one to one evaluation, and small groups, it can be concluded that Flash Card learning media based on Contextual Teaching and Learning can be stated to be very practical to be used in the learning process.

Effectiveness Trial Analysis

The effectiveness test was carried out with 22 subjects of grade IV students of SD Negeri 2 Rantau Bingin. To determine the effectiveness of the use of Flash Card learning media based on Contextual Teaching and Learning, pretest questions were given before using learning media and posttest questions were given after using learning media. Based on data analysis, it can be explained that before conducting learning using learning media, an average pretest score was obtained, which was 46.59. In the pretest activity , many students have not completed answering 20 questions with different scores/scores. After conducting the pretest, students are given treatment using Flash Card learning media based on Contextual Teaching and Learning so that students become active and enthusiastic to learn in groups supported by attractive visuals. Then after learning to use the media, students return to work on posttest questions with the same questions as the pretest. The average score of students during the posttest obtained an average result of 86.40. It is known that the N-Gain value of the average Pretest and Posttest is 0.74 with a high classification. Therefore, based on the recapitulation of the N-Gain value from the average pretest and posttest and supported by relevant research, it can be concluded that Flash Card learning media based on Contextual Teaching and Learning can be declared effective to be used in the learning process.

Final Product Revision

This development research resulted in a final product that has been revised according to suggestions and inputs by a validator team consisting of three experts, namely linguists, materials, and media experts. The following are inputs and improvements or revisions to Flash Card learning media based on Contextual Teaching and Learning from each expert.

1. Linguist

Linguists validate the appropriate language components used in Contextual Teaching and Learning-based Flash Card media that are EYD-compliant. Linguists provide an assessment of the use of language in learning media and are adjusted to the correct rules according to their knowledge. In addition to providing an assessment of Flash Card learning media based on Contextual Teaching and Learning, linguists also provide advice and input on the media. Linguists give advice on punctuation. So that this Contextual Teaching and

Learning-based Flash Card learning media can be perfected by paying attention to the linguistic aspects provided by linguists to increase the validity of the media.

2. Media Member

Media experts provide assessments and provide suggestions to improve the Flash Card learning media based on Contextual Teaching and Learning that has been developed. The advice given by media experts is that the manual for the use of media must be explained in detail at each stage and the flow of use must be systematic.

3. Material Expert

Material experts provide assessments and provide suggestions to improve the Flash Card learning media based on Contextual Teaching and Learning that has been developed. Material experts suggest tidying up the arrangement of the material, so that the delivery of material to students is coherent and structured.

This research develops learning media in the form of Flash Cards based on Contextual Teaching and Learning with the aim of being able to help students and teachers in the learning process so that they can create an active and fun learning environment and help students think critically. This media was created using the help of the Canva application by paying attention to and following the material contained in the teacher's book and student book which is adjusted to CP and ATP so that this media can be arranged properly. The results obtained in the trial showed the results of the validity analysis of Flash Card learning media based on Contextual Teaching and Learning using Aiken's V showed the assessment of the language validator of 0.93, the media validator of 0.81, and the material validator of 0.96. The analysis of the assessment of the practicality sheets of teachers and students obtained that the Flash Card learning media based on Contextual Teaching and Learning has very practical criteria with an average score of 94.58%. Then the analysis of the effectiveness assessment obtained an average N-Gain of 0.74 with a high category. The number of students who obtained the complete category in the effective assessment amounted to 21 people, this is due to the impact of significant changes in the learning media provided that are interesting, creative, innovative, and fun so that it makes it easier for students to better understand the material in the learning process. In addition, there is also 1 student who obtained the category of incomplete in the effective assessment, this is due to a disturbance in the learning process which can be called a slow learner. Slow learner itself is a condition of students who have underdevelopment in every subject, limited achievement, do not stand out and are different from students of their age because they are always slow in learning whatever they teach. Slow learners are also classified as students who are unable to learn but cannot be overcome with academic methods as given to other students, students who experience slow learners take longer and sometimes the lessons given have to adjust to the student's condition (Ridha, 2021:2).

In line with research conducted by Hayati, et al. (2021:197) with the purpose of this research for media development Flash Card in the subject of IPAS Subject on Ethnic Diversity and Indonesian Culture for grade IV students at SDN Pucangsari II, Purwodadi District, Pasuruan Regency. This research uses a research and development (R&D) approach with the ADDIE model. Data were collected using observation and questionnaires. The questionnaire

consisted of media validation questionnaires, material validation, student responses, and teacher responses. The data analysis techniques used are qualitative and quantitative data. Media eligibility Flash Card measured based on the results of media validation assessments and material validation carried out at the development stage. Meanwhile, the practicality of Learning media Flash Card measured based on the results of student responses and teacher responses carried out at the implementation stage. The validation results obtained a percentage of 86.67% for media validation with a very valid category, and a percentage of 92% for material validation with a very valid category. The results of the small group trial obtained a percentage of 90.13%, the response of large group students obtained a percentage of 88%, and the response of teachers obtained a percentage of 90% with the category of very practical.

Thus, it can be concluded that based on the results of the research and supported by relevant research, Flash Card learning media based on Contextual Teaching and Learning can be declared valid, practical, and effective.

CONCLUSION

Based on the results of the research on the development of Flash Card learning media based on Contextual Teaching and Learning in the science subject of fourth grade students of SD Negeri 2 Rantau Bingin, it can be concluded as follows: 1) Flash Card learning media based on Contextual Teaching and Learning is designed through research and development methods or often known as research and development by applying the ADDIE development model at the design stage. The product design process is done with the help of the Canva application which is customized based on the Learning Outcomes and Learning Objectives Flow of the Independent Curriculum. This design stage includes three main activities, including the preparation of benchmark reference tests, media selection, and design selection. Thus, it can be concluded that the design of Flash Card learning media based on Contextual Teaching and Learning has been designed in a systematic, structured, and conceptual manner as a foundation to be implemented in the next stage of product development. 2) Validity of Flash Card learning media based on Contextual Teaching and Learning which was developed based on the results of the assessment of questionnaire sheets that had been filled out by linguists, materials, and media experts that the product was in the "High" category. The language validation test shows that factors such as sentence structure, ability to motivate learners, and consistency of term use in determining language validity. The design of Flash Cards based on Contextual Teaching and Learning is considered very good because it is easy to understand, while the suitability of the material and presentation techniques that support students' skills are also important in the validity of the material. So, it can be concluded that Flash Card learning media based on Contextual Teaching and Learning can be used in the learning process. 3) The practicality of Flash Card learning media based on Contextual Teaching and Learning which is obtained based on the results of filling out questionnaires from the results of small group trials and teacher practicality trials obtained a level of practicality with the criteria "Very Practical". This can be seen from the indicators of ease of learning using media and the ease of reading and understanding writing as factors for media

practicality. So, it can be concluded that the Flash Card learning media based on Contextual Teaching and Learning that was developed was declared practical and can be used in the learning process. 4) The effectiveness of the Flash Card learning media based on Contextual Teaching and Learning that was developed was obtained based on the results of filling out the pretest and posttest sheets the level of effectiveness was obtained with a classification of "High". The significant increase between pretest and posttest scores shows that the use of Contextual Teaching and Learning-based Flash Card learning media is effective in improving students' understanding and mastery of the material. So, it can be concluded that Flash Card learning media based on Contextual Teaching and Learning is declared feasible and can be used in the learning process.

As for suggestions for other researchers who develop Flash Card learning media based on Contextual Teaching and Learning, they can add more teaching materials in addition to the rich material of my country in science subjects. So, that the media can be more comprehensive and meet the needs of wider learning in various other subject areas.

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