

Development of Nature and Job Cards Character Charged Media to Improve Understanding of Natural Appearance Material Grade V Elementary School

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Abstract. Indonesia is experiencing moral decadence that can be seen from various aspects, so the cultivation of character education needs to be improved. The cultivation of character values can be instilled through learning media that are integrated with natural and artificial appearance materials and types of work. This study aims to produce valid and effective nature and job cards character-charged media to improve understanding of natural appearance in grade V elementary school. This type of research is research and development (R&D) with the ADDIE model (analyze, design, development, implementation, evaluation). Data collection techniques in this study are observation, questionnaires, test and documentation. The data analysis techniques carried out are normality test, N-gain test and hypothesis test. The results of this study obtained the validity of getting a percentage of 98.08% by material experts and 96.25% from media experts with very valid and the effectivity of media nature and job cards character charged can be seen from the results of pretests and posttests of students with the N-Gain score obtained was 0.78 with effective criteria, and the results of the t-test showed that $t_{count} (16.401) > t_{table} (2.036)$. Based on the results of the research obtained, it can be concluded that the of nature and job cards character charged media to improve the understanding of the material of the appearance of nature in grade V elementary school has been valid and effectively used in learning.

Key words: Media Cards, N&J Cards, Natural Appearance, Character Education

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INTRODUCTION

Character education is expected to shape the morals of the nation's children and become the main foundation to improve the dignity of the nation to be in accordance with one of the goals of Indonesian education, namely preparing students to become good citizens and character. To realize these values, it is necessary to implement character education which is developed through learning activities that are carried out in a planned and programmatic manner so that character values that have been embedded in children can be carried out continuously and become a cultural thing (Watson, 2016).

Schools as one of the environments in educational institutions must familiarize students with being able to apply the character values to be formed (Martsel, 2020). With the current moral decadence can be seen from various aspects and the attitude of student concern for the environment is getting less and less, so Dewi (2021) mentioned that character education and social skills formation should start from early childhood education to higher education. So that character education is always ingrained in man.

Social studies learning provides knowledge

to students about knowledge that includes four competencies in the 2013 curriculum objectives which are closely related to social life (Zevin, 2018). In class V social studies learning, there is material about natural and artificial appearance. The material aims to allow students to know and recognize the appearance of nature and artificial as well as work according to the place of residence in Indonesia. A medium is needed so that students can clarify the picture of the real situation and can increase understanding of natural and artificial material (Babay & Akrom, 2019).

In line with the 2013 curriculum, learning is instilled with character values that are in accordance with the material presented. Character education can be interpreted as a conscious and planned effort in internalizing character values so that the character can be understood, lived and implemented in everyday life by students (Putry, 2018). The thing that is instilled is what character can be exemplified from doing the work.

Learning will be more interesting for students if in its implementation using learning media. Learning media is everything that can be used to channel messages or as learning materials, so as

to achieve learning goals (Daryanto, 2016). With card media, students can learn while playing which aims to train students to achieve a balance between soft skills and hard skills (Han et al., 2020).

Based on the observations of SDN 03 Serang, the implementation of class V social studies learning with material on natural appearances and artificial appearances and types of work found several similarities, namely that it is still not optimal in the implementation of learning. In this material, there is difficulty in grouping which is the appearance of nature and the appearance of artificial. In distinguishing the attributes of mountains and hills, it is sometimes a misconception.

In learning, there is no learning media that can also invite students to play. The existence of interesting learning media can help students' interest and motivation in processing learning materials delivered by teachers (Teni, 2018). The active role of teachers in inviting students to interact is needed, especially when using card learning media to invite students to play about the appearance of nature and artificial in Indonesia. The attitude of the teacher during learning activities can also be used as a reflection of character for students, how students imitate their teachers (Steinbach & Heidrun, 2016).

From the above problems, it is necessary to make efforts to improve current learning. Among them is the development of innovative learning media. Game cards are worth using because they are one of the tools that can be used in learning at the same time by playing. Based on this background, the intended researchers developed card learning media in the form of Nature and Job Cards with valid and effective characters to improve understanding of the material of nature appearance in grade V elementary school.

METHODS

This research uses research and development (R&D) methods with the ADDIE development model (analyze, design, development, implementation, evaluation). Data collection techniques in this study are observation, questionnaire, test and documentation. The data analysis techniques carried out are normality test, N-gain test and hypothesis test. The trial was carried out using One Group Pretest-Posttest Design at SDN 03 Serang, Petarukan District, Pemalang Regency, with the number of class V

38 students and 1 class teacher. The research procedure is as follows:

Analyze

Researchers conduct needs analysis, identify students' problems (needs) for social studies material and character education. Analysis is carried out to obtain information about the competencies that students need, about natural and artificial appearances and types of work and character values.

Design

The activities carried out are to compile learning media designs, such as: collecting appropriate data and images, compiling instruments to assess and write instructions for the use of character-charged nature and job cards media in detail.

Development

The development stage is the stage of product realization. Embodying the kartu to be created using the Coreldraw X7 application. This stage requires the help of expert validators to assess the validity of the material and learning media. After the assessment was carried out, the improvement was carried out, the media was tested on a small scale (6 students and 1 teacher of SDN 03 Serang) in order to minimize errors that occurred in large-scale tests.

Implementation

The implementation stage is carried out on a limited basis to the school designated as the subject of the study. Siswa tried to use the medium of nature and job cards charged with character on natural and artificial appearance materials and types of work. After the learning process is complete, students do the test questions that have been provided, then students and teachers are also asked to fill out a questionnaire that responds to the media.

Evaluation

The activities carried out at this stage are the evaluation and assessment of the data that has been collected at the implementation stage. Evaluation can be done by looking at the impact of learning using character-charged nature and job cards.

RESULTS AND DISCUSSION

This study aims to develop a valid and effective card media. This development process begins with analyzing needs. The results of the analysis of the needs of students and teachers at SDN 03 Serang require interesting card learning media with material that is short, concise, easy to understand and accompanied by examples of

natural and artificial appearances and types of work. The character education taught is not boring and can be instilled by playing cards. The media used by playing will make students feel that they are not learning because later they will focus on playing with cards.

The high results of the media needs questionnaire filled with students and teachers made the development of media in the form of cards under the name Nature and Job Cards which can then be called N&J Cards. Before developing N&J Cards, it is necessary to compile a learning media design, such as: collecting appropriate data and images, instruments to assess and writing instructions for the use of character-charged N&J Cards media in detail. N&J Cards are made using the coreldraw X7 application, printed with 260 gr of art cartoon paper, size 7 cm x 10 cm, totaling 41 cards, 1 container and a guidebook for use. The instructions for use card is used as a reference that must be understood before starting the game using character-charged N&J Cards (1 card).

The natural appearance card is a card that contains the name, description and example of natural appearance in Indonesia. This card totals 16 cards, which contain mountains, plateaus, lowlands, valleys, hills, rivers, beaches, lakes, seas, mountains, swamps, forests, straits, bays, capes and deltas. Artificial appearance card is a card that contains the name, description and

example of artificial appearance, there are 10 cards namely reservoirs, ports, industrial areas, plantations, rice fields, housing, zoos, tourist attractions, parks and roads. A job type card is a card that contains a job name, job description and contains characters that can be exemplary of the job. The character values contained in the card are peace-loving, responsible, social care and environmental care.

These cards total 14 cards, namely farmers, fishermen, teachers, doctors, police, traders, laborers, drivers, entrepreneur breeders, content creators, miners, tour guides and civil servants. The character education contained in the job type card can be used to instill character education in students. The advantage of nature and job cards with character content is that there is an instillation of character values on the job type card, and in one card (nature appearance card and artificial appearance card) there is already a name, a brief description of the meaning, image and examples of its location.

The cards that have been made are then analyzed for validity by reviewing two aspects, namely the validation of learning materials and the validation of learning media. Material expert validators test based on 13 indicators which include the application of the curriculum, the accuracy of the media with the learning objectives and the material displayed.

Table 1. Material Expert Validation Results

Assessed Aspects	Shoes	Criterion
Application of the curriculum	16	Excellent
Accuracy of media with learning objectives	20	Excellent
Featured materials	15	Excellent
Average	3.9	
Percentage%	98.08	
Criterion	Very Valid	

Suggestions from material experts: (1) in compiling the RPP, HOTS principles and 21st century skills are considered, (2) questions are made that are simple and match the answers compiled (3) the images on the teaching materials need to be given sources (4) the images on the N&J Cards are adjusted, especially aligned with the achievement of character values.

Media expert validators test based on 20 indicators that include learning, usage, materials, and media display.

Table 2. Media Expert Validation Results

Assessed Aspects	Shoes	Criterion
Learning	15	Excellent
Use	11	Excellent
Material	20	Excellent
Media display	31	Excellent
Average	3,9	
Percentage%	96.25	
Criterion	Very Valid	

Advice from material experts: (1) in general it is good, (2) there is no introduction to the use of media (3) the text on the card needs to be bolded on its important word. The results of the

validation of character-charged N&J Cards media from two expert validators (media and material) showed that the character-charged N&J Cards media was very valid for use in the learning process after going through a one-time revision process and continued with a small trial process.

In line with research from Trianata (2020) there is an increase in the feasibility of media developed after being revised from experts. With

the suggestion and then revised, it is hoped that the media will be more effective in learning. Revised cards can help teachers in making learning more innovative and interactive, making it easier for students to get to know vocabulary (Hidayat, 2022).

The instruments about pretest and posttest before being tested, then in the test of validity and reliability, the results are as follows:

Table 3. Item Analysis Results Of Pretest and Posttest Questions

Number of Questions	Valid Amount	Reliability	Differentiation Power	Difficulty Level	Information
45	40 ($r > 0.361$)	0.896	Signs = 5 Enough = 29 Good = 11	Easy = 8 Medium = 28 Difficult = 4	The 40 questions used are valid, reliable, sufficient and good differentiation with easy, medium and difficult criteria

The next process is testing the practicality of character-charged N&J Cards. Data is obtained through the response of students and teachers to the developed media. The results of the student practicality test a percentage of 90.83% and the teacher practicality test with a percentage of 92.5%, both of which are in the criteria are very practical. After the N&J Cards media was charged with valid and practical characters, a large-scale trial was carried out with 32 students and 1 teacher.

The effectiveness test is carried out by analyzing the results of the pretest and posttest carried out by the student. Pretest results are obtained before students learn using media and posttest results are obtained after learning using character-charged N&J Cards media. The data normality test was tested with the Liliefors Test with Kolmogorov-Smirnov.

Table 4. Normality Test Results

	Kolmogorov-Smirnova		
	Statistic	df	Itself.
Pretest	.121	32	.200*
Posttest	.117	32	.200*

Based on Table 4, it can be seen that the pretest data of the Sig value is 0.200 and the posttest of the Sig value is 0.200. Because the Signification value is 0.200 each, which means more than 0.05, it can be concluded that the distribution of data from the pretest and posttest of natural and artificial appearance materials and the type of work is declared normal distribution.

The N-Gain test is used to determine the improvement of students' understanding of natural and artificial material and the type of work before and after using character-charged N&J Cards media.

Table 5. N Gain Test Results

Number of Students	Number of Pretest values	Number of Posttest Values	Average increase	N-Gain	Criterion
32	1368 Average = 43	2810 Average = 88	40	0,78	tall

Table 5 shows the results of the calculation of the N-gain value. The results of the N-gain value analysis for the understanding of natural and artificial appearance materials and types of work with an N-Gain score of 0.78 and are in the high category with an effectiveness level of 78% with effective criteria. Based on the results of the N-

gain score, it can be concluded that *nature and job cards* media are charged with effective character to be used as learning media in increasing students' understanding of natural and artificial appearance materials and types of work in class V social studies learning.

The hypothesis test uses a t-test that aims to

find out whether it occurs significantly or not after the use of character-charged N&J Cards media in social studies learning.

Table 6. T-test Results

Table 6.1. Posttest Results							
		Paired Differences			t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference		
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	
Pair 1	Posttest - Pretest	45.0781	15.5476	2.7485	39.4726	50.6836	16.401 31.000

Based on the results of the calculation of table 6 carried out, it shows that t count (16.401) $>$ t table (2,036) then H_0 was rejected, then according to the basis of decision making in the paired test, it can be concluded that H_0 was rejected and H_a was accepted, which means that there is a significant difference between the understanding of natural and artificial appearance materials and the type of work before using the media nature and job cards charged characters and after using the medium of nature and job cards charged with characters.

The pretest and posttest questions given are the same form of questions and questions, the difference lies in how to answer them. If the pretest is only presented multiple choice then the posttest question is added to be a reasoned multiple choice, so students actually give answers according to their understanding after using the medium of nature and job cards loaded with character.

This increase is also supported by the observation of the value of character education in students before, when and after using character-charged n&j cards media. The character values observed include peace-loving, responsible, social care and environmental care. These behaviors are adapted to the activities of students in the classroom. On the attitude of social care the average student has begun to be seen before using media that n&j cards are charged with character and after the use of media has increased well with the average already cultivated. The average student's environmentally caring attitude has not yet been seen, after the use of media increased in the beginning to develop. The peace-loving attitude of the average student at first has not been seen and has increased to begin to develop after using the medium of character-charged n&j cards. The average student's attitude of responsibility is initially beginning to show and continues to rise to the average already cultivating on student behavior.

The results of this study show that the use of n&j cards media with character is effective in increasing the understanding of natural and artificial appearance materials and types of work, this is in accordance with the results of research from Bere (2022) that card media has an appeal to students because they are in the form of images, color and concrete can be brought into the classroom according to the stage of student development in the concrete operational stage. Learning with cards also focuses on students looking at the images on the cards, so that students can more easily recognize the appearance of nature, artificial appearances and the type of work shown in the picture.

Astuti (2022) using card media, student learning outcomes increased from 33% to 66% mastering learning materials. The ability to remember students for the material presented by the teacher has also increased. In addition, research from Hayati (2022) also supports a significant difference in student motivation, card media makes it easier for students to understand the learning carried out while making it easier for teachers to deliver learning materials.

Character education embedded in character-charged n&j cards media is also well implemented in accordance with research from Wibowo, et al. (2020) character education implemented in learning in accordance with the 2013 curriculum can be the foundation of religious schools, honesty schools, discipline schools and friendly schools as well as healthy and clean schools. These values can result from the consistent application of character education and teacher follow-up to students.

CONCLUSION

The media of nature and job cards charged with characters developed based on the analysis of the needs of students and teachers has the characteristic of embedding character values on the job type card, and in one appearance card there is a name, description, image and example

of its location. The validity of the media nature and job cards charged with the character of both on the criteria is very valid. The effectiveness of the media nature and job cards charged with character based on the N-gain test and hypothesis test obtained effective results and had a significant effect on the results of understanding the material of natural and artificial appearance and the type of work of class V students.

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