



## Development of *PINKI* (Indonesian Culture Interactive Board) with Strengthening the Curiosity of Class IV Students

Susan Amalia Damayanti<sup>1</sup>, Siti Mas'ula<sup>2</sup>, Arda Purnama Putra<sup>3</sup>

<sup>1,2,3</sup> Universitas Negeri Malang

\*Correspondence: E-mail: [susan.amalia.1901516@students.um.ac.id](mailto:susan.amalia.1901516@students.um.ac.id)

### ABSTRACT

*The development of PINKI learning media aims to produce learning media that are valid, practical and effective in strengthening one of students' curiosity. Combined with the presence of technology in it can make this learning media interactive. This development uses the R&D method and the ADDIE development model. The validation results from validator 1 reached an average percentage of 92.87%, validator 2 achieved an average percentage of 96.52% with a very valid category of all validators. The practicality of students is 98.38% and that of teachers is 100.00% so that it is in the very practical category. The processing results of the data normality test were normally distributed, and the results of the paired sample t test sig (2-tailed) were 0.000 < 0.05 with a decision finding found significant differences in the learning process before and after using PINKI learning media. Thus, the PINKI learning media was stated to be very valid, very practical and effective in strengthening students' curiosity so that it could be used in the process of learning cultural diversity material in class IV East Java Province.*

© 2024 Universitas Pendidikan Indonesia

### ARTICLE INFO

#### Article History:

Submitted/Received 27 Sep 2023

First Revised 22 Oct 2023

Accepted 10 Nov 2023

First Available online 03 Jan 2024

Publication Date 03 Jan 2024

#### Keyword:

Cultural Diversity,  
Instructional Media,  
The curiosity Character

## 1. INTRODUCTION

Learning media at the elementary school level take an important role, given the intellectual level of students and it cannot be denied that learning media is also included in one of the learning components. Learning media are used by teachers to convey information, foster student interest and students' abilities to think, feel, and pay attention so that the learning process can take place with higher quality (Sapriyah, 2019). Improving the quality of learning can be supported by learning media so that students can play an active role during the learning process (Nurrita, 2018). The world of education today requires innovation in the development of learning media to optimize students' desires and enthusiasm for learning, strengthen character education and improve the quality of learning. As an educator, you should be obliged to find innovations related to the world of education, including finding appropriate learning media so that the material can be delivered optimally (Mangangantung et al., 2022). In addition, learning that is carried out using media in it is able to make students feel more interested and enthusiastic and provide convenience for educators and students in the reciprocal process of learning activities (Setiawan, 2019).

The use of instructional media can make students more motivated and physically active (Geni et al., 2020). The activeness of students will provide real experiences for them that can be used to improve students' abilities to deal with an increasingly dynamic social life. Dynamic life is closely related to social science which was created to prepare students to become good individuals and citizens. The teaching of social sciences is designed to introduce racial, physical, cultural and religious differences so that students can know, appreciate and accept the differences around them (Marlina, 2022). Social studies learning should be designed to be able to grow and consider students' skills in living their social life which is always moving with the times constantly (Azis et al., 2020). Not only social life is experiencing development, the world of education is also experiencing dynamic development. Developments in the world of education can be felt by the existence of an independent curriculum, where in the curriculum the learning of Social Sciences and Natural Sciences is integrated into the Natural and Social Sciences which aims to foster students' interest and curiosity, an active attitude in cultivating the ability to investigate, understand oneself, the environment and society (Agustina et al., 2022). With this, the use of learning media in the world of education takes an important role.

However, the use of instructional media in conditions in the field states the opposite, (Daud & Ninawati, 2022) most educators only convey theoretically when presenting material in class. This situation is the same as the results of interviews that have been conducted and information is obtained that teaching materials and learning media related to cultural diversity materials in Indonesia which are generally used by teachers are still limited to textbooks and media images. The teacher also explained that there is no concrete learning media for cultural diversity material in Indonesia. In addition, teachers generally apply conventional teaching methods in the form of lectures and questions and answers. Of course learning about the introduction of diversity will be less than optimal and weaken the character of students' curiosity if it is done without other supporting components. The results of the interviews were also supported by data from the student needs questionnaire which obtained information that 90,05% of students felt that material would be easier to understand if learning was carried out through concrete media and combined with games or physical activities. Therefore, it is necessary to have learning media that can support students' mastery of the material in a more interactive manner and provide reinforcement of students' curiosity.

Several researchers have developed map board-based learning media, developing map board-based learning media by introducing cultural diversity in 34 provinces in Indonesia (Daud

& Ninawati, 2022). Developing map board-based learning media using discussion and performance methods (Noverita, 2019). Devi (2019) who developed map board-based learning media supported by visual communication so that it is more interesting. However, based on this research the learning media developed still use the 2013 curriculum reference and have not specifically discussed cultural diversity in a particular area and some of them have not strengthened the character of student curiosity.

Based on this description, there are several things that need to be used as the basis for an innovation in learning. This is related to the use and utilization of learning media more optimally and being able to keep up with the times and can strengthen student character education. Learning is essentially required to always adapt to developments in the fields of science and technology so that learning can provide a learning experience for students that is in accordance with the situation and character of the students (Wisada et al., 2019). Therefore, it is necessary to develop learning media that support learning activities and are integrated with technological developments and are able to strengthen the character of student curiosity. The purpose of this research and development is to be able to develop PINKI learning media (Interactive Board for Indonesian Culture) on cultural diversity in East Java Province by strengthening the character of student curiosity which is valid according to experts, practical to use and effective in strengthening student curiosity and improving student learning outcomes.

## 2. METHODS

This research uses one type of research, namely *Research and Development (R&D)* or research and development. The research phase has been carried out through observation and interviews as initial information. The development model used is the ADDIE model which consists of five stages or phases: Analyze, design, development, implementation, evaluation. The research data samples came from material experts, media experts, teachers and fourth grade students at Fajar Insani Elementary School, a total of 22 students with 12 male students and 10 female students who had different characteristics. The information collection techniques used were a) interviews using semi-structured techniques in which a list of questions had been compiled systematically but required a broad discussion of information b) observation c) questionnaires in the form of student needs analysis questionnaires, material expert validation questionnaires, media expert validation questionnaires, student curiosity indicator questionnaires as well as student response questionnaires and teacher response questionnaires d) tests in the form of assessment of learning outcomes in the form of multiple choice and descriptions carried out before learning activities using PINKI media and after learning activities using PINKI media. There are 2 types of data analysis in this research and development, including qualitative data analysis of interview data, input and suggestions as well as quantitative data analysis related to the processing of numerical data obtained from questionnaires and validity tests.

## 3. RESULTS AND DISCUSSION

The results of the data analysis contained in this research and development are used to find out whether PINKI learning media is valid according to experts and users, practical and effective for use in learning activities and strengthening the character of curiosity in fourth grade elementary school students.

The results of the analysis of potential problems, curriculum analysis and analysis of student characteristics were carried out by means of interviews and giving questionnaires to analyze student needs. The results of the interview stage are: 1) there is no learning media that specifically discusses cultural diversity material, teachers usually use textbooks and are

supported by practice questions. 2) as much as > 50% of the average student score in social studies learning is still below the KKM. 3) as many as 66,67% of students still have difficulty understanding the material due to the conditions of these students and class conditions. 4) the curriculum applied in schools for grade IV is an independent curriculum with diversity material within the scope of the province in which they live. 5) the number of grade IV students at SDI Fajar Insani reaches 45 students divided into 2 study groups. 6) as many as 90,05% of students enjoy learning using concrete media and collaborating with physical activity.

The interview results were also supported by a student needs analysis questionnaire. The results of filling out the questionnaire are described in table 1 below.

**Table 1.** Results of Student Needs Analysis Questionnaire

No	Indikator	Score	Percentage (%)	Average (%)	Analysis results
1.	Material	126	78,8		
2.	Learning Process	54	60		
3.	Learning Media	75	83,3	82,84	Most need
4.	Technology Facilities	86	95,5		
5.	Character of Curiosity	87	96,6		

The results of the student needs analysis questionnaire stated an average percentage of 82,84%. Referring to the percentage categorization by Munggaran (in Wati et al., 2020), shows the percentage is between 76% - 99.9% with the categorization of the level of need included in the category of most need. Based on the results of this analysis, it was concluded that teachers and students in class IV SDI Fajar Insani need learning media that can help learning social studies subjects, especially on cultural diversity material, to be better. The learning media can also be combined with technology so that it can match the facilities available at the school.

In the second stage, namely design, four activities are carried out, namely: 1) product design that is created and developed according to potential problems and refers to the Learning Outcomes of class IV Natural Sciences (Natural and Social Sciences). 2) product creation with the help of the Canva, CapCut and web me-qr.com applications. 3) preparation of material expert validation instruments, media experts and users processed from (Emmanuela, 2020). 4) formulation of research data analysis techniques.

The third phase is in the form of product development and testing in the form of learning media carried out by material experts, media experts and users. The validation results of the three components can be presented in table 2 below.

**Table 2.** Recapitulation of Validation Results

No	Validator	Validation Value	Category
1.	Validator 1	92,87%	Very Valid
2.	Validator 2	96,52%	Very Valid
<b>Average</b>		<b>94,69%</b>	<b>Very Valid</b>

Based on the recapitulation table of the validation results, information was obtained that the developed PINKI learning media products had an average level of validity (Akbar, 2017) of 94, 69% so that it is included in the very valid category with the results of the test decision being suitable for use without revision. The test decision was also supported by comments at the validation stage which stated that learning media had been very helpful for students in understanding culture in East Java because it used attractive colors and models. Learning media

that is supported by video as an audio-visual medium is able to attract students' attention longer and provide motivation to students in the learning process (Ariani et al., 2020).

In the fourth phase, is the implementation stage, small-scale trial activities are carried out to test the practicality of learning media and large-scale trials to determine the practicality, effectiveness and strengthening of the character of students' curiosity. The results of the recapitulation of product practicality values referring to the student and teacher response questionnaire as users above can be described in tables 3 and 4 below.

**Table 3.** Recapitulation of Practicality Value Based on Student Response Questionnaire

No	Trial Stage	Practicality Value	Category
1.	Small Scale Trial	96,76%	Very Practical
2.	Large Scale Trial	100,00%	Very Practical
<b>Average</b>		<b>98,38%</b>	<b>Very Practical</b>

**Table 4.** Recapitulation of Practical Value Based on Teacher Response Questionnaire

No	Trial Stage	Practicality Value	Category
1.	Small Scale Trial	100,00%	Very Practical
2.	Large Scale Trial	100,00%	Very Practical
<b>Average</b>		<b>100,00%</b>	<b>Very Practical</b>

Based on the two practical value recapitulation tables, it can be concluded that PINKI learning media obtains an average practical value from students as users of 98,38% and an average practical value from teachers of 100,00%. Referring to the results of the average percentage of the two users, learning media is included in the very practical categorization with the results of the test decision learning media can be used without revision (Akbar, 2017). The test decision was also supported by positive responses from students who stated that the learning media was very interesting so that they were happy and enthusiastic about participating in learning. Learning media that foster students' interest and attention can provide a flexible and varied learning environment (Anggraeni et al., 2021). Therefore, learning media products are considered appropriate for use in learning activities while the practicality of these learning media can also be used to increase motivation and quality of learning.

Large-scale trial activities that have been carried out with the subject of class IVB students totaling 22 students, obtained very good and positive responses. The results of the large-scale trials are used to determine the effectiveness of the product and to strengthen the character of students' curiosity. Product effectiveness is measured through pre-test and post-test activities. Pre-test and post-test scores were measured using multiple choice questions and essays. This type of question was chosen because the multiple choice test is more representative of the content and extent of the discussion of the material, while the essay test can provide opportunities for students to formulate answers according to their own abilities (Putri et al., 2022). The results of the data in the form of pre-test and post-test values were then processed through parametric statistical testing, namely the Paired Sample T-Test using SPSS. The test results can be described in picture 1 as follows.

Paired Samples Test									
	Paired Differences					t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Pair 1	PRE TEST - POST TEST	-2.559E1	6.59480	1.40602	-28.51488	-22.66694	-18.201	21	.000

**Picture 1.** Test Result of *Paired Sample T-Test*

Based on the results of the Paired Sample T-Test, it was found that the significance value (2-tailed) was  $0.000 < 0.05$ . Derived from the basis of decision making in the Paired Sample T-Test, namely the sig. (2-tailed)  $< 0.05$ , it is stated that there is a significant and significant difference between the initial variable (pre test) and the final variable (post test). Therefore it can be concluded that there is a significant impact between learning before using PINKI learning media and learning after using PINKI learning media.

Strengthening the curious character of grade IV students through learning activities using PINKI learning media is measured based on criteria and action indicators referred to and processed from (Rudiyanto, 2019). Students at the high grade level will be at the stage of investigation and experimentation on something new driven by a high sense of curiosity (Rohmah et al., 2022). This assessment is carried out by means of direct observation together with small-scale trial activities and large-scale trials. The number of observation subjects in small-scale testing was 5 students and the observation subjects in large-scale trials were 22 students. The data obtained from the observation activities can be set out in Tables 5 and 6 below.

**Table 5.** Observation Results of Strengthening Students' Curiosity Character Based on Small-Scale Trials

No	Indikator	Criteria (score) / Acquisition			
		4	3	2	1
1.	Exploring	5	-	-	-
2.	Discovering	4	1	-	-
3.	Adventure spirit	5	-	-	-
4.	Active asking	5	-	-	-

**Table 6.** Observation Results of Strengthening Students' Curiosity Character Based on Large-Scale Trials

No	Indikator	Criteria (score) / Acquisition			
		4	3	2	1
1.	Exploring	20	2	-	-
2.	Discovering	22	-	-	-
3.	Adventure spirit	20	1	1	-
4.	Active asking	19	2	1	-

Based on the two tables, information was obtained that there were more students who scored 4 with very good criteria than students who got scores with good, sufficient or poor criteria. Of the 4 indicators for strengthening the character of students' curiosity, almost all students in small-scale test activities and large-scale test activities received a score of 4. Thus, it can be concluded that the use of PINKI learning media can strengthen the curiosity of class IV students at SDI Fajar Insani. When students have a high level of curiosity, they learn to

maximally live up to that curiosity about the information so that students will begin to learn and discover (Fauzi et al., 2017).

#### 4. CONCLUSION

Based on the results of the research and development that have been described, it can be concluded that PINKI learning media is appropriate to be applied to the learning process and can be used as material in the presentation of cultural diversity material in East Java Province. PINKI learning media is also able to make it easier for students to live and understand cultural diversity material which is quite broad in scope. Supported by the use of technology in which learning can be more interactive and interesting. In addition, the use of PINKI learning media can also maximize the quality of learning through strengthening students' curious characters. This research and development is expected to become a means and material for conducting research with research subjects, research needs and other broader material.

#### 5. REFERENCES

- Agustina, N. S., Robandi, B., Rosmiati, I., & Maulana, Y. (2022). Analisis pedagogical content knowledge terhadap buku guru IPAS pada muatan IPA sekolah dasar kurikulum merdeka. *Jurnal Basicedu*, 6(5), 9180–9187.
- Akbar, S. (2017). *Instrumen perangkat pembelajaran*. PT Remaja Rosdakarya.
- Anggraeni, S. W., Alpian, Y., Prihamdani, D., & Winarsih, E. (2021). Pengembangan multimedia pembelajaran interaktif berbasis video untuk meningkatkan minat belajar siswa sekolah dasar. *Jurnal Basicedu*, 5(6), 5313–5327.
- Ariani, K. R., Sumantri, M., & Parmiti, D. P. (2020). Pengembangan video pembelajaran ips bermuatan tes untuk siswa. *Jurnal Ilmiah Pendidikan Profesi Guru*, 3(2), 217 - 228.
- Azis, D. K., Dharin, A., & Waseso, H. P. (2020). Pengembangan pembelajaran ilmu pengetahuan sosial sekolah dasar berwawasan sosial-budaya berbasis Paikem. *INSANIA : Jurnal Pemikiran Alternatif Kependidikan*, 25(1), 65–78.
- Daud, I. M., & Ninawati, M. (2022). Pengembangan media kontekstual papan peta budaya materi keberagaman budaya bangsa. *Paedagogia: Jurnal Kajian, Penelitian dan Pengembangan Kependidikan*, 13(2), 110 - 1124.
- Devi, M. D. K. (2019). Pengembangan media pembelajaran miniatur peta budaya. *Jurnal Pendidikan Guru Sekolah Dasar* 7(4) 15-26.
- Emmanuela, F. (2020). Pengembangan modul pembelajaran matematika berbasis HOTS pada topik segiempat. Universitas Sanata Dharma, 2.
- Fauzi, A. R., Zainuddin, Z., & Atok, R. Al. (2017). Penguatan karakter rasa ingin tahu dan peduli

sosial melalui *discovery learning*. *Jurnal Teori Dan Praksis Pembelajaran IPS*, 2(2), 79–88.

Geni, K. H. Y. W., Sudarma, I. K., & Mahadewi, L. P. P. (2020). Pengembangan multimedia pembelajaran interaktif berpendekatan CTL pada pembelajaran tematik siswa kelas IV SD. *Jurnal Edutech Undiksha*, 8(2), 1. 23-32

Mangangantung, J. M., Wentian, S., & Rorimpandey, W. H. F. (2022). Pengaruh kreativitas guru dan motivasi belajar siswa terhadap hasil belajar siswa kelas V SD Negeri di Kecamatan Wanea. *Jurnal Inovasi Teknologi Pendidikan*, 9(1), 15–24.

Marlina, T. (2022). Urgensi dan implikasi pelaksanaan kurikulum merdeka pada sekolah dasar/madrasah ibtidaiyah. *Jurnal SNPE FKIP Universitas Muhammadiyah Metro*, 1(1), 67–72.

Noverita, W. A. (2019). Pengembangan media pembelajaran replika peta budaya pada pembelajaran tematik terpadu untuk kelas IV SD/MI di Bandar. <http://repository.radenintan.ac.id/7638/1/SKRIPSI.pdf>

Nurrita. (2018). Pengembangan media pembelajaran untuk meningkatkan hasil belajar siswa. *Misykat*, 03, 171–187.

Putri, H., Susiani, D., Wandani, N. S., & Putri, F. A. (2022). Instrumen penilaian hasil pembelajaran kognitif pada tes uraian dan tes objektif. 4(2), 139–148.

Rohmah, M. Y., Luh, N., Nuraini, S., & Linguistika, Y. (2022). Pengembangan media pembelajaran PANCAKAR (papan pecahan dan kartu soal) dengan penguatan karakter rasa ingin tahu siswa kelas IV sekolah dasar. *Jurnal Kependidikan Dasar Islam Berbasis Sains*, 7(2), 139–158.

Rudiyanto, A. (2019). Rasa ingin tahu pada penilaian sikap. *Kebijakan dan Pengembangan Pendidikan Di Era Revolusi Industri 4.0*, September, 235–242.

Sapriyah, S. (2019). Media pembelajaran dalam proses belajar mengajar. *Diklat Review: Jurnal Manajemen Pendidikan dan Pelatihan*, 2(1), 470–477.

Setiawan, U. (2019). Media pembelajaran (Cara belajar aktif: Guru bahagia mengajar siswa senang belajar). Widina Bhakti Persada.

Wati, I. F., Yuniawatika, Y. Y., & Murdiah, S. (2020). Analisis kebutuhan terhadap bahan ajar game based learning terintegrasi karakter kreatif. *Jurnal Pendidikan Karakter*, 10(2) 35-46.

Wisada, P. D., Sudarma, I. K., & Yuda S, A. I. W. I. (2019). Pengembangan Media Video Pembelajaran Berorientasi Pendidikan Karakter. *Journal of Education Technology*, 3(3) 41-50.