

Pop-Up Book Media Based on Local Wisdom Within The Dimension of Global Diversity and Critical Thinking

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Abstract

Purpose: This study aims to investigate the effect of using local wisdom-based Pop-Up Book media on two key dimensions in fourth-grade elementary school students: global diversity and critical thinking.

Methodology: The study employs a quantitative approach. The population consists of 220 fourth-grade students selected randomly from three elementary schools in Surakarta and its surrounding areas. The independent variable (X) is the Pop-Up Book media based on local wisdom, while the dependent variables (Y1 and Y2) are global diversity and critical thinking, respectively. Data were collected using questionnaires and analyzed through a Multivariate Analysis of Covariance (MANCOVA) to assess the simultaneous effects on both dependent variables. Data normality was confirmed with p-values of 0.098 for global diversity and 0.055 for critical thinking, both exceeding the 0.05 threshold.

Results: The Wilks' Lambda multivariate test yielded a value of 0.936, with $F = 7.380$ and a significance level of 0.001 ($p < 0.05$), indicating that the use of local wisdom-based Pop-Up Book media has a significant positive influence on students' global diversity awareness and critical thinking skills.

Applications/Originality/Value: The findings highlight the potential of culturally grounded instructional media to foster both global perspectives and higher-order thinking skills. By integrating local values into interactive learning tools, educators can create meaningful and engaging classroom experiences that promote cognitive and cultural competence among elementary students.

Introduction

In the era of increasing globalization, education plays a crucial role in equipping the younger generation with the ability to adapt to a diverse and dynamic society. The important role of education can be realized in learning activities at every level and unit of education. In elementary school, students can learn how to improve their personalities and expand their knowledge through the learning process (Hsu et al., 2022; Partovi & Razavi, 2019). In Indonesian Law Number 20 on the National Education System, Article 1 Paragraph 20, learning is described as an interaction between students, teachers, and learning resources in an educational environment. Overall, education today is not only related to the transfer of knowledge but also aims to build character, develop relevant skills, and prepare a generation capable of facing future challenges, both locally and globally. In Indonesia, the importance of education is evident in efforts to instill values reflected in Pancasila, especially to shape students who are character-driven, critical thinkers, and capable of adapting to cultural diversity. Critical thinking skills are the ability of students to analyze the problems they face, accurately identify the issues, and gather the necessary information to resolve them (Buphate & Esteban, 2022). These skills are not only beneficial in learning but also support students in facing daily challenges with a more mature and organized approach. Meanwhile, global diversity itself is an effort to preserve culture, identity, and local wisdom, while remaining open to interacting with other cultures. This aims to instill a sense of tolerance without violating the cultural heritage of the Indonesian nation. Based on Nurgiansah (2022) global diversity is a sense of tolerance towards the diversity of ethnicities and languages, as well as an appreciation for differences. Before students can develop a character of global diversity and critical thinking that aligns with the Pancasila student profile in the Merdeka Curriculum, they need to first apply local wisdom values. This is because the Pancasila student profile is formed through daily activities and instilled in each student through school culture and the surrounding environment, intramural learning, co-curricular activities, and extracurricular activities.

Based on data from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), the implementation of the Pancasila Student Profile, which emphasizes the dimensions of global diversity and critical thinking in Indonesia, still faces various challenges in its execution. In the 2022 national assessment, only about 35% of students demonstrated adequate critical thinking skills, particularly in problem-solving and data-based analysis

(Kemendikbudristek, 2022). To strengthen the dimension of global diversity and critical thinking, the government through the Merdeka Belajar program continues to encourage innovation in learning, with a focus on project-based learning.

Nowadays, in practice, the strengthening of the Pancasila Student Profile is not only carried out through special projects but can also be integrated into daily learning activities by referring to the values contained in the Pancasila Student Profile itself (Istiqomah et al., 2023). Each subject can be designed in such a way as to support the development of the Pancasila Student Profile in everyday life sustainably. The global diversity dimension in the Pancasila Student Profile emphasizes the importance of understanding and appreciating cultural, ethnic, religious, and social background diversity. In this case, students are expected to interact positively with individuals from various backgrounds and understand different perspectives. Meanwhile, the critical reasoning dimension in the Pancasila Student Profile emphasizes the importance of students thinking logically, structurally, and objectively when facing various problems. The ability to think critically is also very important, where students are taught to analyze information, question assumptions, and make decisions based on evidence and rational thinking (Aulya, 2024). Students are expected to be able to analyze information carefully, understand various perspectives, and distinguish between facts and opinions. Additionally, this dimension encourages students to question the information received, not to believe it blindly without strong evidence, and to be able to construct logical arguments based on thorough analysis. The ability to think critically also includes skills in solving problems creatively and innovatively, as well as making careful decisions based on data and moral considerations (Qodarsih et al., 2023).

The reality in the world of education shows that many schools have not yet fully succeeded in integrating character education with academic learning, which often focuses on achieving grades without paying attention to the development of attitudes and thinking skills. Additionally, many students still lack an understanding of the culture in their area, especially the one around them (Armini, 2024). The impact of the lack of reinforcement of the global diversity dimension and critical thinking skills in elementary school students is clearly visible in the daily classroom activities. Students tend to struggle to understand the importance of appreciating differences, both in local and global contexts. Furthermore, the lack of critical thinking skills causes students to have difficulty analyzing problems and finding creative solutions. Failure to develop these skills can result in students being unprepared to face future challenges, especially in an era that demands cross-cultural collaboration and the ability to solve complex problems. This can be impacted by a few components, one of which is the teacher's restrictions in planning imaginative and imaginative learning media amid the learning process. Additionally, many teachers are not yet accustomed to using technology in teaching, making it difficult to utilize digital devices. In addition, the facilities and infrastructure in many schools are still limited, which further exacerbates this situation and hinders the achievement of an optimal learning process.

As a response to this issue, various innovations in learning media are being developed to help bridge the gap. Learning media encompasses all things that can be used to provide information accurately, thereby increasing student interest in the teaching and learning process (Ulfah et al., 2021). Learning media can make it easier for students to understand the material because it provides concrete examples that they can observe directly. Additionally, learning media are materials used to convey content during learning activities, both indoors and outdoors. These media play an important role in making the learning process more active and helping students think critically (Maharani & Reflesia, 2023). In line with other opinions Hidayah & Suyitno (2021) stating that interactive learning media can increase students' interest and motivation, thereby strengthening the Pancasila student profile in elementary schools. One of the learning media that is quite popular and interesting to use is the pop-up book. The pop-up book learning media is quite appealing in terms of appearance or visualization, which can encourage students to understand the learning objectives and ways to improve their learning outcomes. This learning media not only attracts students' interest due to its interactive visuals but also presents content relevant to their local culture and environment. Pop-up books have several advantages, such as giving children the opportunity to experience direct engagement through their involvement (Habibi & Setyaningtyas, 2021). The use of Pop-Up Books based on local wisdom also provides many benefits, including making learning activities more engaging and supporting children's independence, thereby making the learning material presented clearer for educators (Aisyah et al., 2020). Furthermore, the Pop-Up Book learning media has the potential to enhance students' critical thinking skills. With its interactive nature, this media encourages students not only to absorb information passively but also to actively engage in the learning process. Students are encouraged to analyze the plot, explore deeper meanings, and relate them to real-life experiences.

By integrating relevant local cultural elements, the pop-up book not only presents information in an engaging and interactive way but also stimulates students to explore the values and traditions present in their society. For example, students can be invited to discuss how the values of Pancasila are manifested in everyday life in a multicultural society. Therefore, it is important to incorporate local culture into the learning process.

Research results Multiani et al. (2021) reveal that the use of Pop-Up Book Media Based the Local Culture of Pontianak has an impact on the learning process in the classroom (Critical Thinking Skill) and also shows that the implementation of learning was carried out very well, with a percentage reaching 100%. Furthermore, the research Permatasari (2023) shows that the use of pop-up book media containing Pancasila student profile content has been proven to enhance the understanding of the concept of global diversity among 4th-grade students. This success is evident from the increase in the percentage of student learning outcomes. In another study conducted by Bayaniyyah & Novitasari (2024) regarding the Pop-Up Book learning media, the results indicate that the Pop-Up Book learning media based on local wisdom is effective for use in grade IV in the IPAS subject, with a percentage result of 94%, categorized as very feasible.

Based on the background of the problem and the presentation of previous research above, it serves as a reference for the upcoming study on the Pop-Up Book learning media. Most existing studies focus more on the use of Pop-Up Books in the context of creativity development or enhancing learning motivation, without delving deeper into their role in character-building among students. In the future, the pop-up book learning media based on local wisdom will focus more on local cultural wisdom, which will better introduce students to the culture present in their residential areas. There are no definitive results yet regarding the influence of local wisdom-based pop-up book learning media on strengthening the Pancasila student profile, so the researcher is interested in further investigating this matter. This study aims to examine the effect of local wisdom-based Pop-Up Book learning media on the dimensions of global diversity and critical reasoning in grade IV elementary school students. The main questions or problem formulations to be answered in this study are: (1) Is there an effect of Pop-Up Book learning media based on local wisdom on strengthening the profile of Pancasila students in the dimension of global diversity in grade IV elementary school students? and (2) Is there an effect of Pop Up Book learning media based on local wisdom on strengthening the profile of Pancasila students in the dimension of critical reasoning in grade IV elementary school students? Through the answers to these questions, this research is expected to contribute significantly to the development of learning strategies that support the achievement of the goals of the Pancasila Student Profile in the dimensions of global diversity and critical reasoning.

Therefore, in this research, the researcher will conduct a study titled "Pop-Up Book Media Based on Local Wisdom in Global Diversity and Critical Thinking in Elementary Schools". This research is expected to provide a new contribution related to the use of Pop-Up Books based on local wisdom to strengthen the character of global diversity and critical thinking among elementary school students.

Method

This research uses a quantitative approach. The quantitative approach was chosen to statistically measure the influence of the pop-up book media (variable X) on two dependent variables, namely global diversity (variable Y1) and critical thinking (variabel Y2). The population of this study consists of all 4th-grade students from three elementary schools located in Surakarta and its surroundings, namely SD Muhammadiyah 16 Karangasem, SD IT Insan Mulia, and SD Muhammadiyah PU Gedongan. The research sample involved 220 grade 4 students selected through purposive sampling technique, each school had three study groups (rombel) for grade 4, each with about 28 students in each rombel. The sample selection considered criteria such as sufficient reading ability and suitability to the local cultural background so that each student has an equal opportunity to be selected as a respondent, so that the results of the study can be generalized to the population of grade 4 primary school students in Surakarta. This sample selection aims to make the research results reflect the conditions in the field, as well as illustrate the diversity of local culture which is the main focus in the application of Pop-Up Book based on local wisdom as a learning media. This research does not use experimental and control classes; instead, all students receive the same treatment.

The details of the research procedure include initial observations conducted with the school authorities, particularly the principal and class teachers, to obtain research permission and determine the classes to be used. At the implementation stage, the data collection methods used by the researcher are questionnaires, observations, interviews, and documentation. The data collection process in this study lasted for one month. During the first two weeks, students use the local wisdom-based Pop-Up Book, then in the third week, the researcher will give a questionnaire to each student to collect information and data regarding the use of pop-up book media in the context of global diversity and critical thinking skills. Data were collected throughout the period to analyze whether there is an influence of pop-up book learning media on the dimensions of global diversity and critical reasoning of students. The questionnaire was designed to measure students' understanding of the local wisdom Pop-Up Book learning media as well as their level of global diversity and critical thinking skills. The questionnaire used to measure the dimensions of global diversity and critical thinking consists of 12 statements for each dimension, while the questionnaire related to the use of Pop-Up Book consists of 13 statements. Each statement in the questionnaire uses a 1-4 Likert scale, where (1) Strongly Disagree, (2) Disagree, (3) Agree, and (4) Strongly Agree. The survey is filled in specifically by the respondent, and the analyst guarantees that each understudy gets it how to fill out the survey to induce precise comes about and be analyzed utilizing significant measurable tests. Before being used in data collection, the designed questionnaire instrument will be tested first to ensure its validity and reliability. The research instrument framework developed is based on the indicators of the P5 dimension (Strengthening the Pancasila Student Profile Project) that have been outlined in (Khasna & Zulfahmi, 2024).

Table 1. Indicator of dimension P5

Dimension	Element	End of the project phase
Critical Thinking	(a) Obtaining and processing information	a. Able to ask questions to satisfy their curiosity.
	(b) Reasoning and analyzing	b. Able to analyze the procedures for the activities carried out
Global Diversity	Recognizing and appreciating existing cultures	Able to analyze the procedures of the activities carried out

The trial of the research instrument was conducted to empirically determine whether the instrument is suitable for use. To determine the feasibility of the research instrument, an instrument test is conducted outside the population used. The instrument trial conducted was a validity test and a reliability test. Here are the results of the instrument test:

Validity Test

In this study, the product moment validity test is used. Variable X (local wisdom-based pop-up book media) consists of 13 question items. Meanwhile, variable Y (Pancasila student profile) has 2 dimensions, each with 12 question items. The instrument was given to 28 students with a table r of 0.374, here are the validity test results:

Table 2. Results of the validity test for variable X

1	Variable	2	Number of items	3	r tabel	4	Decision
5	Learning Media: Pop-Up Book	6	13 item	7	0,374	8	Valid

Source: SPSS Apriliana S., 2024

The table of validity test results above shows that each question item from the variable of local wisdom-based pop-up book learning media has a calculated r value greater than the table r value (0.374), thus all question items are declared valid and can be used as research instruments.

Table 3. Results of the validity test for variables Y1 and Y2

9	Variable	10	Number of items	11	r tabel	12	Decision
13	Global Diversity	14	12 item	15	0,374	16	Valid
17	CriticalThinking	18	12 item				

Source: SPSS Apriliana S., 2024

The table of validity test results above shows that each question item from the dimensions of global diversity and critical reasoning has a calculated $r >$ table r value (0.374), thus all question items are declared valid and can be used as research instruments.

Reliability Test

In this study, a reliability test was conducted by considering the Cronbach's Alpha value. Here are the results of the reliability test:

Table 4. Reliability test of the learning media variable pop-up book

19	Variable	20	Cronbach's Alpha	21	Standard Alpha	22	Information
23	Pop-Up Book Learning Media	24	0,828	25	0,6	26	Reliable

Source: SPSS Apriliana S., 2024

The results of the reliability test calculations above show that the variable of local wisdom-based pop-up book learning media has a Cronbach's alpha value of 0.828 (>0.6). Therefore, it can be concluded that variable X (local wisdom-based pop-up book learning media) is reliable, allowing the instrument to produce consistent data.

Table 5. Reliability Test of Global Diversity and Critical Thinking Dimension Variables

27	Dimension	28	Cronbach's Alpha	29	Standard Alpha	30	Information
31	Global Diversity	32	0,861	33	0,6	34	Reliable
35	Critical thinking	36	0,821	37	0,6	38	Reliable

Source: SPSS Apriliana S., 2024

The results of the reliability test calculations above show that the global diversity dimension has a Cronbach's alpha value of 0.861 (>0.6) and the critical thinking dimension has a Cronbach's alpha value of 0.821 (>0.6). Thus, it can be concluded that both dimensions are reliable, allowing the instrument to produce consistent data. After conducting validity and reliability tests, the next step is to carry out prerequisite tests before testing the hypothesis. This prerequisite test includes normality tests and homogeneity tests. The normality test is conducted using the Kolmogorov-Smirnov method with the aim of determining whether the data has a normal distribution. After the prerequisite tests had been conducted, hypothesis testing was then carried out using the MANCOVA test. (Multivariate Analysis of Covariance). The MANCOVA test is used to examine the effect of the Pop-Up Book media on two dependent variables simultaneously, namely global diversity and critical thinking ability. MANCOVA allows us to see if there are significant differences in both dimensions.

Result and Discussion

The data obtained in this study are quantitative data, derived from questionnaire responses by the students. Quantitative data processing is carried out using the Statistical Product and Service Solution software. (SPSS). It is known that the sample size is 220 (>50), so the normality test used is the One-Sample Kolmogorov-Smirnov test. The condition for the normality test is that if the Sig. Value > 0.05, then the data is declared to be normally distributed; conversely, if the Sig. Value < 0.05, then the data is not normally distributed. Here are the results of the normality test:

Table 6. Normality test

1 One-Sample Kolmogorov-Smirnov Test						2	
3		4	Global Diversity (Y1)	5	Critical thinking (Y2)	6	Information
7	N	8	220	9	220	10	
12	Statistic	13	.055	14	.060	11	Normal
15	Sig.	16	.098	17	.055		

Source: SPSS Apriliana S., 2024

The results of the normality test above indicate that both variables being studied, namely, global diversity (Y1) and critical thinking (Y2), meet the assumption of normal distribution. The p-value for variable Y1 is 0.098 and for variable Y2 is 0.055, both greater than 0.05. Therefore, the data from both variables can be considered normally distributed at a 5% significance level.

The condition for the homogeneity test or Levene's test is that if the Sig. Value > 0.05, then the data is considered homogeneous or has the same data variance. Here are the results of the homogeneity test:

Table 7. Homogeneity test

	Levene Statistic	df1	df2	Sig.
Global Diversity	.999	1	208	.319
Critical Thinking	.940	1	208	.333

Source: SPSS Apriliana S., 2024

The results of the homogeneity test using the Levene test above show that the data on the global diversity dimension has a Sig. Value of 0.319 > 0.05 and the data on the critical reasoning dimension has a Sig. Value of 0.333 > 0.05. Since each data set has a Sig. Value-based on the mean greater than 0.05, it can be concluded that the data in this study are homogeneous, meaning the sample data being studied have the same variance. This achievement provides a strong foundation for continuing statistical analysis, specifically by applying the MANCOVA test. This test aims to assess the significant impact of using local wisdom-based pop-up book media (X) on the dimensions of global diversity and students' critical thinking skills. The next step is to conduct a Between-Subjects Test to analyze specific differences between groups on each dependent variable. This test aims to assess the treatment effects on each dependent variable individually, after controlling for the predetermined covariates. In the Multivariate Tests table, there are several test statistics, such as Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, to assess the effect of the independent variable (X) on the combined dependent variable (Y1 dan Y2). The result is as follows:

Table 8. Results of the multivariate test

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.064	7.380	2.000	217.000	.001
Wilks' Lambda	.936	7.380	2.000	217.000	.001
Hotelling's Trace	.068	7.380	2.000	217.000	.001
Roy's Largest Root	.068	7.380	2.000	217.000	.001

Source: SPSS Apriliana S., 2024

The analysis results show that there is a significant influence of variable X on the combination of variables Y1 and Y2. Based on Pillai's Trace, the obtained value is 0.064 with $F = 7.380$ and significance 0.001 ($p < 0.05$). A similar result is also observed in Wilks' Lambda, which shows a value of 0.936 with $F = 7.380$ and a significance of 0.001 ($p < 0.05$), indicating that variable X has a significant effect on the combined variable. In addition, the results from Hotelling's Trace and Roy's Largest Root also show a significance value of 0.001 ($p < 0.05$), which further strengthens the finding that there is a significant influence of X on Y1 and Y2 together. Multivariate tests show that the Pop-Up Book media based on local wisdom as variable X has a significant influence on the combination of the two dependent variables, namely Y1 (global diversity) and Y2 (critical thinking) This shows that the method has an impact on the simultaneous improvement of both aspects. After conducting a multivariate test, the next step is to conduct an Inter-Subject Test. (Tests of Between-Subjects Effects). This test aims to determine the effect of the independent variable X on each dependent variable (Y1 and Y2)

separately. In this way, we can understand the extent of variable X's contribution to each aspect being analyzed. Here are the results of the between-subjects test:

Table 9. Results of the tests of between-subjects effects

Source	Dependent Variable	Type III Sumbof Squares	df	Mean Square	F	Sig.
X	Y1	240.188	1	240.18	13.02	.000
	Y2	59.970	1	59.970	3.008	.084

Source: SPSS Apriliana S., 2024

The results of the between-subjects test show that variable X has a different effect on each dependent variable. For Y1, the F value for variable X is 13.021 with a significance of 0.000 ($p < 0.05$), indicating that the local wisdom-based Pop-Up Book media significantly enhances the aspect of global diversity in students. Conversely, for Y2, the F value for variable X is 3.008 with a significance of 0.084 ($p > 0.05$), indicating that variable X does not have a significant effect on students' critical thinking ability. Thus, it can be interpreted that variable X only has a significant effect on Y1 (global diversity), while it is not significant for Y2(critical thinking).

This shows that the approach using Pop-Up Books is more effective in strengthening understanding and attitudes towards global diversity compared to critical thinking skills. The analysis results show that variable X has a significant effect on Y1, but not on Y2. However, the Wilks' Lambda analysis indicates that variable X plays a role in strengthening the relationship between Y1 and Y2. This means that although the direct effect of X on Y2 is not significant, X still contributes to enhancing the interaction between the two variables, which can serve as a basis for further development of learning strategies. Therefore, the use of a Pop-Up Book based on local wisdom can be considered an effective tool in enhancing the understanding of global diversity, which in turn may indirectly influence students' critical thinking skills.

Discussion

The results of the analysis based on the explanation of the research data above, obtained through the MANCOVA test, show that the use of Pop-Up Book based on local wisdom has a significant influence on both dimensions, namely global diversity and students' critical thinking skills. This finding shows that media that promote local wisdom not only help students understand cultural diversity, but also encourage them to think more critically and analyze various problems. The Pop-Up Book learning media based on local wisdom provides several important implications, both theoretically and practically.

The use of pop-up book media can support the application of constructivism theory in the learning process. Constructivism theory emphasizes student learning experiences rather than simply focusing on the material being taught (Suparlan, 2019). By using pop-up book media, students are actively involved in learning activities, such as folding, opening, pulling, sliding, and reading the contents of the material presented in the form of pop-ups, which in turn can deepen their understanding. In addition, the advantage of this media is its ability to present a more concrete visualization, making it easier for students to understand abstract concepts Widyatmojo & Muhtadi (2017) reinforced by the opinion Rubini et al. (2018) that effective learning media is able to present material in a real way, so that students more easily capture and understand the information provided.

Pop-Up Book as a learning medium has great potential to create a more interactive and dynamic learning experience. Elementary school children usually have shorter attention spans and are easily distracted. However, through its attractive visual design, the Pop-Up Book is able to capture their attention and help students focus more on the lesson. By using three-dimensional elements, students not only read but can also directly interact with the material being studied, in line with the opinion Ramadhani & Setyaningtyas (2021) elementary school students tend to prefer books that are equipped with pictures that capture their attention. They can see the pictures that appear, touch, and move the parts of the book designed to move, creating a more immersive learning experience. The pop-up book media presents an element of surprise on every page, making students enthusiastic and eager to see the next page when opened (Arum & Yuanta, 2019). Children will be directly involved in cultural introduction through the images found in the pop-up book, such as traditional clothing, musical instruments, wayang art, typical food, traditional ceremonies, traditional dances, and historical relics found in Central Java. This greater sensory engagement compared to traditional learning methods like reading texts makes students feel more connected to the material. This encourages their motivation to explore the subject more deeply. Stated that the advantages of pop-up book media include: 1) Pop-up books are made using thick paper, making them more durable and less prone to tearing, 2) Each page is adorned with interesting images that can increase student interest and make them more active during the learning process, 3) Pop-up books can be used for both individual and group learning (Izzah & Setiawan, 2023).

The use of pop-up books in education has been proven to have a significant positive impact, especially in increasing student satisfaction and enthusiasm. Research by Fadil et al. (2023) shows that 80% of students feel happy when the teacher uses this media, indicating that the visual and interactive elements of the pop-up book make the learning experience more enjoyable. These findings support the theory that enjoyable learning can enhance student engagement. Piaget also argued that elementary school children need assistance learning with real-life examples during the learning process (Ibda, 2015).

In addition, based on the development of cognitive theory, grade IV students who are around 10 years old are in the concrete operation stage. At this stage, students need learning media that is real and contextual to support their learning process (Megawati & IGALP, 2020). Therefore, pop-up books become an effective tool to support children's cognitive development and create a more engaging learning atmosphere. Moreover, pop-up books are very beneficial in helping students understand abstract concepts that are often difficult for them. According to Cahyani & Sari (2020) pop-up books have several important benefits for children: (1) this medium can help children appreciate and take care of the books they own, teaching them to be more disciplined and responsible in maintaining their personal belongings; (2) pop-up books support the development of children's creativity, making them very suitable to be introduced early on to stimulate their creative growth quickly; (3) pop-up books also allow children to imagine more freely, enabling them to quickly absorb the knowledge gained; (4) pop-up books can help children recognize the shapes of objects better; (5) this medium plays a role in increasing children's reading interest and motivation to learn. However, despite these advantages, pop-up books also have some drawbacks, particularly in the time-consuming production process that requires a high level of patience and precision. According to the opinion, Umam et al. (2019) explain that the use of pop-up books in the learning process has several drawbacks. (1) The process of creating this media usually takes longer because it requires a high level of precision; (2) currently, there are no sellers of pop-up books that showcase local culture from specific regions, as the majority of available pop-up books focus more on folklore, fairy tales, fables, or encyclopedias of knowledge; (3) the production of this media also requires a significant amount of cost.

Integrating cultural elements into Pop-Up Book learning media based on local wisdom offers many significant benefits, especially in enriching the teaching and learning process. In line with the opinion Endayani (2023) that education based on local wisdom is education that teaches students about the culture and traditions of a society that has long existed and has been passed down through generations, as well as containing the noble values of the local culture.

That is reinforced by Pingge (2017) who explains that local wisdom has a pedagogical value that can regulate behavior for the common good of the community. The goal of implementing local wisdom in education is to introduce the culture and traditions of the student's place of residence so that they understand and continue to preserve them. Local wisdom also plays a role in equipping students with attitudes, knowledge, and spirituality related to their region, so that they can preserve and develop the advantages of local wisdom in that area (Muzakkir, 2021). Local wisdom encompasses the values, traditions, and culture that develop in a region as a result of the interaction between the community and its environment. One of its main benefits is strengthening students' cultural identity. When students are introduced to local wisdom from various regions, they not only learn about their own regional culture but also understand that each region in Indonesia has different traditions and customs. State that the introduction of local wisdom can strengthen children against the negative impacts arising from current globalization, as well as contribute to the instillation of character education that will have a positive influence (Kurniawati et al., 2021). Local wisdom can be integrated into the education system as an effort to preserve the distinctive culture of a region. Education based on local wisdom (Wafiqni & Nurani, 2018) is a planned and conscious effort to explore and utilize local potential wisely, in order to create a supportive atmosphere and learning process. By getting to know and understand local culture, students will feel proud of their cultural heritage, which helps form a strong sense of identity within the community (Supriyono et al., 2018). It also ensures that cultural traditions and values are not lost amidst the influence of globalization. By recognizing and understanding local culture, students will feel proud of their cultural heritage, which helps shape a strong identity within the community. This also ensures that traditions and cultural values do not disappear amidst the influence of globalization. Students are also taught to appreciate diversity, which fosters a spirit of tolerance among them. Furthermore, these cultural elements enhance contextual understanding, as academic material linked to familiar cultural experiences makes it easier for students to grasp learning in a relevant way. Knowledge about traditional ceremonies, special foods, arts, traditional clothing, or legendary stories from various regions presented through a Pop-Up Book will strengthen students' emotional connection with the nation and country. Previous research conducted by Tirtoni et al. (2019) shows that media based on local wisdom can cultivate the value of patriotism. This is in line with the goals of Pancasila-based education, which is to instill a sense of love for the homeland and pride as citizens of Indonesia. This also facilitates the development of critical thinking skills, where students are invited to explore cultural values, compare them with other cultures, and assess their relevance in modern life.

Based on the research findings, the use of a local wisdom-based Pop-Up Book stimulates students' thinking skills to analyze, evaluate, and draw conclusions from the presented stories. In line with the opinion [3] that critical thinking skills refer to students' ability to analyze the problems they face, distinguish problems carefully, identify existing issues, and gather the necessary information to find solutions. Research conducted by Lestari & Farhurohman (2020) states that pop-up books have a significant impact on improving students' critical thinking skills. The same thing is also mentioned in the research Suroiha et al. (2021) about Pop-Up Book Media on Critical Thinking Skills in Elementary School Students which aims to design pop-up learning media to help fourth-grade elementary school students improve their deep thinking abilities. The research results show that this media is effective in facilitating students' understanding. Books presented through pop-up media can enhance students' logical thinking abilities while also increasing their motivation to learn. In addition, students also gain a better understanding of the learning material. The results of the general thinking test and the learning test show a positive development in students' thinking abilities. This happens because an enjoyable learning process helps students explore themselves while facing various challenges (Pare & Sihotang, 2023). The strengthening of critical thinking skills is related to presenting complex information in a simpler form, making it easier for students to understand and connect

ideas from what they see. Students become more actively involved in the learning process, which allows them to see the relationships between the cultural events presented and the values contained within them.

In its application, teachers can use Pop-Up Book media based on local wisdom to trigger deeper and more meaningful class discussions. For example, students can be invited to discuss the cultural differences contained in the stories in the Pop-Up Book, as well as question and analyze the issues that arise, such as differences in views or solutions to problems faced in the story. Through this activity, students not only gain an understanding of diversity, but are also trained to think more critically in facing the challenges of everyday life. To increase students' involvement in the learning process and increase their knowledge, which in turn can improve learning outcomes and achieve learning objectives, a learning model is needed that emphasizes active student participation, by connecting learning materials with events that occur in everyday life (Anggraini et al., 2024). In addition, the use of local wisdom-based media can enrich the learning process with a cultural context that is closer to students' lives, making it more interesting and easy to understand (Sunaryati et al., 2024). The use of pop-up books in the learning process also supports in-depth group discussions. The group discussions generated from the use of pop-up books help students develop critical thinking skills, as they learn to examine information from various perspectives, ask probing questions, and build arguments based on data or evidence (Tarigas et al., 2024). In addition, they are also trained to think reflectively, evaluate their own opinions, and refine their views based on feedback from group members. This interaction also strengthens students' social skills, such as empathy, tolerance, and the ability to collaborate with others who may have different perspectives or backgrounds. Pop-Up Book based on local wisdom not only functions as a learning tool, but also as a means that can actively involve students in a more participatory learning process (Santoso, 2024). These skills are very important to support the dimensions of "global diversity" and "critical thinking" in the Pancasila student profile, where students are encouraged to become open-minded individuals, appreciate differences, and actively contribute in groups.

The results of this study have a significant impact on the development of local wisdom-based curriculum, especially in helping students understand and appreciate diversity in a global context. Learning that promotes local values not only brings students closer to their own culture, but also broadens their understanding of the diversity that exists in the world (Simanungkalit et al., 2024). A local wisdom-based curriculum can be a bridge to introduce different perspectives, traditions, and lifestyles, which in turn teaches students the importance of tolerance, mutual respect, and maintaining harmony in a multicultural society. Schools can consider incorporating local wisdom-based materials into various subjects, such as language, art, social science and civic education. For example, in language lessons, students can study local literature that contains diversity values, while in social science, they can analyze social phenomena related to cultural differences and ways of life in various parts of the world. This is very relevant in supporting the achievement of a holistic Pancasila Learner Profile, which includes the dimensions of global diversity, critical thinking, and the ability to contribute positively in an increasingly globalized society (Rohmah et al., 2023). By strengthening the local wisdom-based curriculum, schools can create more relevant and meaningful learning for students (Ningrum et al., 2023), as well as prepare them to become citizens who are aware of the importance of diversity at the local and global levels.

Conclusion

The conclusion of this study shows that the Pop-Up Book media based on local wisdom has a significant impact on global diversity and the critical thinking skills of 4th-grade students. The results of the analysis through the multivariate Wilks' Lambda test show that the value is 0.936 with $F = 7.380$ and significance 0.001 ($p < 0.05$), indicating that variable X (local wisdom-based Pop-Up Book media) significantly affects variable Y1 (global diversity) and Y2 (critical thinking). Moreover, the Pop-Up Book is effective in capturing students' attention with its interactive visual design, which integrates elements of local culture. The locally wisdom-based Pop-Up Book not only has an attractive design but also benefits learners by allowing them to imagine more freely, thus quickly absorbing the knowledge gained. The use of media that highlight local wisdom, such as pop-up books, can be an effective option to increase understanding of diversity and hone critical thinking skills in students. Teachers are advised to consider the integration of pop-up books in learning related to local culture, global issues, or other contexts. Therefore, the locally wisdom-based Pop-Up Book is an effective learning medium for developing the dimension of global diversity and critical thinking skills.

Suggestions for future research could expand the testing of the effect of using local wisdom-based media in a wider range of contexts to find out whether similar results can be obtained in different educational conditions. For example, further research could be conducted in schools in urban areas that have more cultural diversity, or in areas with very different local traditions, to see if the use of local wisdom-based Pop-Up Books still has a significant influence on the development of students' global diversity dimensions and critical thinking skills. Other researchers can learn how to adapt this pop-up book media to improve students' understanding and critical thinking skills at a higher level, while identifying challenges and opportunities in its application.

Acknowledgments

Praise and gratitude are offered to Allah SWT for the ease and smoothness during the implementation of this research. Deep gratitude is also extended to all parties who contributed to the preparation of this article. Thank you also to SD Muhammadiyah 16 Karangasem, SD Insan Mulia, and SD Muhammadiyah Program Unggulan Gedongan for the cooperation and permission granted to conduct research in those schools.

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