The Feasibility of Kopikaya Learning Media (Smart Box of Cultural Diversity) to Improve the Learning Outcomes of Grade V Elementary School Students

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Abstract: Education is a conscious and planned effort to create an active and conducive learning process so that students are able to develop their potential optimally. One important instrument in education is the curriculum, including the Independent Curriculum which encourages the use of technology and learning innovation. However, observations at SDN Baturetno 1 show that learning is still conventional and does not utilize innovative media, resulting in low learning outcomes, especially in the material "Indonesian Cultural Diversity". This study aims to develop KOPIKAYA (Cultural Diversity Smart Box) learning media in the form of interactive game-based 3D media containing instructions for use, illustrated materials, and educational games to improve the learning outcomes of fifth-grade elementary school students. The research method used is Research and Development (R&D) with the ADDIE model which includes the stages of analysis, design, development, implementation, and evaluation. Validation was carried out by material experts, language experts, and media experts with the results of validity percentages of 82.2%, 86%, and 88%, respectively, which are included in the valid category. Based on the validator's suggestions, improvements were made to the font size, image clarity, and material coating. The results showed that KOPIKAYA media is suitable for use and can improve student motivation, understanding, and learning outcomes. Therefore, KOPIKAYA can be an alternative, innovative learning medium that supports the achievement of more optimal learning outcomes.

Keywords: Eligibility, Learning Media, KOPIKAYA, Cultural Diversity, Learning Outcomes

PRELIMINARY

Education is a conscious and planned effort to create a learning atmosphere and process that allows students to actively develop their potential, fostering spiritual and religious strength, self-control, personality, and intelligence (Rahman et al., 2022). This aligns with Law Number 20 of 2003 concerning the National Education System, which emphasizes that education aims to create a conducive learning environment so that students can optimally develop their potential. One important instrument in achieving

educational goals is the curriculum. According to Ripandi (2023), the curriculum is a vital element in education, serving as a guide and direction. In recent years, several changes to the curriculum have occurred along with changes in ministers. The Merdeka Curriculum is a development of the K13 curriculum, emphasizing the development of students' potential, talents, interests, and skills through the use of technology and digitalization of learning (Nikma & Rozak, 2023).

Through the learning process, students are not only required to understand academic material but are also introduced to Indonesia's cultural diversity. One subject that embodies these values is Pancasila Education. In this subject, students learn about the values of Pancasila while also recognizing the diversity of ethnicities, religions, cultures, and customs in Indonesia. Indonesia is a pluralistic country, with ethnic, linguistic, religious, and cultural diversity that can be viewed from both vertical and horizontal perspectives. Vertical diversity relates to differences in educational, economic, and social levels, while horizontal diversity is evident in differences in ethnicity, religion, customs, and regionalism (Saddam et al., 2020).

However, observations and interviews conducted by researchers on March 10, 2025, with a fifth-grade teacher at SDN Baturetno I, Mrs. Novilia Gupita Sari S.Pd., revealed that the learning process still uses conventional methods that tend to be monotonous. Teachers have not utilized engaging and innovative learning media, resulting in students easily becoming bored and lacking motivation. Furthermore, there are limited availability of learning media, diverse student learning styles, and the presence of students with visual impairments, making the material difficult to understand optimally. This has an impact on low student learning outcomes. In the Pancasila Education subject, "My Indonesian Cultural Diversity," only 35% or 7 of 20 students met the Minimum Completion Criteria (KKTP), while 65% or 13 students did not achieve the completion score.

One way to address these issues is by utilizing innovative learning media. Learning media is anything used to convey learning messages to facilitate student understanding (Artha Margiathi et al., 2023). The use of learning media can foster interest, motivation, and provide a more enjoyable learning experience (Indriyani, 2019). Furthermore, learning media can take the form of physical or non-physical aids used by teachers to facilitate the delivery of material, making it more effective and efficient.

One innovative learning media proven effective is the Smart Box. This media is designed as an educational box containing interactive games that students can play to facilitate understanding of the learning material. Research conducted by Oktavia et al., 2024, showed that the implementation of the Smart Box media significantly improved student learning outcomes in Pancasila Education. Student learning completion increased from 43% in the pre-cycle to 64% in the first cycle, and reached 89% in the second cycle. The research results also showed an increase in student learning completion from 62% to 88% after using the Smart Box media. Improved learning outcomes are an important indicator of learning success. Learning outcomes are changes in behavior or competencies acquired by students after undergoing the learning process, including knowledge, skills, and attitudes. Learning outcomes serve as a benchmark for how well students understand and master the material being taught.

Therefore, based on the aforementioned issues, the researchers intend to develop innovative learning media to improve student learning outcomes. According to research (Artha Margiathi et al., 2023), learning media is a crucial factor in the teaching and learning process. Learning media can be defined as aids, both physical and non-physical, intentionally used as intermediaries between educators and students to facilitate understanding of learning material, thereby making the learning process more effective, efficient, and engaging. Based on this, the researchers intend to develop an innovative learning media called KOPIKAYA (Smart Box for Cultural Diversity). This media is designed as a 3D interactive game-based platform for students to play. It is believed that game media like this can provide a fun learning experience that is also full of knowledge, so that it can increase students' understanding of the learning material (Hidayat & Muhajir, 2015).

The development of the KOPIKAYA media aims to provide an alternative, engaging and innovative learning tool, particularly for the topic "My Indonesian Cultural Diversity." Through this media, it is hoped that students will be able to participate in the learning process in a more enjoyable way, thus making the material easier to understand. A good understanding of the material will indirectly have a positive impact on improving student learning outcomes. Support for this media development is also reinforced by the results of a previous study conducted by Oktavia et al. (2024), "Application of Smart Box Media to Improve Learning Outcomes in Pancasila Education on the Material of

Indonesian Cultural Wealth for Fourth Grade Elementary School Students." This study demonstrated that the use of Smart Box media can significantly improve student learning outcomes. Student learning completion increased from 43% in the pre-cycle, to 64% in the first cycle, and reached 89% in the second cycle. These findings demonstrate that the use of innovative media such as Smart Box can improve student motivation and learning outcomes. Another study conducted by Aminah & Yusnaldi (2024) showed that smart boxes contribute to improving the quality of education and improving student learning outcomes in schools.

Based on this background, the researchers were interested in conducting a study entitled "Development of KOPIKAYA Media for the Material "My Indonesian Cultural Diversity" to Improve Learning Outcomes of Fifth Grade Elementary School Students." It is hoped that the development of KOPIKAYA media can be a solution to facilitate students' optimal understanding of the material, increase learning motivation, and ultimately improve student learning outcomes.

METHOD

This study employed a Research and Development (R&D) method with the ADDIE development model, which consists of five stages: analysis, design, development, implementation, and evaluation (Sugiyono, 2020). This study aimed to develop a product in the form of a cultural diversity smart box for fifth-grade students at Baturetno 1 Elementary School, specifically for Pancasila Education. The trial subjects consisted of three validators (a material expert, a media expert, and a language expert), a fifth-grade teacher, and 20 fifth-grade students at Baturetno 1 Elementary School. Data collection techniques included observation, interviews, questionnaires, and tests. The instruments used included observation sheets, interview sheets, validation sheets, teacher and student questionnaires, and test sheets.

Data were analyzed using validity, practicality, and effectiveness analysis techniques. Validity data were obtained from expert validation of the media content and presentation. Practicality was measured through teacher and student questionnaires after use of the media. Effectiveness was assessed by the results of student learning tests to determine improvements in understanding. A product was deemed feasible if it met the criteria for validity, practicality, and effectiveness. To determine the level of feasibility,

a Likert scale was used to indicate whether the Smart Box (KOPIKAYA) was suitable for use (Saputri & Wiratsiwi, 2022). The formula for calculating the results is as follows:

$$P = n / N \times 100\%$$

Information:

P = Presentase score (%)

n = Total scores obtained

N = Maximum score

The assessment criteria for validating the development of the cultural diversity smart box are as follows:

Table 1 Smart Box Validity Level Criteria

Presentase (%)	Valid Criteria
76 – 100 %	Valid
56 – 75 %	Quite valid
40 – 55 %	Less valid
0 – 39 %	Invalid

Sources: Arikunto In Khoirudin, 2019:47)

RESULTS AND DISCUSSION

In this study, the resulting product is the Kopikaya (Smart Box for Cultural Diversity) learning media. This product is expected to improve the learning outcomes of fifth-grade elementary school students. Kopikaya includes user instructions, Cultural Diversity materials, and games. Users can access the instructions by scanning the barcode provided on Kopikaya. The Cultural Diversity materials are complemented by images that can provide visualization to users. The games on Kopikaya are intended to increase student enthusiasm in participating in the learning process. Figure 1 shows the exterior of Kopikaya.

Figure 1 Exterior View of Kopikaya

The interior view of Kopikaya is shown in Figure 2.

Figure 2 Inside View of Kopikaya

After completing Kopikaya, the researcher conducted validation with three experts: a material expert, a language expert, and a media expert. The data obtained from the validation consisted of qualitative and quantitative data. The validation results are expected to be used to improve the developed product, resulting in a viable product. Quantitative data was obtained from the validator's assessment. These assessments were averaged to determine the feasibility criteria for the material, language, and media aspects. The table below shows the results of the validation by material experts.

Table 2. Results of Material Expert Validation

No.	Assessment Indicators	Score
1	The alignment of Kopikaya content with Learning Outcomes (CP).	4
2	The alignment of Kopikaya content with indicators.	4
3	The alignment of learning objectives with indicators.	5
4	The alignment of questions presented in Kopikaya with the material.	3
5	The difficulty level of Kopikaya is appropriate for the material.	4
6	The overall content of Kopikaya motivates students in learning.	4
7	The material in Kopikaya is clear and easy to understand.	4
8	The alignment of Kopikaya content with the material.	5
9	Stimulates students' curiosity.	4
	Total Expert Assessment Scores	**37**
	Maximum Scores	**45**
	Validity Percentage	**82,2%**

Table 2 shows the subject matter expert assessment of Kopikaya at 82.2%. This percentage is obtained by dividing the total expert assessment scores for all assessment indicators by the maximum score and then multiplying by 100. Each indicator is scored on a Likert scale ranging from 1 to 5. Table 2 shows that the assessment indicator with the lowest score from the validator was the suitability of the questions presented in Kopikaya to the material. This indicates that some questions developed in Kopikaya did not align with the material and therefore needed to be revised.

The results of the linguist validation are shown in Table 3.

Table 3 Results of Validation by Linguists

| No.	Indikator Penilaian	Score
1	The sentence structure in Kopikaya is easy to understand.	5
2	The sentences used in Kopikaya conform to the rules of good and correct Indonesian.	4
3	The sentences used in Kopikaya are communicative.	4
4	The language used evokes a sense of enjoyment when students use it and encourages them to thoroughly study the material.	5
5	The sentences used in Kopikaya do not create ambiguous meanings.	4
6	The sentences used in Kopikaya foster curiosity.	4
7	The sentences in the Kopikaya user manual are easy to understand, making it easy for students to use Kopikaya.	4
8	The sentences used in Kopikaya media use scientific terminology, thus enhancing student literacy.	4
9	The grammar choice in Kopikaya is appropriate for students' emotional maturity.	5
10	The practice questions in Kopikaya use sentences that are easy for students to understand.	4
	Total Expert Assessment Scores	**43**
	Maximum Scores	**50**
	Validity Percentage	**86%**

Table 3 shows the linguist's assessment of Kopikaya at 86%. Similar to the assessment percentage obtained by the content experts, this percentage is obtained by dividing the total expert assessment scores for all assessment indicators by the maximum score and then multiplying by 100. Each indicator on the linguist validation sheet is scored on a Likert scale, ranging from 1 to 5.

Table 3 shows that three assessment indicators in the linguist validation results received the maximum scores: (1) the sentence structure in Kopikaya is easy to understand, (2) the language used evokes a sense of enjoyment when students use it and encourages them to study the material thoroughly, and (3) the choice of grammar in Kopikaya aligns with students' emotional maturity. Based on the linguist's assessment, it can be said that the sentence structure used in Kopikaya is easy to understand for fifth-grade elementary school students. Furthermore, Kopikaya can foster a sense of enjoyment in students while learning and encourages them to study the material thoroughly. Another factor that was considered optimal by the linguist was the word choice used in Kopikaya, which aligns with the emotional maturity of fifth-grade elementary school students. The results of the linguist validation are shown in Table 4.

Table 4. Media Expert Validation Results

No.	Assessment Indicators	Score
1	Kopikaya provides students with opportunities for independent practice.	4
2	Kopikaya can be used individually.	4
3	Clarity of Kopikaya's instructions.	4
4	Kopikaya's color selection.	5
5	Use of Kopikaya's font.	4
6	Attractiveness and clarity of images, backgrounds, and usage.	4
7	Kopikaya's display design.	5
8	Appropriate arrangement of Kopikaya's components.	5
9	Practicality of Kopikaya's use.	4
10	Ease of use of Kopikaya.	5
	Total Expert Assessment Scores	**44**
	Maximum Scores	**50**
	Validity Percentage	**88%**

Table 4 shows the media expert's assessment of Kopikaya at 88%. Similar to the assessment percentages obtained by the material experts and language experts, this percentage is obtained by dividing the total expert assessment scores for all assessment indicators by the maximum score and then multiplying by 100. Each indicator on the language expert validation sheet has a score according to a Likert scale, ranging from 1 to 5. Based on Table 4, it can be seen that the maximum scores were obtained for four assessment indicators: (1) Kopikaya's color selection, (2) Kopikaya's display design, (3) the arrangement of Kopikaya's components appropriately, and (5) ease of use. Based on these assessments, the Kopikaya developed is appropriate in terms of color selection, display design, component arrangement, and ease of use. The average validation results from the three experts are presented in Graph 1.
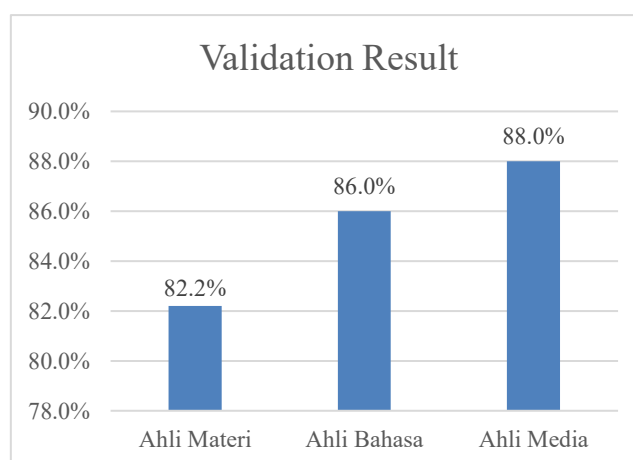
Chart 1 Results of Validation by Material, Language, and Media Experts

Graph 1 shows the validity percentages from the three experts: material, language, and media. The validity criteria obtained from all three experts are valid. This is because the validity score percentage for all experts is above 76%. Based on this, it can be concluded that the Kopikaya (Smart Box for Cultural Diversity) learning media is suitable for implementation with fifth-grade elementary school students to improve learning outcomes. Qualitative data was obtained from comments or suggestions for improvement provided by the three validators: material, language, and media experts. Table 5 shows the results of the revisions to the Kopikaya that have been developed.

Table 5. Validator Comments or Suggestions

Materials Expert	The material in Kopikaya is clear and can be applied in the learning process.
Linguist	Kopikaya can be implemented in teaching and learning activities, but it would be better if Kopikaya used lighter and more water-resistant materials.
Media Expert	The font size in Kopikaya could be enlarged, and the images used in Kopikaya could be clearer and more resistant to damage.

Based on Table 5, to produce the best research product, the researcher can make revisions based on the suggestions provided by the three validators. The researcher did not make any changes to the main ingredients of Kopikaya. The main ingredient used is plywood wrapped in paper. To ensure the product is waterproof, the researcher coated the paper with plastic or laminated the components inside Kopikaya. Furthermore, the researcher also revised the font size. Some font sizes used in Kopikaya were enlarged to allow students to use Kopikaya more clearly. Some images used in Kopikaya were also changed to reflect the intended information.

The revisions made to Kopikaya, based on the comments and suggestions provided by the three validators, are expected to maximize Kopikaya's effectiveness in improving the learning outcomes of fifth-grade elementary school students in Cultural Diversity. Kopikaya is a smart box learning medium. Previous research has conducted on smart box learning media to improve student learning outcomes in Social Studies. One example is research conducted by (Aminah & Yusnaldi, 2024), which showed that smart boxes contribute to improving the quality of education and improving student learning outcomes in schools. Based on these research findings, the implementation of Kopikaya, which has been declared feasible by three validators, is expected to improve the learning outcomes of fifth-grade students in social studies, particularly in the subject of Cultural Diversity.

CONCLUSION

Based on the results of research and development that has been conducted, it can be concluded that the KOPIKAYA (Smart Box of Cultural Diversity) learning media is suitable for use as a learning media on the subject of My Indonesian Cultural Diversity for fifth grade elementary school students. The validation results from material experts, language experts, and media experts show a validity percentage of 82.2%, 86%, and 88%, which are included in the valid category. This media is also considered practical to use based on the results of trials with teachers and students, and is effective in improving student understanding and learning outcomes. By combining visual aspects, interactive games, and illustrated materials, KOPIKAYA is able to foster students' interest and motivation to learn. Therefore, KOPIKAYA media can be an alternative, effective, innovative learning media to improve student learning outcomes on the subject of Cultural Diversity at the elementary school level.

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