

Development of the "JATARA" Board Game as a Cultural Exploration Medium for IPAS in Grade IV Elementary School

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ABSTRACT

Lack of learning media innovation is making students less active and leading to a low understanding of student concepts related to the material IPAS. This study aims to develop a board game exploring the Indonesian culture "JATARA", which is appropriate and effective as a cultural exploration medium for grade IV elementary school. The novelty of this study lies in the larger physical game board and the guidebook equipped with modules and handouts of material about Indonesian culture. This study uses the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The research subjects were grade IV students of Lamenta State Elementary School. The data collection techniques used were questionnaires and tests. The research findings revealed that: (1) expert validation produced an average score of 91.25%, categorized as "very appropriate"; (2) material expert validation produced a score of 87.5%, categorized as "very appropriate"; (3) small group trials conducted by teachers and students produced scores of 97.92% and 95.83% respectively, both categorized as "very appropriate"; (4) large group trials produced a score of 96%, also categorized as "very practical"; (5) The evaluation test results were 100% in the "very effective" category. The results indicate that JATARA media is suitable and effective for use as a cultural exploration medium for grade IV elementary school. This media contributes significantly to "IPAS" learning by offering practical and innovative solutions that can increase student involvement and understanding in a cultural context, at the elementary education level.

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1. INTRODUCTION

Indonesia currently uses the independent curriculum. Learning with the concept of independent learning in this independent curriculum prioritizes student interests and talents so that learning outcomes can foster creative attitudes and make the learning process more enjoyable [1]. One of the changes in the independent curriculum is the merging of science

and social studies lessons into natural and social science at the elementary school level, which aims to ensure that students receive comprehensive and balanced learning, with the hope that students can manage the natural and social environment as a whole.

Learning natural and social sciences presents new challenges for teachers in learning because efforts to achieve the learning objectives of natural and social sciences have not met expectations. Rahmayati & Prastowo explained that the reality often faced during the process of learning natural and social sciences in class is that teachers predominantly teach science and social studies separately, and the material delivered tends to be informative and requires students to memorize [2]. In line with the opinion of Pawartani et al., explaining that learning natural and social sciences carried out by teachers only focuses on memorizing concepts, terms, and theories, so that important aspects such as processes, attitudes, and applications that are integral parts of integrated learning are neglected [3].

Based on observations conducted through interviews with fourth-grade teachers at Lamenta State Elementary School, it was discovered that teachers in natural and social science lessons have used learning media in the form of textbooks, images, videos, and worksheets. However, the media used have not fully provided opportunities for students to be directly involved in their use. The minimal use of learning media can make students less active and unfocused when teachers deliver lesson material. Students tend to engage in other activities such as talking with classmates and even playing. Furthermore, learning that focuses on memorization without adequate media also hinders students' optimal understanding of concepts.

From these problems, the lack of understanding of student concepts is influenced by learning conditions that are not in accordance with the characteristics of elementary school students. At this age, students need learning activities that involve them directly in the learning process. Elementary school students, on average, aged 7-12 years, are at the concrete operational stage, which means students need learning media that can increase learning motivation, make it easier for students to understand the material, and make learning more active [4]. Therefore, this study proposes an innovation in learning media that is suitable for application in the learning process, namely the board game learning media for exploring Indonesian culture (JATARA).

JATARA media is a learning media that combines board games with natural and social science learning materials on the topic of Indonesia's rich culture, topic B, Indonesia's cultural richness. JATARA media is a board game media that is developed in a visual form so that it can be seen, observed, and played directly by students. This media was developed according to the characteristics of elementary school students who still enjoy playing, are active, tend to be in groups, and like direct demonstrations [5].

JATARA media includes components such as a game board, question cards, information cards, a game guide, teaching materials, and dice. In this game, students act as pawns and answer the questions on the question cards.

Previous research has shown that the Nusantara Exploration media is effective for use as a learning medium that can increase student activity and conceptual understanding. Hariyadi et al. showed that the Nusantara Exploration media is suitable for use as a learning medium because it can improve student understanding and facilitate teacher performance in

learning [6]. Anjelinda et al. stated that board game media in social studies learning is valid and practical, so it is suitable for use. The result is that students are more active in learning, making it easier for them to understand the material being taught. [7]. In addition, Yohana et al. showed that the use of PETRA (Nusantara Map) media is effective and can improve student learning outcomes in learning [8].

The novelty of this study lies in the larger physical size of the game board, enabling its use to involve all students in the class. Furthermore, the game guidebook is complemented by a handout on Indonesian cultural diversity. Previous studies have adapted the game board to a standard size and lacked a game guidebook combined with comprehensive handouts.

Based on this background, the problem formulation discussed in this study is how to develop a suitable and effective JATARA board game as a cultural exploration medium for natural and social sciences for grade IV of SD Negeri Lamenta. Therefore, this study aims to develop a suitable and effective JATARA board game as a cultural exploration medium for natural and social sciences for grade IV of SD Negeri Lamenta. This learning media is expected to provide an interesting and meaningful learning atmosphere through learning activities while playing, thereby increasing students' activeness and conceptual understanding.

2. METHOD

This study uses a research and development (R&D) approach with the ADDIE model consisting of five systematic stages: analysis, design, development, implementation, and evaluation [9]. This model was chosen because it has systematic, simple, and easy-to-understand stages. This research was conducted in the even semester of the 2024/2025 academic year, involving 15 fourth-grade students of Lamenta State Elementary School. It should be acknowledged that the sample used was relatively small, so the findings cannot be generalized widely. The object of this study was JATARA media. Ethical considerations, including student consent and the approval of the relevant institution, were also obtained prior to data collection.

The data collection technique of this research concerns the feasibility, practicality, and effectiveness of JATARA media. The feasibility of JATARA media is obtained based on an assessment questionnaire in the form of a Likert scale of 1-4. The expert validation questionnaire consists of 20 questions. The practicality is obtained from the teacher response questionnaire, which consists of 12 questions, and the student response questionnaire, which consists of 10 questions. Then, the effectiveness of JATARA media is obtained through an evaluation test related to students' understanding of natural and social science concepts, totaling 10 multiple-choice questions created based on predetermined learning objective indicators.

The data analysis techniques used included feasibility testing, practicality testing, and effectiveness testing. Feasibility testing was conducted to obtain data from the assessments conducted by media expert validators and material expert validators. Furthermore, practicality testing was conducted to obtain data from the assessments conducted by teachers and students as users. The data generated from these assessments is

quantitative. This data is then converted into qualitative data based on feasibility and practicality criteria.

Based on Table 1, JATARA media is declared feasible if it reaches a feasibility percentage of 61%-100%. Based on Table 2, JATARA media is declared practical if it reaches a practicality percentage of 60%-100%.

Table 1. Eligibility Level Criteria

Percentage Achievement	Category
81-100%	Very worthy
61-80%	Worth it
41-60%	Quite decent
21-40%	Less worthy

Table 2. Practicality Level Criteria

Percentage Achievement	Category
81-100%	Very practical
61-80%	Practical
41-60%	Quite practical
21-40%	Less practical

The analysis of the effectiveness test of JATARA media was carried out by calculating the percentage of student evaluation results referring to the KKTP (Criteria for Achieving Learning Objectives) in grade IV of SD Negeri Lamenta in natural and social sciences, namely 68-78 (sufficient), 79-89 (good), and 90-100 (very good). The level of effectiveness, JATARA media is said to be effective for use in learning if it obtains a percentage of the number of students whose scores reach the sufficient category on the KKTP.

3. RESULTS AND DISCUSSION

The result of this development research is a board game learning media for exploring Indonesian culture, "JATARA." The development of this media has gone through a series of systematic ADDIE model procedures consisting of five stages: analysis, design, development, implementation, and evaluation.

3.1. Results

This research resulted in a board game learning media exploring Indonesian culture "JATARA" in the natural and social science content of My Indonesia is Rich in Culture for Grade IV elementary school, which has been proven to be feasible and effective for use. The development process was done using the ADDIE model, which consists of five stages.

3.1.1 Analysis

Analysis is the initial stage of research, identifying possible causes of performance gaps in learning, including problem analysis and needs analysis. The problem analysis shows that during natural and social science lessons, teachers have used textbooks, Figures, videos, and worksheets as learning support tools. However, the use of these media is considered inadequate. Capable of providing opportunities for students to be directly involved in their

use. Furthermore, students are still often given memorization assignments, which leads to less than optimal conceptual understanding of natural and social science materials.

A needs analysis showed that the lack of use of instructional media in natural and social science lessons resulted in students being less active in the learning process, as indicated by students often ignoring teacher explanations and engaging in other activities such as talking and playing with their classmates. Furthermore, students had poor conceptual understanding in natural and social science lessons. This was due to the large amount of memorization assignments given by teachers.

Based on the analysis, it can be concluded that students require a fun and engaging learning environment to stimulate their activeness and increase their interest in learning, making it easier for them to understand the natural and social sciences learning materials. Considering the characteristics of elementary school students who enjoy playing while learning, JATARA Media was developed to provide an engaging and enjoyable learning environment through playful learning activities while simultaneously facilitating student comprehension of the subject matter.

3.1.2 Design

The JATARA media design stage was carried out based on the results of the analysis in the previous stage. This design stage consists of compiling natural and social science materials and creating media designs, as follows.

a. Preparation of Materials for natural and social sciences

The material included in the JATARA media is natural and social science material, chapter 6, "My Indonesia is rich in culture," topic B, "Indonesia's cultural richness." This material discusses cultural diversity in Indonesia, the factors causing cultural diversity, and attitudes of respecting cultural diversity in the surrounding environment. This material was obtained by reviewing teachers' and students' books as well as several articles relevant to the material.

b. JATARA Media Design

At this stage, the Canva application was used to create the overall design of the JATARA media components, including the game board, game cards, guidebook, and teaching materials. The JATARA media was designed with attention to the composition, combination, and placement of elements such as color, font type, and size, as well as images of cultural diversity designed to suit the characteristics of elementary school students. Meanwhile, original images related to cultural diversity were taken from sources relevant to the material. The following is the JATARA media design presented in Figure 1.



Figure 1. JATARA Media Design: (a) Game Board, (b) Game Cards, (c) Guidebook & Teaching Materials

3.1.3 Development

In this development stage, the initial step is to create JATARA media according to the initial design. Then, product validation is carried out through an assessment process by media and content experts, and revisions are made based on the criticism and suggestions provided.

a. Product Manufacturing

Product manufacturing is carried out by printing JATARA media based on the design that has been made with the following specifications: (1) The game board is printed with dimensions of 3 m × 2 m. using flexi material; (2) game cards are printed with a size of 6 cm × 8.6 cm using 280 gms cartoon card; (3) guide books and teaching materials are printed with a size of 14.8 cm × 21 cm (A5) using 230 gms art paper (cover) and 150 gms (content pages). The following printed JATARA media is presented in Figure 2.



Figure 2. JATARA Media: (a) Game Board, (b) Guidebook & Teaching Materials, (c) Game Cards.

b. Product Validation

Product validation aimed to determine the level of feasibility and obtain criticism and suggestions from media and content experts. The media expert validation results yielded a

score of 95%, categorized as very valid without revision. The media expert validation results are presented in Table 3.

Table 3. Media Expert Validation Results

Assessment Aspects	Total Score	Shoes Total	Maximum Score	Results (%)	Category
Media display	26	76	80	95	Very worthy
Media presentation	42				
Material	8				

The validation by material experts yielded a score of 87.5%, indicating that the JATARA media is categorized as very suitable for use with revisions as suggested. The results of the validation by material experts are presented in Table 4.

Table 4. Results of Material Expert Validation

Assessment Aspects	Total Score	Shoes Total	Maximum Score	Results (%)	Category
Head	24	70	80	87,5%	Very worthy
Presentation	25				
Language	21				

Next, revisions were made to the JATARA media, focusing on improving the material in the guidebook and game cards. Based on suggestions from subject matter experts, the revisions included improving the layout, explaining material related to examples of cultural diversity, and improving the section on cultural respect. The following images, before and after the revisions, are presented in Figure 3.

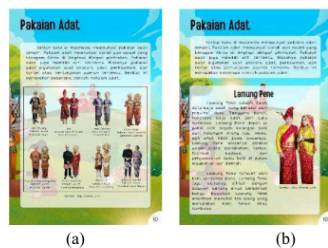


Figure 3. JATARA Media: (a) Before revision, (b) After revision

3.1.4 Implementation

In the implementation stage, a trial was conducted to determine the practicality and effectiveness of the JATARA media. The implementation of the JATARA media was carried out in June 2025. Before the trial, all fourth-grade students were given initial assessment questions aimed at determining the level of student knowledge in order to divide students into heterogeneous groups. The trial was carried out directly in the learning process guided

by the teaching module using the TGT (Team Game Tournament) type cooperative learning model.

a. Small Group Test

The small group trial involved six students and one teacher as an observer. The six students were selected using a comparison of initial assessment scores: two students with high knowledge, two students with moderate knowledge, and two students with low knowledge. The students were divided into two heterogeneous groups of three people each. After the small group trial, students and teachers completed a response questionnaire to determine the level of practicality after using the JATARA media.

Based on Table 5, the teacher response was 97.92%, categorized as very practical. The suggestion was that the learning process was going well, and the media used was very engaging. However, the language used in delivering the material needs to be improved to make it easier for students to understand. Table 6 shows that the student response in the small group trial was 95.83%, categorized as very practical, and comments that the JATARA media was very enjoyable and exciting.

Table 5. Teacher Response Questionnaire Results

Assessment Aspects	Total Score	Shoes Total	Maximum Score	Results (%)	Category
Material	23	47	48	97,92	Very practical
Media	24				

Table 6. Results of the Small Group Student Response Questionnaire

Assessment Aspects	Total Score	Shoes Total	Maximum Score	Results (%)	Category
Material	90	230	240	95,83	Very practical
Media	140				

b. Large Group Trial

A large-group trial was conducted on all 15 fourth-grade students at Lamenta Public Elementary School. Students were selected using a comparison of initial assessment scores: 5 students with high knowledge, 3 students with moderate knowledge, and 7 students with low knowledge. The students were divided into heterogeneous groups of 5 students each. After the large-group trial, students were asked to complete a questionnaire responding to the JATARA media.

Based on Table 8, the results of the student responses from the large group trial were 95% categorized as very practical, and the comments from the JATARA media made students happy and made it easier for them to do their assignments.

Table 7. Results of the Large Group Student Response Questionnaire

Assessment Aspects	Total Score	Shoes Total	Maximum Score	Results (%)	Category
Material	227	230	576	96	Very practical
Media	349				

Furthermore, the level of effectiveness of JATARA media from the results of student evaluation tests after using JATARA media showed that the number of students who reached the sufficient KKTP category was all IV students. Thus, the percentage of the effectiveness level calculated using the classical completeness formula, 100%, is also categorized as very effective.

3.1.5 Evaluation

After the JATARA media is implemented, the next stage is an evaluation based on the results of media validation, material validation results, teacher response results, student response results, and evaluation test results.

a. JATARA Media Eligibility Level

The JATARA media assessment, validated by media experts, includes three assessment aspects, namely the appearance aspect, the media presentation aspect, and the material aspect. In the appearance aspect, there are 7 question items with a score of 92.86% in the very appropriate category. In the media presentation aspect, there are 11 question items with a score of 95.45% in the very appropriate category. Meanwhile, in the material aspect, there are 2 question items with a score percentage of 100% in the very appropriate category. From these three aspects, an average score of 95% is obtained in the very appropriate category. The data from the media expert validation results are presented in Figure 4.

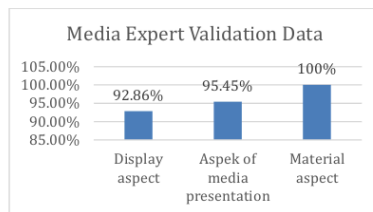


Figure 4. Media Validation Results Data Diagram

Furthermore, the level of suitability of JATARA media based on validation by material experts includes three assessment aspects, namely content, presentation, and language. In the content aspect, 7The question item produced a score of 85.71% in the very appropriate category. In the presentation aspect, there were 7 question items resulting in a score of 89.29%, categorized as very appropriate. Meanwhile, in the language aspect, there were 6 question items with a score of 87.5%, categorized as very appropriate. From these three aspects, an average score of 87.5% was obtained, categorized as very appropriate/valid and with suggestions for improvement. The data from the validation results by material experts are presented in Figure 5.

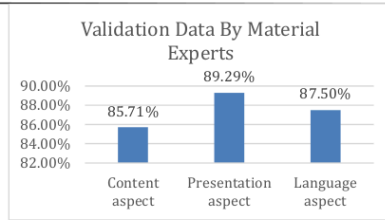


Figure 5. Data Diagram of Material Validation Results

b. JATARA Media Practicality Level

The practicality level of JATARA media was obtained based on teacher responses, student responses in small group trials, and student responses in large group trials. The practicality level of JATARA media, based on teacher responses, includes two aspects: the material aspect and the media aspect. In the material aspect, there are 6 question items with a score of 95.83%, categorized as very practical. Meanwhile, in the media aspect, there are 6 question items resulting in a score of 100%, categorized as very practical. Thus, the aspect obtained an average of 97.92% with a very practical category.

The practicality level of JATARA media, based on the results of student responses in the small group trial stage, obtained a score of 93.75% with a very practical category in the material aspect and 97.22% with a very practical category in the media aspect, so that an average score of 95.83% was obtained with a very practical category. While in the large group trial, it obtained a score of 94.58% with a very practical category in the material aspect and 96.94% with a very practical category in the media aspect, resulting in an average score of 96% with a very practical category. Data on teacher and student responses are presented in Figure 6.

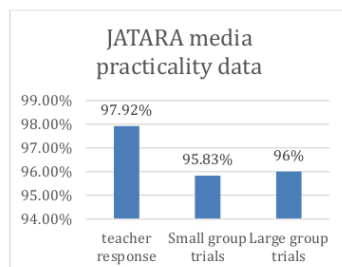


Figure 6. Teacher Response Results Data Diagram

c. Level Effectiveness Media JATARA

The effectiveness of JATARA media is determined based on the results of the evaluation test used to determine the level of understanding of natural and social science concepts of fourth-grade students of SD Negeri Lamenta. It was found that all students obtained scores above the KKTP. Based on the percentage of student evaluation test results

data calculated using the classical completeness formula, an achievement level of 100% was obtained; thus, JATARA media is included in the very effective category because most students have been able to understand the material well.

3.2. Discussion

This research produces a suitable and effective board game learning media for exploring the archipelago, "JATARA," for use in natural and social science learning on Indonesian cultural richness. The JATARA media was developed through the ADDIE model stages of analysis, design, development, implementation, and evaluation.

Based on the analysis, it was found that teachers in natural and social science learning have used textbooks, Figures, videos, and worksheets as learning support tools. However, the use of these media has not fully involved students in their use. This can be seen from students who often do not pay attention to teacher explanations and do other activities, such as talking and playing with their desk mates. This is in line with the findings of Gunayasa & Dewi, who stated that less conducive classroom conditions and minimal use of media tend to make students less active in learning in class [10].

From these problems, it can be seen that elementary school students enjoy learning when learning is carried out through games that are channeled through learning media. Playing activities can provide many benefits to students because these activities not only improve social, attitude, and language aspects, but can also improve cognitive aspects, and through playing activities, it also makes it easier for teachers to convey material concepts [11].

Fourth-grade students are also known to have low conceptual understanding in natural and social sciences. This is due to the large amount of memorization given by teachers without active student involvement. This is in line with the opinion of Hadijah et al., who stated that conventional learning methods that focus on memorization and lectures often make students passive, and they have less opportunity to explore the material in depth [12].

In this problem, this study developed the Indonesian cultural exploration learning media "JATARA" as a medium used by teachers and students in learning natural and social sciences. The use of JATARA media can provide a new and interesting learning atmosphere for students. Not only that, students can also carry out two activities at once, namely learning while playing. Game media is believed to be quite effective learning media because students can learn without pressure, because learning is done actively, and is fun [13].

JATARA media was designed in two stages: material preparation and media design. The material was prepared by reviewing natural and social science textbooks and articles relevant to the topic of Indonesia's cultural richness. According to Wulan et al., the material must be structured coherently to facilitate student understanding [14]. The Canva application was used to design all components and content of JATARA media, including images of elements of Indonesian cultural diversity, color design, fonts, and other supporting images. Arranged by paying attention to composition, combination, and position, and designed according to the characteristics of elementary school students. According to Pratama et al., attractive visual elements can increase student interest, especially at the elementary education level, and students' attention tends to be easily diverted [15].

The development aims to realize the product according to the previously created design and validate the product [16]. This stage is carried out by printing JATARA media components, such as printing a game board measuring 3 m × 2 m using flexible materials, printing playing cards measuring 6 cm × 8.6 cm using art paper, and printing guidebooks and teaching materials in A5 size using art paper.

In the development, a media validation process was also carried out involving experts to validate the developed product to ensure it meets the research objectives. In line with Hakki et al.'s opinion, the media will be validated by several experts, namely media experts and material experts, who aim to validate or determine whether or not the product is suitable for use as a learning medium [17]. Validation by media experts was only carried out in one stage. The assessment was based on three aspects, namely the appearance aspect, the media presentation aspect, and the material aspect, obtaining a score of 95% with a very suitable category and without any improvements. Validation by material experts was carried out in one stage. The assessment was carried out on the content, presentation, and language aspects, obtaining a score of 87.5% with a very suitable category and several suggestions for improvement, namely improving the writing style, adding explanations related to cultural examples, and changing the explanation about cultural respect.

Implementation aims to conduct trials on the products that have been created [18]. The JATARA media trial was conducted on teachers and all 15 fourth-grade students of Lamenta State Elementary School. The trial at this stage consisted of small group trials and large group trials. The selection of trial subjects was carried out by referring to Arikunto's opinion that the trial subjects for small groups were 4-14 respondents and for large groups between 15-50 respondents [19]. Before the trial was conducted, all fourth-grade students were given initial assessment questions to determine the level of student knowledge, in accordance with Sahir's opinion that the purpose of giving the initial test is to help researchers determine the level of knowledge or understanding of students before learning is carried out [20]. Then, from the results of the initial assessment test, researchers divided students into heterogeneous groups. This is in line with Kurniati's opinion that heterogeneous groups aim to gather several students who have differences in certain categories in one group [21]. The impact of this heterogeneous group is that it can provide opportunities for students to share knowledge and support each other. Where high-achieving students can act as mentors, deepen their understanding, and help their friends [22]. JATARA media is applied in classroom learning activities using the Team Game Tournament type cooperative learning model. The use of JATARA media with the TGT cooperative learning model can encourage students to be enthusiastic and active during the learning process. In line with the opinion of Firdaus et al., who stated that the advantage of the TGT cooperative learning model is that this learning model focuses on students, so that it can increase student enthusiasm and activeness and improve social skills through cooperation in groups [23].

The small group trial aims to determine the practicality of the learning media, and the large group trial is conducted to determine the effectiveness of the learning media, as seen from the results of student learning completeness [24]. Based on the teacher response questionnaire, the practicality of the JATARA media was 97.92%, which is a very practical category, and several suggestions for further improvement in the use of language when

delivering material, so that it is easy for students to understand. At the same time, the student response questionnaire at the small group trial stage obtained the practicality of the JATARA media of 95.83% with a very practical category and comments stating that the game was very fun and exciting. Furthermore, the student response questionnaire in the large group test obtained a practicality percentage of 96%, which was a very practical category, and comments that the JATARA media made students happy and made it easier for them to do their assignments. Then, based on the results of the evaluation test, the classical completeness percentage was 100% which means it is above the KKTP with a very effective category.

Evaluation was conducted to obtain the feasibility and effectiveness of JATARA media. Evaluation can be seen from the results of expert validation questionnaire, teacher and student response questionnaires, and evaluation tests completed by students. Based on the media expert validation questionnaire, a score of 95% was obtained for a category that was very feasible without revision. Media expert validation includes three assessment aspects with their respective score percentages, namely the appearance aspect of 92.86% with a very feasible category, the media presentation aspect of 95.45% with a very feasible category, and the material aspect of 100% with a very feasible category. Based on the media appearance aspect, the attractiveness of the JATARA media display obtained a score of 4, including very good criteria. According to Pagarra et al., learning media that are interesting, interactive, and present innovations will be able to attract the attention of students, especially elementary school students [25].

The results of the validation by material experts obtained a score of 87.5%, which is a very appropriate category. The validation of material experts includes three aspects with their respective score percentages, namely the content aspect of 85.71% with a very appropriate category, the presentation aspect of 89.29% with a very appropriate percentage, and the language aspect of 87.5% with a very appropriate category. Based on the Content aspect, the material presented in accordance with the learning achievements and objectives obtained a score of 4 with very good criteria. In line with the findings of Widyastuti et al., the suitability between material and learning achievements and objectives can influence the information conveyed so that it will build conceptual integrity at the student's thinking level [26].

The practicality of JATARA media was determined based on teacher response questionnaires and student response questionnaires during the learning process using JATARA media. The results of the teacher response questionnaire obtained a score of 97.92% with a very practical category. The results of the student response questionnaire in the small group trial obtained a score of 95.83% with a very practical category, and the results of the large group trial obtained a score of 96% with a very practical category. The assessment included two aspects, namely material and media aspects. It was found that the JATARA media developed was very interesting for teachers and students. This is in line with the findings of Azzahra et al., that interesting learning media will make students more motivated in learning, avoid boredom, and stimulate positive student responses [27]. JATARA media is a pedagogical innovation that combines board games with natural and social science materials. This approach is designed to encourage active, fun, and meaningful

learning for students. In line with the opinion of Asrin et al., breakthroughs must be made in an effort to improve basic understanding of culture, so that services in the field of education can be carried out professionally and organized [28].

The effectiveness of JATARA media was obtained from the results of student evaluation tests, which were then calculated using the classical learning completion formula, resulting in a percentage of 100% with a very effective category, which shows that all fourth-grade students have achieved KKTP, which means that students have been able to understand the material well. In line with the findings of Rahmatih et al., the use of learning media can provide ease of understanding and mastery of concepts for students [29].

Based on the validation results of media experts, material experts, teacher and student response questionnaires, and student evaluation test results, it can be concluded that JATARA media is very suitable and very effective for use as a learning medium for natural and social sciences on the subject of Indonesian cultural wealth.

A limitation of this research lies in the JATARA media, which only displays images of diversity, such as traditional houses, which are shown from only one angle. Furthermore, cultural diversity, such as performances and other cultural activities, needs supporting media such as videos. In addition, this research is limited by the size of the sample, which is small and only covers one agency, which can limit the generalizability of the results.

4. CONCLUSION

The development of JATARA media using the ADDIE model has been proven feasible and effective for use in learning natural and social sciences on the subject of Indonesian cultural wealth. Based on the validation results, media experts and material experts obtained scores of 95% and 87.5% respectively, with a very feasible category and several suggestions. Then the results of teacher responses obtained a score of 97.92% with a very practical category and several suggestions, the results of student responses to small group trials and large group trials with a very practical category of 95.83% and 96% respectively. The results of the evaluation test, which scored 100%, indicate that the JATARA media is very effective.

JATARA media is suitable for use by elementary school teachers as a learning tool that can engage students and optimize their understanding of concepts related to Indonesian cultural diversity. This media is designed with the media's suitability to the characteristics of students who enjoy playing, ensuring engaging and meaningful learning. Furthermore, the media is designed with the material's suitability to learning objectives and learning outcomes in mind.

Teachers can utilize JATARA media by integrating it into core learning activities for natural and social sciences, particularly on Indonesian cultural diversity. Successful implementation in the classroom requires a structured, flexible, and contextual learning plan that can accommodate student characteristics and support optimal learning objectives.

Based on the findings of this study, there are several limitations to the development of JATARA media. Future research that develops JATARA media is recommended to utilize technologies such as QR Codes/Augmented Reality (AR) that can display the entire object and present videos of cultural diversity. Furthermore, further research is encouraged to

expand the implementation of JATARA media in various schools, of course, tailored to student characteristics, curriculum needs, and local cultural contexts.

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