

Development of Puzzle Learning Media in Islamic Religious Education Subjects Class IV Elementary School

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Abstract: This study uses the ADDIE model to develop learning media in puzzles for Islamic Religious Education class IV subjects at SDN 304 Mamara. The goal is to assess the stage of development, validity, and practicality of the media. The research method uses a qualitative and quantitative approach with data collection techniques through observation, interviews, questionnaires, and documentation. The study results showed that the puzzle learning media was categorized as "Very Valid," with an average score of 83% from media, material, and language experts. The practicality test showed that this medium was very practical, scoring 97% from students and 82% from teachers. In conclusion, this puzzle learning media is effective and can be implemented in the learning process to increase student engagement.

Keywords: Puzzle learning media, ADDIE Model, Islamic Religious Education.

1. Introduction

Education in Indonesia, in general, plays a very important role in ensuring the survival of a nation and state. Education is an important means of improving human resources (HR) and advancing the country and its goals. (Sudirman, 2022). Education is a strategy carried out with awareness and planning to create a learning environment and learning process that facilitates students in exploring their unique potential (Ramdani et al., 2023). Education aims to cultivate individuals with intellectual prowess and noble ethical values (Jasmin, 2023). Learning is providing guidance or teaching to students in the learning process (Pane & Darwis Dasopang, 2017).

A person needs to go through a learning process to understand and develop their potential optimally (Karim & Ilham, 2022). The learning process is a form of communication between educators and students, where information and knowledge are delivered interactively. In this context, learning media is a tool that facilitates the communication process, allowing information to be conveyed more effectively and interestingly (Syamsuddin & Pameessangi, 2022). This learning media is very important because it not only supports the understanding of concepts and materials but also increases the involvement and motivation of students in the learning process. With the right learning media, the teaching and learning process can become more dynamic and interactive and facilitate the achievement of better educational goals (A. P. Wulandari et al., 2023).

Media is a tool designed to make it easier to deliver learning materials to students. In the learning process, the media not only functions as a means of conveying information but also plays an important role in making the learning process more efficient and effective (Wulan et al., 2024). Using appropriate learning media can improve the quality of interaction between educators and

students and make it easier to understand the material. Learning media supports the development of various aspects of students' skills, including cognitive knowledge, psychomotor skills, and affective aspects. By using media, educators can convey abstract concepts more concretely and interestingly. Therefore, it is important for educators to continue to innovate and adapt learning media to technological advances and changes in learning needs to ensure that the teaching and learning process remains relevant and effective (Nur Fakhrunnisaa, n.d.).

Learning media is applied in teaching to convey learning materials and spur students' thinking activities (Margareta, 2023). Learning media is a tool that can be used to help demonstrate certain facts, concepts, principles, or procedures to appear more real or concrete. The tools are intended to provide a more concrete experience to motivate and improve the memory of fibers and students' memory in learning, and learning media contain and convey messages or data to the recipients of messages, especially students (Hasriadi, 2023). Learning using media is very important for students because it can solve learning shortcomings (Nasaruddin & Nurdin, 2024). The main element in the learning process is the learning medium. Therefore, learning media can be used as a learning resource for students, making it easier for teachers to deliver material more easily (Citra Sanjaya et al., 2019).

However, the obstacles faced in the field stated that developing innovative and varied learning media was the main obstacle. It is known that in Islamic religious education learning, there is a lack of use of learning media, and when the teaching and learning process is carried out, teachers only use printed books as teaching tools in the classroom. Therefore, students are less active in participating in learning; this makes participants feel bored and do other things, such as playing and disturbing their peers when learning activities are carried out. Based on these problems, it is necessary to have learning media that are made and presented in an interesting way to improve learning. One of the media that can increase students' activeness is the use of puzzle learning media in the learning process so that learning Islamic religious education can be more effective and fun.

Puzzle learning media is simply played disassembled (Ating et al., 2018). Media *Puzzle* This is in the form of pieces of pictures, letters, words, and sentences into one whole image that involves the child's psychomotor and reasoning in compiling the puzzle above. This media is a learning medium that uses puzzle game techniques to use the brain (Dahniar, 2024). In addition, puzzle media can also be called an educational game because it is not only for playing but also for sharpening the brain and practicing between the speed of the mind and hands (Khomsoh & Gregorius, n.d.). In the learning process, using puzzle media can improve student development (Krisna Gae, 2024). Therefore, the media puzzle is hoped to help improve understanding of the material taught.

Based on the explanation above, there is a gap in research related to the development of puzzle learning media. Although this study has used qualitative and quantitative approaches to evaluate the validity and practicality of puzzle learning media in SDN 304 Mamara, it has not explored the long-term impact of puzzle media on student learning outcomes, especially in Islamic religious education learning. In addition, this study did not evaluate students' and teachers' perceptions of using puzzle media in a broader context or how this media can be integrated with other learning methods.

The purpose of the research that can be proposed based on this gap is to evaluate the use of puzzle learning media on student learning outcomes in Islamic religious education learning, as well as to understand the perception of students and teachers regarding the use of puzzle learning media in the broader learning context in grade IV of elementary school.

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This research is expected to provide a more comprehensive insight into the effectiveness of puzzle learning media and how this media can be optimized to improve elementary schools' teaching and learning processes.

2. Research Methods

This research uses a type of development research called Research and Development (R&D). Development research is a research method that produces a certain product or develops a pre-existing product. This research uses the ADDIE model to develop teaching media through puzzles. The ADDIE development model is one of the research and development methods used to develop learning tools. The purpose of this development research is to produce a specific product and to test the validity and practicality of the product developed.

The stages of the ADDIE development model are the first analysis. The early stages of this research begin with conducting a needs analysis, namely determining the basis of the problems faced during the learning process. In the second design stage, the researcher prepares learning media materials, puzzles, materials, and the names and tasks of angels made with certain materials. Third, at this stage, development is carried out by the manufacture of products in real form in accordance with the design that has been made previously. The development in question considers input from validators as a reference for media development. After the data from all validators has been obtained, the researcher makes improvements or revisions to the media. Fourth is implementation; at this stage, the product is then tested in learning. This trial was carried out to obtain information about the puzzle learning media that has been developed. The researcher distributed questionnaires to students and teachers to determine the criticisms and suggestions of the developed products. The fifth evaluation stage is when the researcher conducts formative and summative evaluations. Formative evaluation is carried out for data collection at each stage and used for refinement, and summative evaluation is carried out at the end of development to determine the influence and quality of development.

The data collection techniques and instruments researchers use in developing puzzle learning media are documentation, interviews, questionnaires, and documentation. The data obtained were then analyzed using quantitative descriptive analysis. The validation and practicality questionnaire on puzzle learning media contains written statements or questions for validators of media experts, materials, languages, students, and educators.

The validity and practicality of the questionnaire scale can be seen in the following table.

Table 1. Validation Criteria

Instrument Score	Score
Excellent	4
Good	3
Pretty Good	2
Bad	1

Table 2. Practicality Criteria

Instrument Score	Score
Strongly Agree	4
Agree	3
Simply Agree	2
Disagree	1

Data analysis was carried out using qualitative descriptive analysis and quantitative descriptive analysis. Qualitative data analysis is carried out by grouping information from

qualitative data in the form of inputs, criticisms, and suggestions for improvement contained in interview data and questionnaires conducted by researchers. The results are then carried out and used to revise the developed product. Quantitative data analysis analyzes validation and practicality data from students and educators. Then, the data is analyzed using the percentage formula and categorized according to the categorization table.

To determine the results of product validation and practicality, we analyzed the questionnaire using the percentage formula. (Jaya, 2022).

$$\text{Percentage of ideality} = \times 100\% \frac{\text{total score obtained}}{\text{ideal maximum score}}$$

The results of the percentage calculation are then categorized according to the following table:

Table 3. Validity Level Categorization

Percentage (%)	Criterion
81-100	Highly Valid
61-80	Valid
41-60	Quite Valid
21-40	Invalid

Table 4. Product Practicality Level Categorization

Percentage (%)	Criterion
81-100	Very Practical
61-80	Practical
41-60	Quite Practical
21-40	Impractical

3. Result

a. Development Results

This research produces a product in the form of puzzle learning media in Islamic religious education subjects. The type of research used in this study is Research and Development (R&D) development research, which uses the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model.

1) Analysis stage

The analysis stage is the first step to conducting preliminary research by collecting data related to the initial conditions and problems teachers and students face in the learning process according to the curriculum, learning materials, learning media, and the needs of teachers and students.

2) Design stage (planning)

This design stage is an advanced stage of the analysis stage. At this stage, product planning is carried out through several processes, namely media selection, material selection, and initial design to produce products according to the needs of students.

3) Development Stage

At this stage, the creation of a pre-designed puzzle media is carried out at the design stage. The puzzle media is validated by three expert validators, namely material expert validators, media experts, and linguists, who aim to obtain input and improve the puzzle media that has been previously designed.

4) Development Stage

If the puzzle media has been declared valid and suitable for testing by validators, then the puzzle media can be tested to find out the practicality of the media that has been developed. This practicality trial was conducted by distributing respondents' questionnaires to students and teachers at SD Negeri 304 Mamara with 18 students.

5) Evaluation Stage

The final stage in the ADDIE development model is the evaluation stage. The evaluation in this study is formative evaluation and summative evaluation. Formative evaluation is carried out at the end of each stage. Meanwhile, summative evaluation is carried out at the end of product development after the validity test and practicality test stages. In the analysis stage, after conducting a needs analysis and curriculum analysis, the researcher evaluated again whether the data obtained was enough to meet the information needed by the researcher. In the design stage, the researcher evaluates by looking again at whether there are mistakes in the puzzle that has been designed.

Furthermore, the development stage involves making products and testing validity. The researcher evaluated the form of a validity test conducted by validators of media experts, material experts, and linguists. The implementation stage, the evaluation carried out at this stage, is a practicality test for 18 grade IV students at SDN 304 Mamara and educators of Islamic religious education subjects.

b. Validation Results

The validation results of three expert validators each used a questionnaire with a different number of question items. Media experts using questionnaires with 13 questions were given a score of 1-4, material experts with ten questions were given scores of 1 to 4, and linguists. From the assessment of the three expert validators, the validity level is calculated in the following table:

Table 5. Puzzle Validation Results

It	Validation	Result
1	Media Validation	71%
2	Material Validation	92%
3	Language Validation	87%
Average		83%

The validation results obtained from expert validators are then analyzed and categorized. The validation from media validation was obtained with a validity value of 71% with a valid category. The validation obtained from material experts obtained a validity value of 92% with a very valid category. Furthermore, language validation was obtained at 87%, a very valid category. The average score obtained by media experts, material experts, and linguists was obtained as a percentage of 83%, a valid category.

c. Practicality Results

The assessment of the practicality of students and educators uses a questionnaire with a total of 10 10 questions scored 1-4. The results of the practicality assessment of students and educators show that the maximum score of all questions is 40, and the practicality assessment can be calculated as a percentage of the practicality score. The analysis and assessment of practicality for students and educators is found in the following table:

Table 6. Practicality

It	Practicality	Result
1	Students	97%
2	Educators	82%
Average		89%

The practical results obtained from students and educators are then analyzed and categorized. The practicality obtained from students was obtained with a practicality score of 97% in the very practical category. Meanwhile, the practicality obtained from educators was obtained with a percentage of 82% in the very practical category. The average score obtained from students and educators was 89%, with a very practical category.

4. Discussion

a. Development

Research This is a Research on developing puzzle learning media in Islamic religious education Subjects grade IV at SDN 304 Mamara, Luwu Regency. This development uses the ADDIE model. The stages of the ADDIE model consist of five stages, namely: 1) Analysis, 2) Design, 3) Development, 4) Implementation, 5) Evaluation. Referring to the opinion of Puji Rahayu (Rahayuningsih et al., 2022) Regarding learning media, Learning media is a means of channeling messages or information in the teaching and learning process that the source of the message wants to convey to the target or recipient of the message. The selection of media types is then developed and utilized according to conditions, costs, time, and learning objectives (Junaidi, 2019). The use of learning media has its function as a means of helping to create a more effective learning situation. The importance of using learning media is because the existence of learning media can foster a sense of joy, increase students' knowledge, and give life to learning (Indriyani, 2019). Thus, this aligns with the learning theory of connectionism, which is the formation between stimulus and response (Sahlan, 2018).

Research findings from (Cantika, 2022) stated that a learning medium is needed to support learning, arouse students' enthusiasm, and stimulate students to actively participate in creating effective learning. Therefore, the type of media used in this study is physical learning media in the form of puzzle media with the development stage using the ADDIE model.

Based on the results of this study, one of the solutions offered to increase learning effectiveness is integrating puzzle learning media in other subjects at various levels of education. It can be done by adapting the content and design of the puzzle according to the topic and difficulty level according to the needs and characteristics of the students. It is important to train teachers to maximize the benefits of puzzle learning media and use it effectively in their teaching. This training will help teachers design and implement interactive learning media that suits the needs of students so that they can improve the overall quality of learning.

b. Validity

The results of the validation assessment of media experts, material experts, and linguists were declared "Valid" with a media validity of 71%, the validity of material experts was declared "Very Valid" with a percentage of 92%, and the validity of linguists was declared "Very Valid" with a percentage of 87%. In line with this opinion (Rizqi Zamilah, 2021) states that the validity of a test can be started by looking etymologically that validity comes from the word validity, which means the extent of the determination and precision of a measuring instrument in performing its function. In addition, Wulandari and Radia (A. I. Wulandari & Radia, 2021) also argued that the product developed can be valid if the instruments provided to the experts have the right level of measurement. Validity shows the determination and accuracy of the percentage results used in determining the validity of learning media from experts.

The research findings from Badriyah entitled "Development of Puzzle Media in Improving the Ability to Understand Integer Counting Operations" stated that the validity of a measuring instrument depends on whether the measuring instrument can achieve the desired measurement objectives (Badriyah, 2022). Based on the results of the validation assessment from these experts, it is known that the overall assessment of puzzle learning media developed by the researcher has a "Very Valid" eligibility percentage to be used in the learning process.

The solution that can be proposed based on the results of this study is to implement puzzle learning media more widely in various schools, adjusted to the needs and characteristics of each subject. Further development of this media also needs to be carried out, for example, by adding interactive or digital elements so that puzzle media becomes more interesting and relevant to the current development of educational technology. These steps are expected to help improve the quality of learning and provide a more enjoyable and effective learning experience for students.

c. Practicality

Based on assessments from students and educators at SDN 304 Mamara through a response questionnaire, the results of media research concerning practicality. It is known that the results of the students' assessment are 97%, while the results of the assessment from educators are 82%. Based

on this explanation, it can be stated that puzzle learning media is very practical to use in the learning process with the acquisition of a practical analysis of students getting the "Very Practical" category with a percentage of 97%, and the results of the educator's practicality analysis getting the "Very Practical" category with a percentage of 82%. Maskar and Dewi argue that practicality is a measure of the skills of the product being developed, and the size of a product can be measured by the ease and presentation by students (Maskar & Dewi, 2020). This statement aligns with the opinion (Ilhami et al., 2022), namely the ease of use of learning media seen from the level of practicality. The results of this study are also in line with research (Alwi et al., 2020) that tests the practicality of the learning media developed, namely attractiveness.

Research findings from (Nurul Mujtahidah et al., 2023) with the title, Development of Creative Puzzle Learning Media on Initial Reading Materials for Elementary School Students, stated that the practicality of the media is achieved if teachers can use teaching materials and most students give positive responses and the product is said to be practical if the product is realistic and can be used. Based on this explanation, in the practicality of learning media, several aspects need to be considered, namely skills, convenience, presentation, and attractiveness of the product developed.

The solution that can be offered from the results of this research is to evaluate and further develop puzzle learning media to make it more varied and interesting. Adding a collaborative element that allows students to work in groups to solve puzzles so can improve students' social skills and cooperation. In addition, it is necessary to regularly monitor and receive feedback from students and teachers to determine which aspects can still be improved from this media. It aims to make puzzle learning media practical and adaptive to various student learning styles and can be applied more widely in various learning contexts.

5. Conclusion

The conclusion of this study began with the main objective, namely, to develop puzzle learning media to increase the effectiveness of Islamic Religious Education learning in grade IV of SDN 304 Mamara. This research uses the ADDIE development model, which involves five stages: Analysis, Design, Development, Implementation, and Evaluation. The main findings of this study show that puzzle learning media has high validity and practicality. The validity of this media is confirmed by the assessment of media, material, and language experts in the "Very Valid" category and shows high practicality with an assessment percentage of 97% of students and 82% of educators.

Based on these findings, this study recommends the wider use of puzzle learning media in various subjects and levels of education. The researcher also suggested that there should be further development involving interactive and digital elements to keep up with the development of educational technology, as well as training for teachers to maximize the use of this media. The contribution of this research is to provide alternative learning media that is valid and practical and can improve student engagement and overall learning quality.

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