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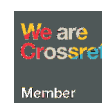
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A mixed-methods development study of teak wood thematic puzzle media to enhance storytelling skills of 4–5 year old children in early childhood learning settings

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ABSTRACT

This study addresses the lack of contextual and developmentally appropriate learning media at KB Arraudoh, where many 4–5-year-old children were found to struggle with story sequencing, coherent expression, and narrative vocabulary. The research aimed to develop thematic teak wood puzzle media while also identifying learning needs, understanding classroom conditions, and examining children's storytelling progress after implementation. A mixed-methods R&D design using the ADDIE model was applied. Qualitative data from observations, teacher interviews, needs analysis, and documentation were used to analyze children's characteristics and contextual requirements for media design. Quantitative data were obtained from expert validations and structured assessments in limited field trials. Qualitative findings guided product development, while quantitative results confirmed feasibility and effectiveness. The puzzle media received very high feasibility scores: 98.3% (content expert), 98.4% (media expert), and 98.5% (practitioner). Children's storytelling performance improved significantly, with 85% categorized as Developing as Expected and a 70% increase in achievement after implementation. The integration of qualitative insights and quantitative validation shows that the media effectively supports narrative development through contextual visual cues and structured sequencing. This study contributes a context-based mixed-methods model for early childhood media development and offers practical implications for designing developmentally appropriate storytelling interventions.

Keywords:

Media development
Needs analysis
Expert validation
Feasibility assessment
Storytelling skills
Early childhood learning
Environment

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Introduction

One aspect of early childhood development and growth is language. Children's language development is very important in the world of education, because with language children can communicate well. Through language, children will develop the ability to get along (*social skills*) with others (Wulandari, 2023). Advances in science and technology currently require PAUD educators to be able to choose and develop learning resources creatively and innovatively (Nurfadilah, Fadila, & Adiarti, 2021). Early childhood educators are required to be more creative in developing games so as to create meaningful play activities. Children will learn through direct experience, which in turn the knowledge they gain

will enter long-term memory and last a long time. This is in accordance with the principle of learning in kindergarten, namely playing while learning (Khadijah & Armanila, 2017).

Play and communication skills are two things that are important for children to feel and do. Through play, children can convey and communicate various ideas they have easily without burden as well (Inten, 2017). At the age of 3-5 years, children's enjoyment of storytelling media games increases sharply (B.Maundeng, 2023). However, at this stage, children still like story books with lots of illustrations and bright colors, especially pictures of the main character in the story. Therefore, providing good stimulation at this stage is by reading stories, stories, or fairy tales (Nurhapizah, 2020).

Storytelling is an activity carried out by someone orally to other people with or without tools about what must be conveyed in the form of messages, information or just tales, which are packaged in the form of stories that can be listened to with a sense of fun (Iswahyuningsih, Julaiha, & Noor, 2017). Therefore, people who tell stories can convey them interestingly. In kindergarten, storytelling is one of the language development methods that can develop several physical and psychological aspects of children according to the nature of their development. The purpose of the storytelling method in kindergarten is to train understanding, thinking, concentration, develop children's fantasy or imagination, create a fun and familiar atmosphere in the classroom, and develop children's vocabulary (Supriatna et al., 2022).

Puzzle media has significant potential in the development of early childhood language skills (Janiar et al., 2024). According to Amalia and Patiung, this media can be used to foster the ability to recognize letters, which shows its relevance in the context of education (Amaslia & Patiung, 2021). In addition, Devi stated that the development of appropriate learning media can improve the ability to recognize number symbols, which is in line with the purpose of this study to improve children's storytelling ability (Made Intan Asri Devi, 2020). Junaid emphasizes the importance of a solid foundation in educational development, which is relevant to the use of the Research and Development (R&D) model in this study (Junaid, 2022). The ADDIE model, described by Slamet, has the advantage of systematizing the development stages, and is applied in this study to ensure the effectiveness of the media (Slamet, 2022). Based on the opinions of several studies, it can be concluded that puzzle media has significant potential in developing early childhood language skills. This media is not only effective in fostering the ability to recognize letters, but can also improve the ability to recognize number symbols, which supports the research objective to improve children's storytelling ability. The importance of a solid foundation in educational development, as emphasized by Junaid, suggests that the use of Research and Development (R&D) models and systematic approaches such as the ADDIE model are highly relevant to ensure the effectiveness of the media developed. Thus, the development of appropriate learning media, such as teak wood thematic puzzles, can be an effective tool in supporting early childhood language development and storytelling skills.

Based on the results of the initial analysis conducted by researchers by direct observation and conducting interviews with teachers and principals, it appears that children at KB Arraudoh have problems in the language development of children aged 4-5 years, namely: there are some children who still have not achieved the ability to speak, communicate, or tell something compared to children their age, learning is still teacher-focused, not child-focused so that there is no feedback in interaction, and less utilization of existing media in PAUD schools. In addition, existing media are also less interesting such as storybooks, serialized picture cards and dolls. It appears that using these media is uninteresting and unpleasant, making children easily bored. This condition shows that there is an urgent need among educators to stimulate children's storytelling intelligence with relevant and contextual approaches. For this reason, teachers are expected to be able to innovate and use more creative media.

The urgent need is also reinforced by research conducted by Adawiah and Watini that in Dharma Wanita Persatuan Kindergarten, Sangkapura District, there are some children who cannot, have not dared and do not understand in expressing speaking skills, especially in telling stories (Adawiyah & Watini, 2022). This condition requires an effort to develop the ATIK model to stimulate the

intelligence of speaking skills, it is proven that serial picture puzzle media can improve children's speaking skills at Dharma Wanita Persatu Kindergarten, Sangkapura District. Furthermore, other researchers by Amalia and Patiung (2021) entitled Puzzle Media Development to Foster the Ability to Recognize Latin Letters for Early Childhood. Evidently, the results of the study show that puzzle media can improve the ability to recognize Latin letters in children, besides that it also facilitates educators in the teaching and learning process (Amalia & Patiung, 2021). Research by Devi entitled Development of Number Puzzle Learning Media to Improve the Ability to Recognize Number Symbols. It is proven based on the results of the trial that the number puzzle learning media developed can improve the ability to recognize number symbols and make it easier for students to learn to recognize number symbols (Devi, 2020).

The conclusion of several previous researchers regarding puzzle media shows that puzzle media is one of the effective learning media innovations because it is able to present interactive and challenging learning to increase learning effectiveness.

This research aims to identify the needs in developing storytelling skills, create interesting and interactive learning media, and measure the effectiveness of the media. Research gaps to be filled include limitations of existing learning media, diverse approaches with ADDIE-based R&D models, specific local contexts, focus on specific age groups, and expert evaluation of media feasibility. Thus, this research is expected to contribute significantly to the development of effective learning media for early childhood.

Methods

The approach used in this research is a *mixed method* approach (qualitative and quantitative data) to test the feasibility of teak wood thematic puzzle media (UNESA, 2024). The method used is the R&D method for developing teak wood thematic puzzle media with the ADDIE model which consists of 5 stages, namely *Analysis, Design, Development, Implementation, and evaluation* (Andi Rustandi & Rismayanti, 2021; Hidayat & Nizar, 2021). However, this development research applies 4 stages, up to the limited implementation stage, due to time constraints that make it impossible to proceed to the evaluation stage and limited research activity funds, especially for full implementation and extensive evaluation, requiring additional costs that are not available, but this model has advantages in its systematic stages of work. Each stage is evaluated and revised so that the resulting product becomes a feasible, effective and valid product. The ADDIE development model is also an integrated approach to learning that guides measuring the effectiveness of learning because of the expected behavior, knowledge, and learning outcomes. Through research on the development of teak wood thematic puzzle media, it is hoped that it can improve the storytelling ability of children aged 4-5 years.

This research uses several data collection techniques that are commonly used to obtain accurate information including literature studies, observation, interviews, and documentation. This research took place at KB Arraudoh, Cisarua Village, Tegalwaru District, Purwakarta Regency, West Java Province. Primary data sources are 21 students of the 4-5 Year Age Group of KB Arraudoh, Class Teachers, as well as 3 experts consisting of 1 Material Expert and 1 Media Expert, and 1 Practitioner in this case the Principal.

The data analysis technique used is a descriptive analysis technique that describes the validity of the puzzle media developed with the results of the validation test in the form of scores 1-4. A scale that shows the attitude of two polar differences such as bad - good - bad - good (Suryani, 2016). The structured questionnaire grid instrument is addressed to material, media and teacher instrument experts. The use of a scale in this questionnaire is a Likert scale with a range of 1 to 4, having criteria that are very less, less, good and very good. After all respondents' answers are collected, the total value of the respondents is calculated by finding the expected score of each aspect of the assessment and the total overall score. The components of the assessment aspects will be validated by material experts, media and practitioners. Furthermore, a percentage is made so that it can be concluded how

valid the puzzle media is in improving the storytelling ability of children aged 4-5 years. This data is then analyzed with the following criteria: STS (Strongly Disagree) with weight 1, TS (Disagree) with weight 2, S (Agree) with weight 3, and SS (Strongly Agree) with weight 4.

In this study, the percentage of media feasibility was calculated for three types of evaluators, namely material experts, media experts and practitioners. The calculation of the percentage of the feasibility level of learning media uses the following formula:

$$Vma = \frac{Tse}{Tsh} \times 100\% (1); Vm = \frac{Tse}{Tsh} \times 100\% (2); Vp = \frac{Tse}{Tsh} \times 100\% (3)$$

Description: *Vma* (Feasibility validation from material experts). *Vme* (Feasibility validation from media experts). *Vp* (Feasibility validation from expert practitioners). *TSe* (Total score obtained). *TSh* (Total expected score).

After the entire percentage of feasibility is calculated, then to find out how feasible the puzzle media is used in improving children's storytelling ability, using the following eligibility criteria:

Table 1. Eligibility Criteria According to Validators

Eligibility Criteria (%)	Description
85,01 - 100	Very Feasible
70,01 - 85	Feasible
50,01 - 70	Less Feasible
01,00 - 50	Not Feasible

Results and Discussion

Research and Development (R&D) is the type of research used in this study. The development model used is the ADDIE model which consists of 5 stages, namely *Analysis*, *Design*, *Development*, *Implementation*, and *Evaluation*. Due to the limitations of researchers both in time and cost, this research and development only reached the Limited *Implementation* stage (Hidayat & Nizar, 2021).

At the Analysis Stage, a needs analysis is carried out consisting of literature studies, comparative analysis results, observation results, and teacher questionnaire results. At the Design Stage, the design of the wood thematic puzzle media model was carried out. At the Development Stage, teak wood thematic puzzle media is carried out and tested for effective development products for learning media. Therefore, to see the extent to which teak wood puzzle media is needed in learning, researchers validated the feasibility test on three groups that were used as test subjects, namely expert review (Expert Judgement), teacher observation, and child observation. Specifically in the expert review, the researcher conducted a feasibility test of the puzzle media which was assessed by 3 expert examiners, namely Material Experts, Media Experts, and Expert Practitioners. After obtaining the feasibility test, the researcher took further action on the design of the puzzle design which was adjusted to the needs of students based on the results of the research analysis observation. After getting the test results of material experts, media experts, and practitioners, the puzzle was revised according to the results of suggestions and input.

Based on the analysis of the needs of teachers and students for learning media, new innovations are needed regarding the learning media used during the teaching and learning process. It is necessary to develop learning media in the form of teak wood thematic puzzles that are tailored to the material and development of children aged 4-5 years. Regarding the need for teak wood thematic puzzle specifications to stimulate children's storytelling ability, it is known that the puzzle must have attractiveness, the size of the puzzle is in accordance with the characteristics of children aged 4-5 years, use safe materials, easy to use, easy to store and tidy up, there are clear instructions or guidelines for use, achieve learning objectives to attract children to be able to tell stories, and encourage interactive learning in the material to stimulate children's storytelling. This is in line with research conducted by Novitasari and Utami, which shows that the use of learning media that is interesting and in accordance with children's characteristics can increase student motivation and

involvement in the learning process. They found that interactive and fun media, such as puzzles, can help children understand the material and improve their storytelling ability (Novitasari & Utami, 2022). In addition, research by Hidayati (2021) also supports the importance of using safe and easy-to-use media, which can increase the effectiveness of learning in early childhood (Ulfa, 2018). Winaryati's theory explains that "Analysis phase includes: needs assessment, goal identification, and learner, task, context, objectives, and skills analysis" (Winaryati et al., 2021). Thus, the development of teak wood thematic puzzle media is expected to meet these needs and make a positive contribution to the storytelling ability of children aged 4-5 years.

The design in this discussion explains the design of learning media developed for 4-5 year old children, storytelling ability as a skill to be learned, learning strategies that are suitable for learning outcomes, and how to determine the level of mastery of the lesson. The design of the teak wood thematic puzzle media model contains the design of the media content that has been designed by paying attention to the main points of learning media in stimulating storytelling skills for children aged 4-5 years. This is in accordance with Ramadhanty's explanation of the design (Design) which is carried out with the following references: (a) who is this lesson designed for? (learners); (b) what skills do you want to learn? (competencies); (c) how can the material or basic skills be learned best? (learning strategies); (d) how to determine the level of mastery of the lesson that has been achieved? (assessment and evaluation) (Ramadhanty, 2022). Research by Hariono & Yasa shows that the use of well-designed learning media can improve early childhood storytelling ability. In their study, it was found that children who used interactive learning media, such as puzzles, showed significant improvement in storytelling skills compared to children who used traditional methods (Hariono & Yasa, 2025). Research by Hudain et al also supports this, where they found that game-based learning media can increase children's motivation and engagement in learning to tell stories. The results showed that children who learned using game media had higher levels of participation (Hudain et al., 2023). Furthermore, research by Gobel et al shows that the use of safe and attractive materials in learning media can increase children's interest in learning. In their study, children who used learning media designed with safety and attractiveness in mind showed better results in storytelling ability (Gobel et al., 2022). Research by Rahmia emphasized the importance of interactive learning strategies in improving children's storytelling skills. They found that children who engaged in learning activities that involved social interaction and collaboration showed significant improvement in their storytelling ability (Rahmia, 2020).

The teak wood thematic puzzle media to stimulate the storytelling ability of KB Arraudoh children consists of 10 pieces of puzzle boards, puzzle placemat sheets, and instructions for using teak wood thematic puzzle media. The puzzle measures 30 cm high, 35 cm long, and 1.5 cm thick with materials using teak wood. The image is printed using stickers that are attached according to the puzzle piece pattern. Instructions for using teak wood thematic puzzle media have been provided by researchers, namely (1) the teacher prepares the puzzle according to the theme, (2) provide a table or flat surface that is large enough so that each child can work comfortably, (3) give a time limit if needed to maintain the enthusiasm and enthusiasm of children, (4) the teacher makes small groups, each group consisting of 2-5 people, (5) the teacher provides footing/playing rules before the game starts, (6) children arrange the puzzle by working together to help each other arrange the puzzle pieces according to a certain pattern or image, (7) children are asked to continue communicating when arranging the puzzle. For example, if a child finds a puzzle piece that matches another piece they can immediately tell their friend, (8) when finished, the puzzle is arranged in each group. Next, children are asked to tell the contents of the picture and experiences when putting together the puzzle, and (9) give appreciation to all members. The teacher can take pictures of the final puzzle as documentation. The media developed by researchers has an easy and medium difficulty level with a simple and colorful design.

The design of the model developed is in accordance with the benefits of puzzles and the characteristics of children in the growth and development phase of 4-5 years of age. The benefits of puzzle games according to Cantika & Ilhami are stimulating children's fine motor skills, training children's patience, developing children's thinking and concentration skills, training hand-eye

coordination, developing cognitive skills through problem solving, and developing children's social skills through interaction with others (Cantika & Ilhami, 2025). Research by Rahayu Khoerunnisa supports these benefits, where they found that puzzle games can improve children's fine motor skills and cognitive abilities. In their study, children who engaged in puzzle activities showed significant improvements in problem-solving ability and hand-eye coordination (Rahayu Khoerunnisa et al., 2023). In addition, research by Kartikasari et al showed that the use of puzzles in learning can improve children's patience and concentration. The results showed that children who played puzzles were better able to focus on the tasks given and showed an increase in patience when completing challenges (Kartikasari et al., 2024). Research by Rahayu Khoerunnisa et al also emphasized the importance of social interaction that occurs when children play puzzles with their friends. They found that children who played puzzles in groups showed improvements in social skills, such as sharing and cooperating (Rahayu Khoerunnisa et al., 2023).

The suitability of the model design with the growth and development of children aged 4-6 years who are included in the Play Phase, as explained by Arlina that children at this age are very active and move a lot. He begins to learn to develop his ability to socialize. His initiative also began to develop, and with his friends, he began to learn to plan games and play them happily (Arlina, 2020). Research by Wulandari supports this view, where they found that children aged 4-6 years showed significant improvements in social skills and initiative when engaged in group play. In their study, children who participated in structured play activities showed better abilities in planning and collaborating with their peers (Wulandari, 2021). In addition, research by Sulaeman shows that games involving social interaction can help children develop self-confidence and communication skills. Their results showed that children involved in group games were better able to express their ideas and feelings well (Sulaeman, 2019). Research by Hayati & Putro also emphasizes the importance of the play phase in child development. It found that children who are given the opportunity to play actively and creatively can develop motor, cognitive, and social skills that are important for their future development (Hayati & Putro, 2017).

Storytelling according to Gusmayanti & Dimyati is an activity carried out by someone to convey a message, information, or a mere fairy tale, which can be done orally or in writing. The way the story is told can be done using props or without props (Gusmayanti & Dimyati, 2021). Research by Hartati et al shows that storytelling has an important role in children's language development and communication skills. In their study, children who engaged in regular storytelling activities showed a significant increase in their vocabulary and speaking ability (Hartati et al., 2021). In addition, research by Agusriani et al emphasized that the use of props in storytelling can increase children's interest and understanding of the story. The results of their research show that children who listen to stories with the help of props are better able to remember and understand the contents of the story compared to those who do not use props (Agusriani et al., 2022). Research by Khadijah et al also supports the importance of storytelling activities in developing children's social skills. She found that children who engaged in group storytelling sessions showed improvements in their ability to interact and share ideas with their peers (Khadijah et al., 2024).

A child who (Khadijah et al., 2024) is in the age range of 3-4 years old begins to like storytelling or he himself begins to enjoy telling a story. Stories that will be presented to children aged 3-4 years must of course be in accordance with their world of life. The content of the story must come from daily experiences that they may experience or simple things that are easily digested by their stage of thinking. The way of narration must also be interesting so that the child's attention will be focused on the story we tell. If the child listens to the story attentively, the "message" of the story can be easily captured. Various story characters can be played in children's stories, ranging from human characters, animals to plants can be "brought to life".

To ensure the content of the model design is appropriate and feasible for children aged 4-5 years, feasibility testing is carried out by material experts, media and early childhood education practitioners. Based on the results of the assessment of Material Expert Validators, Media Experts, and Practitioners, the assessment results are presented in Table 2.

Table 2. Results of Media Feasibility Assessment by Experts

Validator Name	Field Expert	Percentage Result (%)	Criteria
Miftachul Jannah, M.Pd.	Material Expert	98,3	Very Feasible
Yuwan Fijar Anugrah, M.Pd.	Media Expert	98,4	Very Feasible
Ulpah Paujiah, S.Pd.	Practitioner	98,5	Very Feasible

The graph of the development of media feasibility assessment by experts is presented in Figure 1.

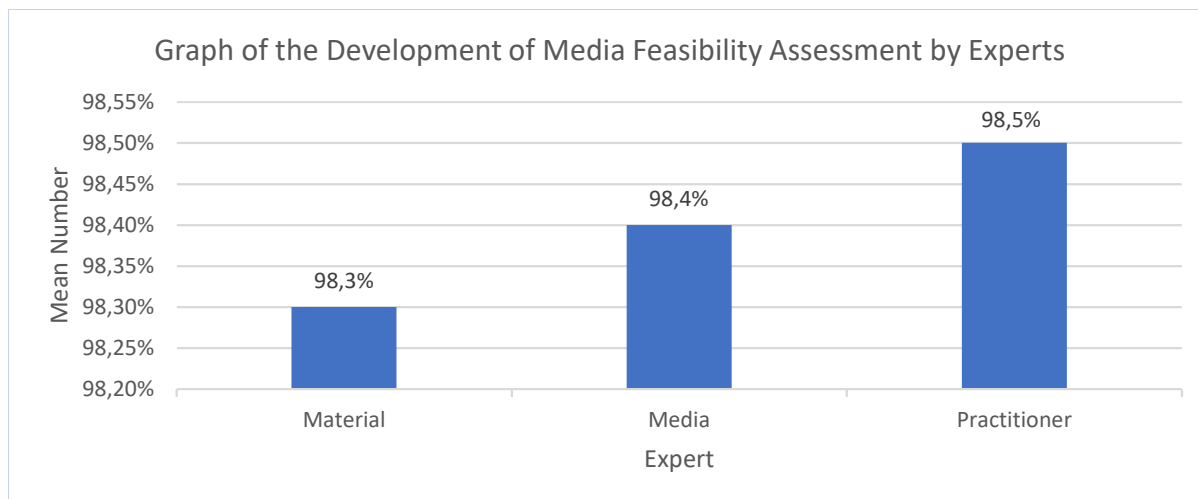


Figure 1 Graph of the Development of Media Feasibility Assessment by Experts

Based on the results of the media feasibility assessment conducted by material experts, media experts, and practitioners through a questionnaire, the Teak Wood Thematic Puzzle media validation instrument has validity with very valid criteria so that it is very feasible to use to improve the storytelling ability of children aged 4-5 at KB Arraudoh.

The final model is obtained from the results of the draft I model validation test, the draft II model validation test, and the draft III model trial, the input and constraints contained in the validation test and trial are the basis for revision or improvement so as to create a final model of Teak Wood Thematic Puzzle media that aims to stimulate the storytelling ability of children aged 4-5 years. The following is the final model of Teak Wood Thematic Puzzle media.



Figure 2 Final Model of Teak Wood Thematic Puzzle Media

Assessment in storytelling activities according to Mulyani et al is obtained based on facial expressions, communication, namely the message is conveyed well, the story is read in sequence, and fluency in speaking (Mulyani et al., 2022). In addition, listening is also an important aspect, where students can listen to the reading of the story well and can answer questions from the teacher about the story that was read. Courage is also an assessment factor, namely learners who can confidently tell the life experiences they have felt, and dare to convey their personal ideas about the story that has been read by the teacher. In this study, the assessment was carried out by conducting product trials, teacher observations, and child development documents before and after using teak wood thematic puzzles. Research by Andriani & Hamdu showed that comprehensive assessment in storytelling activities can provide a clearer picture of the development of children's communication and social skills. They found that children who were assessed based on various aspects, including expression and courage, showed significant improvement in their storytelling skills (Andriani & Hamdu, 2021). In addition, research by Helfianti et al emphasized the importance of observation in the assessment of storytelling activities. Their results show that teacher observation can provide valuable insight into children's progress in storytelling and their ability to interact with friends (Helfianti et al., 2021).

The results of the product trial of the Teak Wood Thematic Puzzle media were that the use of puzzles in storytelling activities succeeded in improving early childhood language skills, especially in terms of vocabulary, sentence structure, and the ability to develop stories. This trial illustrates that the use of educational game tools such as puzzles can be a fun tool in honing early childhood storytelling skills.

In the large group product trial, each respondent was tested in a limited group in the form of arranging puzzles and making free stories according to the puzzle picture. Children's storytelling ability in the first trial of using teak wood thematic puzzle media according to the researcher's observations, namely there were 7 children (30%) in the Still Developing (MB) category, which means that children perform storytelling tasks still have to be reminded or assisted by the teacher, and 14 children (70%) in the Developing As Expected (BSH) category, which means that children can already perform storytelling tasks independently and consistently without having to be reminded or exemplified by the teacher.

Children's storytelling ability in the second trial of using teak wood thematic puzzle media according to researcher observations has increased, namely there are 4 children (15%) in the Developing As Expected (BSH) category, which means that children can already perform storytelling tasks independently and consistently without having to be reminded or exemplified by the teacher, and 17 children (85%) in the Very Good Developing (BSB) category, which means that children can already perform storytelling tasks independently and can already help their friends who have not achieved the ability according to the expected indicators. These results prove that the storytelling ability of KB Arraudoh students increased compared to before using teak wood thematic puzzle media.

Children's storytelling ability after the use of teak wood thematic puzzle media according to the researcher's observations, namely overall, the use of puzzles in storytelling activities has succeeded in improving early childhood language skills, especially in terms of vocabulary, sentence structure, and the ability to develop stories. which means that children can already perform storytelling tasks independently and consistently without having to be reminded or modeled by the teacher. This trial illustrates that the use of educational game tools such as puzzles can be a fun and effective means of honing early childhood storytelling skills.

Development (development) according to Slamet (2022) is a development activity which is essentially an activity of translating design specifications into physical form, so that this activity produces a prototype of the development product. Everything that has been done at the design stage, namely the selection of materials according to the characteristics of students and competency

demands, the learning strategies applied as well as the forms and methods of assessment and evaluation used are realized in the form of prototypes. In this study, the development of Teak Wood Thematic Puzzle media was made into a final model. The final model is obtained from the results of the draft I model trial and the draft II model trial. Input and constraints contained in the draft I trial and draft II trial became the basis for revision or improvement so as to create a final model of Teak Wood Thematic Puzzle media that aims to stimulate the storytelling ability of children aged 4-5 years.

Research and development of Teak Wood Thematic Puzzle media to improve the storytelling ability of children aged 4-5 at KB Arraudoh is one of the educational development research. In developing education according to Junaid (2012) a solid foundation is needed and can be accounted for both scientifically, technologically, and religious ethics.

In this study, the foundation of research and development of Teak Wood Thematic Puzzle media to improve the storytelling ability of children aged 4-5 at KB Arraudoh consists of philosophical, sociological, cultural, psychological, scientific and technological, and juridical foundations.

Philosophical foundation is the philosophy of Indonesian national education which is rooted in the cultural values contained in Pancasila. The values of Pancasila must be instilled in students through the implementation of national education at all levels and types of education. These values not only color the content of lessons in the curriculum but also the style of implementation. The plan to instill the nation's cultural values is made in such a way that not only cognitive mastery is achieved, but more importantly affective achievement. Furthermore, the achievement of cultural values as a philosophical foundation aims to develop talents, interests and intelligence in optimal empowerment (Junaid, 2012). In this study, the value of Pancasila is displayed on the attitude of helping in the Thematic Puzzle of Teak Wood with the theme of Suka Menolong.

The sociological foundation according to Junaid (2012) is that educational activities are a process of interaction between two individuals and even two generations, which allows generation to generation to develop themselves in line with the development and progress of society in their time. In this research, the process of interaction between individuals is instilled in children aged 4-5 years in medium and large group trial activities. During this process, children are not only encouraged to talk, but also to work together in groups, share ideas and listen to their friends' opinions. The teacher or facilitator provides motivation and guidance.

Cultural foundation according to Junaid (2012) that Education is always related to humans, while every human being is always a member of society and a supporter of a particular culture. In this study, researchers present one of the cultural values, namely the habituation of hooded mothers in the puzzle theme of Plant subthemes of Fruit Plants.

The psychological foundation according to Junaid (2012) is that education always involves aspects of the human psyche, so psychology is an important foundation in education. Student understanding of psychological aspects is one of the success factors of education. Therefore, it is very necessary to apply the results of studies in the discoveries of psychology in the field of education, for example knowledge about the sequence of child development. Each individual has different talents, interests, abilities, strengths, as well as the tempo and rhythm of development with other individuals. In this study, based on the observations of researchers, teachers guide students with different approaches for each student, because each student has a different character.

The foundation of science and technology according to Junaid (2012), namely education plays a very important role in the inheritance and development of science and technology. On the other hand, every development of science and technology must be immediately implemented by the world of education, namely by immediately incorporating the results of the development of science and technology into the content of teaching materials. On the other hand, education is strongly influenced by the branches of science and technology. Along with the progress of science and technology, science in general is also developing very rapidly. In this research, the application of science and technology is carried out starting from the analysis stage, the design stage which requires a graphic design

computer program and printing and cutting stickers for puzzle images using cutting sticker technology.

The implementation of national education needs to be organized based on the law. This is very important because in essence national education is the realization of the will of the 1945 Constitution, especially article 31 on Education and Culture. The juridical foundation is not only the basis for the implementation of education but also used as a tool to regulate so that if there are deviations in the implementation of education (Junaid, 2012). The implementation of this juridical basis through the implementation of thematic learning processes using an independent curriculum based on the Minister of Education, Culture, Research and Technology Regulation No. 12 of 2024 concerning Curriculum in Early Childhood Education, Primary Education and Secondary Education (abbreviated as Permendikbudristek No. 12 of 2024) is a regulation that regulates the education curriculum in Indonesia for PAUD, SD, and SMP levels. This Permendikbudristek was officially enacted on March 26, 2024 and became the basic framework and curriculum structure for all educational units in Indonesia.

Based on the above foundations, it can be stated that the Teak Wood Thematic Puzzle media is a form of educational development that has been tested to achieve educational goals. The foundations contained in the Teak Wood Thematic Puzzle media, both content and practice can make the Teak Wood Thematic Puzzle media a media that is suitable for application in early childhood.

Conclusion

The findings of this study indicate that the development and limited implementation of the thematic teak wood puzzle media were successfully carried out through a mixed-methods Research and Development (R&D) approach using the ADDIE model. Qualitative data obtained from observations, interviews, and needs analysis played a critical role in shaping the analysis and design stages, particularly in identifying children's learning difficulties, teacher needs, and classroom conditions that informed the characteristics of the media. Quantitative data in the form of expert validation scores and structured performance assessments provided empirical confirmation of the media's feasibility and effectiveness. The integration of these two forms of data demonstrates how contextual insights and numerical evidence jointly contribute to the overall evaluation of the media.

Feasibility testing showed very high validation scores, with 98.3% from the material expert, 98.44% from the media expert, and 98.53% from the practitioner. These quantitative results reinforce the qualitative findings that the media aligned well with pedagogical needs, children's characteristics, and the storytelling objectives. Observational assessments further revealed clear developmental changes: prior to implementation, 7 children (30%) were categorized as Still Developing and 14 children (70%) as Developing as Expected. After the use of the puzzle media, the distribution shifted to 4 children (15%) categorized as Developing as Expected and 17 children (85%) categorized as Very Well Developed. These results, supported by observed behavioral changes such as improved sequencing, increased narrative vocabulary, and greater independence in storytelling tasks, indicate that the media contributed meaningfully to children's storytelling progression.

Overall, the study achieves its dual objectives by (1) producing a contextually grounded learning media prototype based on qualitative exploration, and (2) confirming its feasibility and effectiveness through quantitative assessment. The findings also align with theoretical perspectives on early literacy development, particularly the role of visual scaffolding and concrete materials in supporting narrative skills in early childhood settings.

However, the study has several limitations. The implementation was conducted only at one institution, involved a relatively small sample, and did not proceed to the full evaluation stage due to time and funding constraints. These factors limit the generalizability of the findings and should be considered when interpreting the results. Additionally, children's individual characteristics and the role of teacher guidance may have also influenced the outcomes, and these elements were not examined in depth.

Despite these limitations, the study offers practical implications for teachers and early childhood institutions. The puzzle media can serve as an alternative storytelling scaffold that supports children's narrative development and helps educators facilitate more structured and engaging storytelling activities. The study also highlights the value of integrating qualitative insights and quantitative evidence in designing early childhood learning media.

Future research should extend the implementation to multiple institutions, include a larger and more diverse sample, and proceed through the complete ADDIE evaluation stage. Further refinement of the media, adaptation for other age groups, and examination of teacher-child interaction during storytelling activities would also strengthen the contribution of this line of inquiry.

References

- Adawiyah, R., & Watini, S. (2022). Implementasi Model ATIK untuk Meningkatkan Kecakapan Bicara Anak dengan Kegiatan Menyusun Puzzle Gambar Seri di TK Dharma Wanita Persatuan. *JlIP- Jurnal Ilmiah Ilmu Pendidikan*, 5(3), 883–887.
- Agusriani, A., Sumiati, S., Ismail, W., Nurhayati, A., & Rachmatiah, S. (2022). Penggunaan Alat Peraga Dalam Metode Bercerita Untuk Meningkatkan Perbendaharaan Kata Anak 5-6 Tahun. *KHIDMAH: Jurnal Pengabdian Kepada Masyarakat*, 2(2), 141–150. <https://doi.org/10.24252/khidmah.v2i2.30214>
- Amalia, S., & Patiung, D. (2021). Pengembangan Media Puzzle Untuk Menumbuhkan Kemampuan Mengenal Huruf Latin Bagi Anak Usia Dini. *NANAEKE: Indonesian Journal of Early Childhood Education*, 4, 53–65.
- Andi Rustandi, & Rismayanti. (2021). Penerapan Model ADDIE dalam Pengembangan Media Pembelajaran di SMPN 22 Kota Samarinda. *Jurnal Fasikom*, 11(2), 57–60. <https://doi.org/10.37859/jf.v11i2.2546>
- Andriani, D., & Hamdu, G. (2021). Analisis Rubrik Penilaian Berbasis Education for Sustainable Development dan Konteks Berpikir Sistem di Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1326–1336. <https://doi.org/10.31004/edukatif.v3i4.514>
- Arlina. (2020). Perkembangan Kemampuan Dasar Anak Usia Dini. *UIN Sumatera Utara*, 1–312.
- B.Maundeng, D. S. (2023). *Pengaruh Metode Bercerita Terhadap Kemampuan Anak Berbahasa Di Kelompok B Tk Paud Ta ' Amal*.
- Cantika, F., & Ilhami, A. (2025). Pengaruh Media Puzzle Bergambar terhadap Kecerdasan Emosional Anak Usia 5-6 Tahun di Tk B Tunas Muda Lahat. *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)*, 5(1), 530–539. <https://doi.org/10.53299/jppi.v5i1.1478>
- Devi, N. M. I. A. (2020). Pengembangan Media Pembelajaran Puzzle Angka untuk Meningkatkan Kemampuan Mengenal Lambang Bilangan Pada Anak Kelompok B. *Jurnal Ilmiah Pendidikan Profesi Guru*, 3(2), 258–268.
- Gobel, E. C. D., Arifin, I. N., & Hardiyanti, W. E. (2022). Pengaruh Media Pembelajaran Real Object Terhadap Minat Belajar Anak Pada Tema Alam Semesta Di TK Kelompok B. *Jurnal Ilmiah Potensia*, 7(2), 162–173. <https://doi.org/10.33369/jip.7.2.162-173>
- Gusmayanti, E., & Dimiyati, D. (2021). Analysis of storytelling activities in improving the development of moral values in early childhood. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(2), 903–917. <https://doi.org/10.31004/obsesi.v5i2.1062>
- Hariono, S. E., & Yasa, A. D. (2025). *Meningkatkan Kemampuan Bahasa Melalui Media Bergambar Berbasis Kearifan Lokal Pada Usia 3-4 Tahun di KB PKK Al Huda Ngadireso Kecamatan Poncokusumo*. 8(1), 488–499.
- Hartati, S., Damayanti, E., Rusdi T, M., & Patiung, D. (2021). Peran Metode Bercerita terhadap Perkembangan Bahasa Anak Usia Dini. *Jurnal PG-PAUD Trunojoyo : Jurnal Pendidikan Dan Pembelajaran Anak Usia Dini*, 8(2), 74–86. <https://doi.org/10.21107/pgpaustrunojoyo.v8i2.10513>
- Hayati, S. N., & Putro, K. Z. (2017). Bermain dan permainan anak asia dini. In *Pendidikan Islam Anak Usia Dini* (Vol. 7, Issue 1). <https://journal.uir.ac.id/index.php/generasiemas/article/view/6985>

- Helfianti, D., Novianti, R., & Solfiah, Y. (2021). Pengembangan Media Permainan Game Geo Bus (GGS) untuk Mengenalkan Bentuk-Bentuk Geometri pada Anak Usia 4-5 Tahun. *Journal of Education Research*, 2(1), 19–26. <https://doi.org/10.37985/jer.v2i1.42>
- Hidayat, F., & Nizar, M. (2021). Model Addie (Analysis, Design, Development, Implementation and Evaluation) Dalam Pembelajaran Pendidikan Agama Islam. *Jurnal Inovasi Pendidikan Agama Islam (JIPAI)*, 1(1), 28–38. <https://doi.org/10.15575/jipai.v1i1.11042>
- Hudain, M. A., Kamaruddin, I., Irvan, I., Juhanis, J., Weraman, P., & Saddhono, K. (2023). Media Pembelajaran Berbasis Video: Apakah berpengaruh terhadap peningkatan motivasi belajar pada Anak? *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(4), 4881–4891. <https://doi.org/10.31004/obsesi.v7i4.4924>
- Inten, D. N. (2017). Pengembangan Keterampilan Berkomunikasi Anak Usia Dini Melalui Metode Bermain Peran. *Mediator: Jurnal Komunikasi*, 10(1), 109–120. <https://doi.org/10.29313/mediator.v10i1.2712>
- Iswahyuningsih, S., Julaiha, & Noor, H. H. (2017). *Bercerita Dengan Bahasa Ibu Untuk Menstimulasi Perkembangan Bahasa Anak Usia Dini*. Kementerian Pendidikan dan Kebudayaan Direktorat Pembinaan Anak Usia Dini Balai Pengembangan Pendidikan Anak Usia Dini dan Pendidikan Masyarakat Kalimantan Selatan.
- Janiar, D. M., Marmawi, & Lukmanulhakim thn (2024) Vol 13 hal. 151901531 <https://jurnal.untan.ac.id/index.php/jpdpb>. (2024). Pengembangan Media Permainan Puzzle Kartu Bergambar Untuk Melatih Kemampuan Membaca Permulaan. *Pendidikan Dan Pembelajaran*, 13(7), 2715–2723. <https://doi.org/10.26418/jppk.v13i7.79034>
- Junaid, H. (2012). Sumber, Azaas dan Landasan Pendidikan (Kajian Fungsionalisasi secara makro dan mikro terhadap rumusan kebijakan pendidikan nasional). *Sulesana*, 2(2), 84–102.
- Junaid, H. (2022). Azas dan Pendidikan. *Sulesana*, 2(2), 1–19.
- Kartikasari, D., Wuryandini, E., & Nurodin, M. (2024). Implementasi Media Puzzle Untuk Meningkatkan Minat Belajar Siswa pada Mata Pelajaran IPAS di SDN Mlatiharjo 02 Semarang. *Journal on Education*, 7(1), 3193–3201. <https://doi.org/10.31004/joe.v7i1.6790>
- Khadijah, & Armanila. (2017). *Bermain dan Permainan Anak Usia Dini*. Perdana Publishing.
- Khadijah, Hairani Ananda Putri, Annisa Fitri Akhriyah, Annisa Zakia Nasution, Evi Sukma Pratiwi, Miftahul Jannah Harahap, & Novia Rahmawati. (2024). Mengembangkan Sosial Emosional Anak Melalui Metode Bercerita. *Dewantara : Jurnal Pendidikan Sosial Humaniora*, 3(3), 137–146. <https://doi.org/10.30640/dewantara.v3i3.2860>
- Made Intan Asri Devi, N. (2020). Pengembangan Media Pembelajaran Puzzle Angka untuk Meningkatkan Kemampuan Mengenal Lambang Bilangan. *Jurnal Ilmiah Pendidikan Profesi Guru*, 3(3), 417–428. <http://dx.doi.org/10.23887/jippg.v3i3>
- Mulyani, D., Intem, D. N., & Aziz, H. (2022). Bercerita Seraya Berkarya untuk Menumbuhkan Literasi Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(6), 6450–6461. <https://doi.org/10.31004/obsesi.v6i6.2976>
- Novitasari, K., & Utami, N. R. (2022). Analisis Kebutuhan Media Pembelajaran Multisensori Untuk Stimulasi Kemampuan Literasi Awal Anak Usia Dini. *Jurnal Cikal Cendekia*, 02(02), 55–65. <https://journal.upy.ac.id/index.php/CIKAL/article/view/2258%0Ahttps://journal.upy.ac.id/index.php/CIKAL/article/download/2258/1415>
- Nurfadilah, Fadila, S. N., & Adiarti, W. (2021). *Panduan APE Aman Bagi Anak Usia Dini*. Direktorat Pendidikan Anak Usia Dini Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar, dan Pendidikan Menengah Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Nurhapizah, A. (2020). penerapan metode bercerita untuk meningkatkan perkembangan bahasa anak usia dini di Raudhotul Atfal. *Kaos GL Dergisi*, 8(75), 147–154.
- Rahayu Khoerunnisa, S., Muqodas, I., & Justicia, R. (2023). Pengaruh Bermain Puzzle terhadap Perkembangan Motorik Halus Anak Usia 5-6 Tahun. *Murhum : Jurnal Pendidikan Anak Usia Dini*, 4(2), 49–58. <https://doi.org/10.37985/murhum.v4i2.279>
- Rahmia, E. (2020). Penerapan Metode Interaktif Dalam Meningkatkan Perkembangan Bahasa Pada Anak Di Ra Perwanida 03 Poncokusumo. In *Skripsi*.
- Ramadhanty, D. Z. (2022). Perancangan Media Pembelajaran Pendidikan Anak Usia Dini Berbasis

- Android. *JRKT (Jurnal Rekayasa Komputasi Terapan)*, 2(01), 15–22.
<https://doi.org/10.30998/jrkt.v2i01.6480>
- Slamet, F. A. (2022). *Model Penelitian Pengembangan (R n D)*. Institut Agama Islam Sunan Kalijogo Malang.
- Sulaeman, A. R. (2019). Peran Guru Pendidikan Agama Islam dalam Membentuk Akhlak Terpuji Peserta Didik di UPTD Negeri 9 Parepare. *Prosiding*, 2(1), 1–10. <http://lp3.um.ac.id/wp-content/uploads/simple-file-list/Prosiding-Semnas-PAI.pdf#page=38><http://www.issn.lipi.go.id/issn.cgi?daftar&1493781343&1&&>
- Supriatna, A., Kuswandi, S., Agus Ariffianto, M., Permana Suryadipraja, R., & Taryana, T. (2022). Upaya Melatih Kemampuan Berbicara Anak Usia Dini Melalui Metode Bercerita. *Jurnal Tahsinia*, 2(1), 37–44. <https://doi.org/10.57171/jt.v3i1.310>
- Suryani, H. (2016). *metode riset kuantitatif: teori dan aplikasi pada peelitian bidang menejemen dan ekonomi islam* (edisi kedua). prenadamedia Group.
- Ulfa, J. s. (2018). Peranan Guru Dalam Upaya Meningkatkan Motivasi Belajar Siswa Di Mts Mazaakhirah Baramuli Kelas Viii Pinrang. *Cochrane Database of Systematic Reviews*, 2018(11), 1–23.
<http://ejurnal.iainpare.ac.id/index.php/latihan/article/view/1709%0Ahttp://doi.wiley.com/10.1002/14651858.CD009115.pub3>
- UNESA. (2024). Metodologi Mixed Method_ Pengertian, Jenis, Contoh, dan Sistematikanya. *File:///D:/KULIAH%20S2/DRAFT%20TESIS%20BARU/Metodologi%20Mixed%20Method_%20Pengertian,%20Jenis,%20Contoh,%20dan%20Sistematikanya.Html*, 1–7.
- Winaryati, E., Munsarif, M., & Mardiana. (2021). *Cercular Model of RD&D (Model RD&D Pendidikan dan Sosial)*. KBM Indonesia.
- Wulandari, S. (2021). *Permainan Tradisional Di Taman Kanak-Kanak Aisyiyah Bustanul Raden Intan Lampung Usia Dini*.
<http://repository.radenintan.ac.id/id/eprint/16737%0Ahttp://repository.radenintan.ac.id/16737/1/SKRIPSI%20BAB%201%20265.pdf>
- Wulandari, S. (2023). Keterampilan Berbahasa Anak Usia Dini. *Kementrian Pendidikan Kebudayaan Riset Dan Teknologi, Dld*, 2–6.