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Analysis of The Use of Ethnobotany-Based Storybooks to Improve Science Literacy in Alpha Generation Children

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Abstract

This study aims to analyze the use of ethnobotany-based storybooks as a learning medium in introducing science literacy to early childhood, with a focus on introducing local plants, namely "Pulu Mandoti," which is part of the local wisdom in Alla District Village. The approach used was descriptive qualitative, with data collection techniques in the form of questionnaires and interviews with 14 respondents from early childhood education environments in Alla Enrekang District. The results showed that 90% of respondents considered the introduction of local wisdom to be important, especially in the process of planting and caring for Pulu Mandoti plants. In terms of media format, 42% of teachers chose short animated videos, while 50% preferred printed picture storybooks as the most effective medium. This study recommends the use of ethnobotany-based storybooks in the PAUD curriculum to improve science literacy and introduce local cultural values. The combination of picture books and short animations is expected to enrich children's learning experiences, improve their understanding of science, and foster appreciation for cultural and natural wealth.

Keywords: Storybook, Ethnobotany, Science Literacy, Generation Alpha, Pulu Mandoti Rice.

INTRODUCTION

Early childhood education has crucial potential through a holistic and contextual approach to build a strong foundation of science skills from an early age. Data from the 2024 Early Childhood Profile shows that only 17.21% of children have access to story-reading activities that involve science concepts (Mega Silviliyana, Karuniawati Dewi Ramadani, Rini Sulistyowati, Nindya, 2024). However, the early childhood education curriculum in Indonesia still lacks integration between science, culture, and environmental concepts through applicable activities (Elok Endang Rasmani et al., 2023). Studies have also found that introducing local plants through ethnobotany activities can increase curiosity and critical thinking skills in early

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childhood (Wulandari et al., n.d.). Meanwhile, the PAUD curriculum in Indonesia still lacks integration between science literacy and direct exploration activities (Sholeha et al., 2021). Furthermore, according to the report (Unicef, 2023), only a small portion of PAUD in Indonesia consistently implement science-based activities in their daily activities (Arum Sekar Sari, 2021). The low level of teachers' skills in packaging science learning into interesting and relevant activities is also a hindering factor (Dhey et al., 2024).

Enrekang Regency, South Sulawesi, has extraordinary natural and cultural wealth, including Pulu Mandoti rice, which is famous for its fluffy texture and distinctive aroma (Karim, 2020). However, children's knowledge of this local wealth is limited to historical stories and has not been fully utilized as a learning medium , especially in the digital age. Based on interviews with early childhood education (PAUD) teachers at RA Aisyiyah Bolang in Alla District, introducing natural potential is done by showing YouTube videos about local resources. Challenges arise due to limited educational media, On average, indoor learning media available in the classroom are used, focusing on teaching children to read and write due to parental requests (Rohita & Rahmadini Hidayat, 2023). Therefore, the importance of learning experiences outside the classroom is richer in potential, which can integrate local elements in a science context that is interesting and easy for early childhood to understand (Kustiarini et al., 2024).

Through learning experiences outside the classroom that are richer in potential, it becomes very important, especially those that can integrate local elements into a scientific context that is interesting and easy to understand for young children (Hidayat et al., 2022). Local elements in the context of science are local plants found in the Enrekang area with the concept of ethnobotany, namely local plants in the form of pulu mandoti rice, which are introduced through a storybook as an educational medium to improve science literacy in early childhood education(Nisa & Halifah, 2021).

The use of ethnobotany as a medium to improve science literacy in early childhood education is still minimal or very rarely done by early childhood teachers, as evidenced by the fact that on average, early childhood education in Enrekang only introduces simple stories through demonstrations but have not yet proven the concept of science stories, resulting in low understanding of science literacy. The concept of science is implemented in the curriculum, indicating a need to develop an approach that integrates ethnobotany into a comprehensive learning framework(Widayati et al., 2020). Ethnobotany and science literacy complement each other in early childhood education(Zahro et al., 2019). Ethnobotany provides a real cultural context, while science literacy helps children understand natural phenomena in a scientific way(Yulistia & Syafrudin, 2022). Through ethnobotany-

based activities such as planting local plants, listening to stories, and direct exploration. In this context, parents and teachers play an important role in fostering science literacy from an early age through engaging and contextual media(Gisna & Nurulaeni, 2024).

The important role of adults greatly helps stimulate literacy skills in children, thus offering solutions by presenting stories that combine science and local wisdom in an engaging format. The purpose of this study is to analyze the needs in the early childhood education environment in Enrekang Regency by randomly distributing questionnaires to 14 teachers as a reference for developing learning media in the form of ethnobotany-based storybooks that introduce science literacy to children from an early age. Through picture storybooks, children's literacy enthusiasm can be stimulated, as storybooks based on local culture can significantly increase children's interest in reading and understanding science(Pulimeno et al., 2020).

Through the characteristics and uniqueness of the local cultural approach, storybooks can be analyzed to determine the needs of the Enrekang community to become an attractive and educational medium for children. Therefore, it is important to understand the context of using ethnobotany-based storybooks as an innovative solution to improve early childhood science literacy. Therefore, "*Analysis of the Need for Ethnobotanical Storybooks to Improve the Literacy of Generation Alpha in Early Childhood Education in Enrekang Regency*" is needed as an important element of media literacy education by introducing ethnobotanical activities to improve early childhood science literacy, focusing on the form, format, and theme of the media that are appropriate for early childhood needs. This research is expected to contribute to the development of learning media through the concept of ethnobotany, which integrates local wisdom and science to improve the literacy skills of early childhood.

METHOD

The research approach used in this study is descriptive qualitative. The focus of this study is the analysis of the needs of early childhood teachers for the implementation of storybooks. There are 14 early childhood teachers, kindergarten teachers, and RA teachers in Alla sub-district, Enrekang district.

The research procedure began with field observations, in-depth interviews, and a questionnaire containing eight questions about the teachers' responses to determine the importance of using ethnobotany-based storybooks to introduce distinctive local plants, followed by data triangulation to obtain the validity of the findings. Data analysis was carried out by describing the respondents' answers in detail(Haryono, 2023).

The research instruments included observation guidelines, interview guides, and questionnaires. Data collection techniques were carried out through direct observation of children's verbal behavior, semi-structured interviews with teachers and parents, and documentation in the form of photographs.

Table 1. Presentation of Instruments

Instruments	Description	Purpose
Observation	Direct observation of children's verbal behavior and learning activities in early childhood education, to observe the process of science literacy introduction.	To observe the application of ethnobotany-based learning media in practice and how children interact with the material.
Interview	Semi-structured interviews with teachers to explore their understanding of the importance of ethnobotany-based storybooks ( ) in learning.	To obtain in-depth data on teachers' views regarding the use of ethnobotanical-based storybooks.
Questionnaire	A questionnaire containing 8 questions about teachers' responses to the use of ethnobotany-based storybooks.	To collect qualitative data on teachers' opinions regarding the effectiveness of ethnobotanical storybooks as a teaching medium.

Data analysis was conducted using the steps outlined in Miles Huberman and Saldana's theory, which involves analyzing data in three steps: data collection, data presentation, and drawing conclusions or verifying(Waruwu, 2023). The data analysis technique used in this study was descriptive qualitative data analysis to determine the importance of using ethnobotanical storybooks.

RESULTS AND DISCUSSION

This data analysis aims to answer the use of ethnobotany-based storybooks to improve science literacy in alpha generation children aged 2-6 years. This study aims to determine the importance of using storybooks. There were 14 early childhood education institutions in Enrekang Regency as respondents to answer the need for ethnobotany-based storybooks. The focus of this study included the use of storybooks in early childhood education, the importance of using storybooks in learning about local wisdom, and the media format to be implemented.

The results of this study show that storybooks were used by distributing questionnaires as data instruments. This was done over five weeks and divided into three stages, namely planning, implementation, and evaluation. Through the analysis stage, the activities ran smoothly and the results were maximized.

The planning stage involved preparing instruments with eight questions, including: 1) Have teachers ever used storybooks in learning? 2) How important is the use of storybook media in early childhood learning? 3) Are you familiar with the pulu mandoti rice plant as local wisdom in Enrekang? 4) Is it important to introduce local wisdom (pulu mandoti) through picture story media for early childhood? 5) What obstacles are usually encountered in using picture story learning media in early childhood education? 6) What theme is most suitable for a pulu mandoti-based storybook? 7) What is the most effective media format for a pulu mandoti storybook? 8) What is the most enjoyable way to get children interested in stories about pulu mandoti? The next stage of implementation was carried out by distributing questionnaires at Enrekang PAUD schools to analyze the need for ethnobotany-based storybooks. The final stage was evaluation, to determine the importance of using ethnobotany-based storybooks by providing storybook media.

The results of the instrument in Figure 1 with the question *"Have you ever used storybooks (picture books) in PAUD learning activities?"* showed that 100% of the 14 PAUD teachers answered 'Yes' to having used storybooks in PAUD learning activities. Through interviews with the head of the PAUD, the PAUD teachers stated that storybooks are used because they can stimulate children's development, including cognitive, language, and socio-emotional aspects. Storybooks are also considered a fun learning medium because of their clear storylines and use of attractive pictures, making it easier for children to understand basic concepts and actively engage in learning.

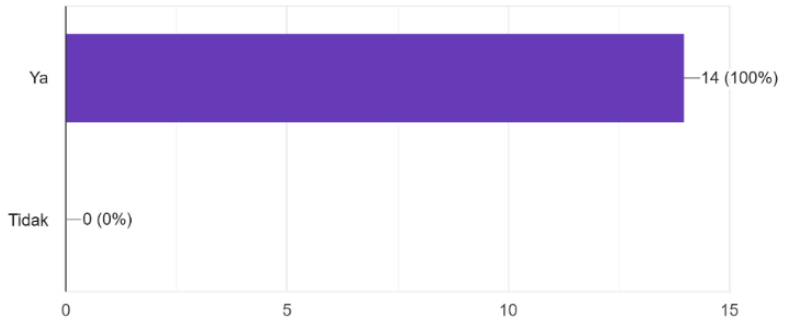

Figure 1

This shows that ethnobotanical storybooks not only improve science literacy but also children's holistic development, in line with the research objective of analyzing the importance of using ethnobotanical storybooks as an integration of science in PAUD learning. As confirmed by an interview with a teacher named "M," the use of storybooks can increase children's learning stimulation through social interaction, and age-appropriate media can support cognitive and language development. The use of interesting and illustrated storybooks is one way to

facilitate early literacy, storytelling skills, and understanding of basic concepts such as science and mathematics in early childhood(Nilsson et al., 2018a).

The results show that 88% of early childhood teachers consider the use of storybooks to be very important, while 12% consider it important. This shows that storybooks have a significant role in supporting the learning process. Storybooks not only teach information but also encourage the development of creativity, critical thinking, and social values in children. The use of storybooks can stimulate children's imagination and support vocabulary development, storytelling skills, and understanding of basic concepts. This is consistent with the findings of this study that the majority of early childhood educators strongly support the use of storybooks in learning.(Williamson et al., 2023)

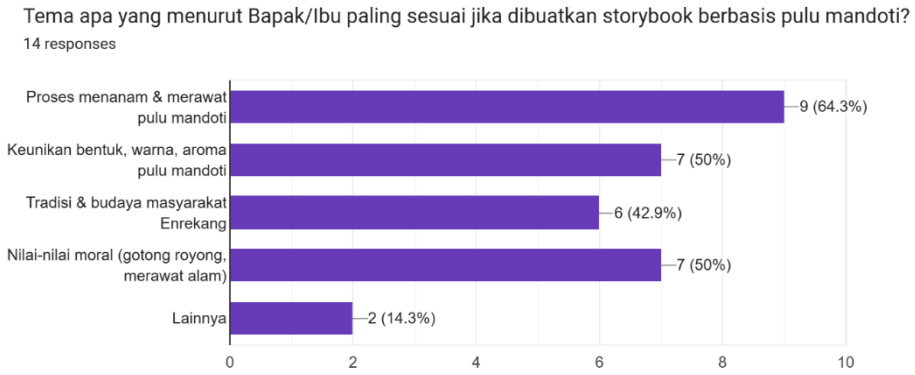

Figure 2

In the diagram above regarding the questionnaire items, namely the need for storybook themes that tell about pulu mandoti based on ethnobotany, there are four categories, including the process of planting and caring for pulu mandoti, the uniqueness, shape, color, and aroma of pulu mandoti, the cultural traditions of the Enrekang community, and moral values (mutual cooperation in caring for nature). Of the 14 respondents, the majority of teachers chose the theme "the process of planting and caring for Pulu Mandoti" for the ethnobotanical-based Pulu Mandoti storybook with a score of 64.3%. Although children's storybooks tend to highlight moral values, they need to emphasize the concept of science literacy by introducing the process of Pulu Mandoti, starting with the characteristics of Pulu Mandoti rice grains, planting, harvesting, and enjoying it as a traditional food. These simple things, when wrapped in interesting literacy, support children's literacy development. Teachers are more interested in providing direct and practical experience-based learning to children. Additionally, the theme of the 'uniqueness of the shape, color, and aroma' of Pulu Mandoti also received attention (50%), while the theme of 'the traditions and culture of the Enrekang community' received less attention (14.3%).

Teachers' responses were evenly divided, with 50% choosing illustrated printed books and 50% choosing interactive digital books. This shows that both media formats are well accepted by teachers. Illustrated printed books are more accessible and suitable for children who are not yet familiar with digital technology. However, interactive digital books offer a more dynamic experience and allow children to be more involved in learning. This is reinforced by the results of an interview with the head of IGTKI Enrekang Regency, who stated that in order to optimally introduce literacy, it is better to use printed books, series books, and picture books as these are stimuli that can be directly touched by early childhood children and make it easier for Enrekang early childhood teachers who do not have stable internet connections.

Based on the findings, it was discovered that stories can improve science literacy in early childhood by using stories that contain scientific concepts, making it easier for children to understand the material presented (Khowiyah & Eliza, 2023). Picture storybooks that are specially designed can improve science literacy in children. A study found that the use of picture storybooks increased the science literacy scores of fourth-grade students from 59.07 to 86.8 after the intervention. In addition, science story applications based on local wisdom have also been proven to be valid, effective, and practical for early childhood (Eliza et al., 2024) . Fictional picture books, although not written for scientific purposes, can introduce scientific concepts to children. The use of these books in early education can stimulate children's scientific thinking and imagination, as well as help them understand scientific concepts in a fun way (Tunnicliffe & Bruguière, 2017).

It is important to introduce children to reading materials, so the design involves selecting and determining a series of books about the unique Pulu Mandoti, an ethnobotanical plant that is native to the Enrekang Regency in South Sulawesi Province. The manuscript used to create *the storybook* describes the process of planting, caring for, harvesting, and the benefits of the plant. The manuscript format will be displayed in JPG format, then packaged into an e-book format and printed in series. Below is the manuscript creation process through *a storyboard* for the ethnobotanical storybook about Pulu Mandoti.

Table 2. Ethnobotany Storybook Design

Scene	Visual Description	Narration/Text	Action/Interaction	Notes
1	Terraced rice fields on the slopes of the Enrekang mountains, with expanses of green Pulu Mandoti rice.	"On the slopes of Mount Latimojong, a special variety of rice called Pulu Mandoti grows."	Panorama of terraced rice fields with a mountain backdrop.	Bright green colors with morning mist for a peaceful atmosphere.
2	A young farmer named Bintang walks along the rice field embankment while checking the rice plants.	"Pulu Mandoti is no ordinary rice; it has a fragrant aroma and is the pride of the Enrekang community."	Focus on Bintang as he smells the rice grains with an expression of admiration.	The details of the rice grains are clearly visible.
3	Bintang's grandfather sits on the porch of a traditional house, telling stories about the origins of Pulu Mandoti.	"Legend has it that Pulu Mandoti was first discovered by our ancestors in this fertile valley."	Flashback to the time when our ancestors discovered rice.	Use warm colors to set the mood for the story of the past.
4	Close-up of the large, golden-yellow grains of Pulu Mandoti rice.	"This rice is known for its large size, soft texture, and fragrant aroma when cooked."	Close-up of rice grains in the farmer's hand.	The texture of the rice is shown in detail.
5	Bintang and his grandfather harvest Pulu Mandoti with their family in the rice field.	"The Pulu Mandoti harvest is always carried out with gratitude to nature."	The family cuts the rice with sickles while joking around.	Add details of the small ceremony before the harvest.
6	Bintang's grandmother shows how to cook Pulu Mandoti in a traditional kitchen.	"Pulu Mandoti is cooked in the traditional way to preserve its aroma and deliciousness."	Grandma cooks rice over a wood stove.	Thin smoke billows for a traditional kitchen atmosphere.
7	The children taste the fragrant Pulu Mandoti rice with their family in the dining room.	"The aroma of Pulu Mandoti rice fills the room, making the meal together even more special."	The children's happy expressions as they eat together.	Plates of warm rice with visible steam.
8	Bintang asks about the importance of preserving Pulu Mandoti.	"Why do we have to preserve Pulu Mandoti, Grandpa?"	Focus on Bintang and his grandfather's serious faces.	Add an illustration of rice plants in the background.

9	Grandfather explains that Pulu Mandoti is a natural heritage that must be preserved by the younger generation.	"Pulu Mandoti is our identity. Preserving it means respecting our ancestors and nature."	The grandfather points toward the rice fields with mountains in the background.	Use bright colors to create an inspiring atmosphere.
10	The Bintang storybook is complete with a full story about Pulu Mandoti.	“Through this story, we want the world to know the uniqueness of Pulu Mandoti from Enrekang.”	The book features illustrations of rice and the text “Pulu Mandoti, the Pride of Enrekang.”	The gold color on the book cover symbolizes the uniqueness of rice.

Thus, the data from Table 2 about the storyboard of the ethnobotany story above serves as the basis for designing the Pulu Mandoti storybook based on ethnobotany. This illustrated storybook functions as an educational medium to introduce science literacy from an early age. (Triyanita & Mulyono, 2024) states that through *Increasing Children's Basic Literacy Through Storybook Media, the storybook* aims to understand how storybooks are used as a medium to improve the basic literacy skills of young children. The aspects of science literacy measured include the ability to identify questions, acquire new knowledge, explain scientific phenomena, and draw conclusions, which are woven into simple stories presented in the form of storybooks as learning media. This highlights the importance of integrating storybooks as a medium in science education for young children (Khowiyah & Eliza, 2023) .

Through visual media (Yanto, 2019) emphasizes that visual media such as picture stories are very effective in communicating abstract concepts to early childhood. Using picture stories that tell about the farming process or the uniqueness of Pulu Mandoti can help children understand natural processes and the relationship between humans and nature in a fun and easy-to-digest way.

The use *of storybooks* is mentioned by (Egert et al., 2022) that storybooks can stimulate children's imagination and support vocabulary development, storytelling skills, and basic concept understanding. This is in line with the findings of this study that the majority of early childhood education teachers strongly support the use of storybooks in learning. Meanwhile, it is emphasized from (Hidayat et al., 2022) that project-based learning, such as planting crops, is very effective in teaching fine motor skills, concentration, and conceptual understanding. The farming process can teach children about responsibility and hard work, as well as provide an understanding of the relationship between humans and nature. The use of digital

media in education can increase children's engagement, while printed books remain effective for developing reading skills at an early age.

Integrating ethnobotany concepts into teaching materials for early childhood education can enrich learning by linking science and local wisdom. Science teaching materials for early childhood that integrate local wisdom and Islamic values. The results show that these teaching materials are suitable for use in the learning process at (Diana & Setiadi, 2018) . Development of illustrated science stories integrated with local wisdom based on digital technology for early childhood. This approach is expected to increase children's interest and understanding of science through the context of local culture (Eliza et al., 2022)

Using the surrounding environment and encouraging early childhood to explore their environment can increase creativity in learning. The environment acts as a learning asset that has a major influence on children's physical, social, cultural, and emotional development. Optimizing the potential of the environment means utilizing various objects and tools around them as sources and media for learning. These media can be developed creatively by teachers together with children as an alternative to overcome the limitations or shortcomings of available learning media (Suhayati & Watini, 2024) . Science learning for early childhood by utilizing local wisdom aims to recognize local wisdom while understanding basic science concepts (Susdarwati & Agustina, 2018) . The use of appropriate learning media to help children understand the material, especially that related to local wisdom. This approach can foster a sense of love and pride in one's own culture from an early age (Dhey et al., 2024) .

CONCLUSION

Based on the results of research on the use of ethnobotany-based storybooks, it has been proven that storybooks can improve science literacy, as seen from the results of questionnaire data analysis, which show that early childhood teachers in Enrekang Regency strongly support the development of ethnobotany-based storybooks that integrate Pulu Mandoti rice as the main theme because they can introduce scientific concepts in a fun and easy-to-understand way for children, while integrating local culture. This study also shows that both media formats, namely printed picture books and interactive digital books, are well received by teachers.

Further research is recommended to develop training modules for teachers in maximizing the use of ethnobotany-based storybooks and conducting trials in various classroom contexts to assess the effectiveness of storybooks in supporting more effective science literacy development. This research, " ," shows that there are great

opportunities to integrate ethnobotany-based storybooks into the early childhood education curriculum, paving the way for further development in utilizing story media as an effective teaching tool in the future.

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REFERENCES

Arum Sekar Sari, W. (2021). Pentingnya Sains dan Peran Orangtua dalam Pengajaran Sains kepada Anak di Rumah. *Journal Ashil: Jurnal Pendidikan Anak Usia Dini*, *1*(1), 52–66. https://doi.org/10.33367/piaud.v1i1.1572

Dhey, K. A., Ndek, F. S., Tini, F. A., & ... (2024). Pengembangan Media Pembelajaran Berbasis Kearifan Lokal Pada Pembelajaran IPAS Di Kelas IV. *Jurnal Ilmiah …*, *2023*.

Diana, D., & Setiadi, A. E. (2018). Bahan Ajar Sains Anak Usia Dini Berbasis Kearifan Lokal Dan Nilai Keislaman. *JPUD - Jurnal Pendidikan Usia Dini*, *12*(2), 211–220. https://doi.org/10.21009/jpud.122.02

Egert, F., Cordes, A. K., & Hartig, F. (2022). Can e-books foster child language? Meta-analysis on the effectiveness of e-book interventions in early childhood education and care. *Educational Research Review*, *37*, 100472. https://doi.org/10.1016/J.EDUREV.2022.100472

Eliza, D., Mulyeni, T., Budayawan, K., Hartati, S., & Khairiah, F. (2024). Creation of Cultural Local Wisdom-Based Picture-Science Stories Application for the Introduction of Scientific Literacy for Early Childhood. *International Journal on Informatics Visualization*, *8*(1), 417–424. https://doi.org/10.62527/joiv.8.1.2234

Eliza, D., Mulyeni, T., Budayawan, K., Hartati, S., Khairiah, F., & Permana, A. I. (2022). Pengembangan Teknologi Digital Cerita Sains Terintegrasi Kearifan lokal untuk Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *6*(6), 7069–7077. https://doi.org/10.31004/obsesi.v6i6.3640

Elok Endang Rasmani, U., Wahyuningsih, S., Winarji, B., Jumiatmoko, J., Eka Nurjanah, N., Shofiatin Zuhro, N., Fitrianingtyas, A., Agustina, P., Kristiani

Wahyu Widiastuti, Y., Diah Putri Nazidah, M., & Ayu Sekar Prashanti, N. (2023). Implementasi Manajemen Pembelajaran Proyek Berbasis Kurikulum Merdeka di Lembaga PAUD. *Murhum : Jurnal Pendidikan Anak Usia Dini*, *4*(1), 567–578. https://doi.org/10.37985/murhum.v4i1.265

Gisna, G. A., & Nurulaeni, F. (2024). Indonesia Peningkatan Literasi Sains Menggunakan Cerita Bergambar Ilmiah. *Jurnal BELAINDIKA (Pembelajaran Dan Inovasi Pendidikan)*, *6*(2), 185–190. https://doi.org/10.52005/belaindika.v6i2.160

Haryono, E. (2023). Metodologi penelitian kualitatif di Perguruan Tinggi Keagamaaan Islam. *E-Journal an-Nuur: The Journal of Islamic Studies*, *13*, 1–6.

Hidayat, W., Halifah, S., & Zainuddin, L. (2022). Pemanfaatan Media Rainbow Walking Water dan Ampas Kelapa Untuk Meningkatkan Kemampuan Mengenal Warna Pada Anak. *PAUDIA : Jurnal Penelitian Dalam Bidang Pendidikan Anak Usia Dini*, *11*(1), 443–458. https://doi.org/10.26877/paudia.v11i1.11364

Karim, A. (2020). Endemic Rice Pulu' Mandoti Supports the Economy and Food Security at Salukanan Community During Covid-19 Global Pandemic Crisis. *International Journal of Innovative Science and Research Technology*, *5*(9), 793–796. https://doi.org/10.38124/ijisrt20sep485

Khowiyah, Z., & Eliza, D. (2023). Pengaruh Metode Bercerita Terhadap Literasi Sains Anak Usia Dini. *Jurnal Pelita PAUD*, *8*(1), 120–131. https://doi.org/10.33222/pelitapaud.v8i1.3440

Kustiarini, K., Sarwi, S., Rusilowati, A., & Dewi, N. R. (2024). Implementation of Learning Models To Improve Elementary School Students ' Critical Thinking Abilities. *International Conference on Science, Education an Technology*, *10*, 103–107.

Mega Silviliyana, Karuniawati Dewi Ramadani, Rini Sulistyowati, Nindya, G. A. (2024). Profil Pendidikan Anak Usia Dini 2024. In Direktorat Statistik Kesejahteraan Rakyat (Ed.), *Badan Pusat Statistik* (Direktorat, Vol. 5, Issue 1). Badan Pusat Statistik. https://www.bps.go.id/id/publication/2024/12/13/744350b0873dcb98dfeab38c/profil-anak-usia-dini-2024.html

Nilsson, M., Ferholt, B., & Lecusay, R. (2018a). 'The playing-exploring child': Reconceptualizing the relationship between play and learning in early childhood education. *Contemporary Issues in Early Childhood*. https://doi.org/10.1177/1463949117710800

Nilsson, M., Ferholt, B., & Lecusay, R. (2018b). 'The playing-exploring child': Reconceptualizing the relationship between play and learning in early childhood education. *Contemporary Issues in Early Childhood*, *19*(3), 231–245. https://doi.org/10.1177/1463949117710800

Nisa, K., & Halifah, S. (2021). Temu Baur Budaya dan Matematika : Kue Tradisional Konjo pada Pengenalan Bentuk Geometri Anak Usia Dini. *Jurnal Obsesi : Jurnal*

Pendidikan Anak Usia Dini, *6*(1), 445–456. https://doi.org/10.31004/obsesi.v6i1.936

Pulimeno, M., Piscitelli, P., & Colazzo, S. (2020). Children's literature to promote students' global development and wellbeing. *Health Promotion Perspectives*, *10*(1), 13–23. https://doi.org/10.15171/hpp.2020.05

Rohita, & Rahmadini Hidayat, N. (2023). The Effectiveness of Using Learning Device Information Systems in Preparing Learning Plans. *JPUD - Jurnal Pendidikan Usia Dini*. https://doi.org/10.21009/jpud.171.12

Sholeha, V., Wahyuningsih, S., Hafidah, R., Syamsuddin, M. M., Pudyaningtyas, A. R., Dewi, N. K., & Nurjanah, N. E. (2021). Penerapan Literasi Sains Basis Kelas oleh Guru PAUD di Kota Surakarta. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *6*(3), 2013–2019. https://doi.org/10.31004/obsesi.v6i3.1237

Suhayati, Y., & Watini, S. (2024). Implementasi Model ASYIK dalam Meningkatkan Literasi Sains dengan Memanfaatkan Lingkungan Sekitar pada Anak Usia Dini. *Jurnal Studi Guru Dan Pembelajaran*, *7*(2), 562–578.

Susdarwati, S., & Agustina, D. A. (2018). Pengembangan Modul Pembelajaran Sains Berbasis Kearifan Lokal Daerah Ngawi Pada Taman Kanak-Kanak. *Social, Humanities, and Educational Studies (SHEs): Conference Series*, *1*(1), 888–895. https://doi.org/10.20961/shes.v1i1.23554

Triyanita, T., & Mulyono, R. (2024). Increasing Children's Basic Literacy Through Storybook Media. *Lombok, North Wiralodra, Universitas Java, West*, *15*(1), 372–379.

Tunnicliffe, S. D., & Bruguière, C. (2017). Growing Scientific Thinking with Fictional Picture Books : Questioning and Imagination in Early Years. *Communication HSCI*, *August 2018*, 16–19.

Unicef. (2023). Laporan Tahunan 2023. *Laporan*, 1–526.

Waruwu, M. (2023). Pendekatan Penelitian Pendidikan : Metode Penelitian Kualitatif , Metode Penelitian Kuantitatif dan Metode Penelitian Kombinasi (Mixed Method). *Jurnal Pendidikan Tambusai*, *7*(1), 2896–2910.

Widayati, J. R., Safrina, R., & Supriyati, Y. (2020). Analisis Pengembangan Literasi Sains Anak Usia Dini melalui Alat Permainan Edukatif. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *5*(1), 654. https://doi.org/10.31004/obsesi.v5i1.692

Williamson, J., Hedges, H., & Jesson, R. (2023). Storybook reading: Literacy and teacher knowledge in early childhood education. *Journal of Early Childhood Literacy*. https://doi.org/10.1177/14687984231214990

Wulandari, B., Rokhmawan, T., & Dewi, A. C. (n.d.). *Initiating an Educational Agricultural Flower Tourism Village through the Construction of Language Landscape and Eco Folklore*. https://attractivejournal.com/index.php/bce//index

Yanto, D. T. P. (2019). Praktikalitas Media Pembelajaran Interaktif pada Proses Pembelajaran Rangkaian Listrik. *INVOTEK: Jurnal Inovasi Vokasional Dan Teknologi*, *19*(1), 75–82. https://doi.org/10.24036/invotek.v19i1.409

Yulistia, A., & Syafrudin, U. (2022). Implementasi Dongeng Sains dalam Pembelajaran untuk Meningkatkan Keterampilan Berpikir Kritis Siswa. *Elementary : Jurnal Ilmiah Pendidikan Dasar*, *8*(1), 41. https://doi.org/10.32332/elementary.v8i1.4610

Zahro, I. F., Atika, A. R., & Westhisi, S. M. (2019). Strategi Pembelajaran Literasi Sains Untuk Anak Usia Dini. *Jurnal Ilmiah Potensia*, *4*(2), 121–130. https://doi.org/10.33369/jip.4.2.121-130