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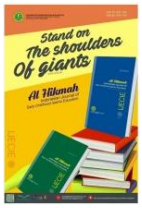

Integrating Coastal Culture in the Development of Problem-Solving Skills in Early Childhood

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ABSTRACT

This study aims to describe the experiences of children aged 4-5 years in developing problem-solving skills through the integration of coastal culture in early childhood education. The background of this study stems from the need to strengthen contextual learning that provides space for children to explore, think critically, and collaborate through real experiences that are close to their lives. The research method used is qualitative with a phenomenological approach. The research subjects included 12 children, a teacher, and three parents. Data were obtained through participatory observation, semi-structured interviews, and documentation, then analyzed through the stages of bracketing, identification of important statements, theme grouping, and the preparation of textural and structural descriptions. The results of the study show that coastal culture provides a rich and meaningful context for children to recognize problems, analyze causes, and choose solution strategies. Children can identify problems in games such as simulating fish markets, loading and unloading boats, and pulling nets, and develop cognitive, social, and motor strategies. Coastal culture-based learning also enhances cooperation, independence, and children's ability to try solutions independently before asking for help. This study concludes that the integration of coastal culture is effective as a contextual learning model that supports early.

INTRODUCTION

Early childhood education (PAUD) is a fundamental stage in shaping children's character, intelligence, and social skills (Diknas, 2025). During this period, children are in a phase of rapid brain development, so appropriate stimulation will have a significant impact on the quality of their future growth and development (Pamungkas et al., 2019; Tia Ramlah dkk., 2022). Theoretically, Piaget explains that in the preoperational stage (2-7 years), children begin to learn to recognize cause-and-effect relationships through real experiences (Piaget, 2010). Vygotsky added that problem-solving skills develop better if children interact with appropriate social environments and media (Vygotsky, 2009). One important aspect that needs to be developed early on is problem-solving skills, namely the ability of children to think logically, make decisions, and find solutions to simple problems in everyday life (Krisnawati, 2023; Nurrachmah et al., 2023). This ability not only supports cognitive aspects, but also shapes children's independence and confidence in facing challenges. (Diknas, 2025; Wahyuni et al., 2021).

However, learning practices in many early childhood education institutions still tend to be instructional and teacher-centered. (Hobir & Kurniawan, 2019; Sumardyono et al., 2016). Children are often directed to follow instructions without being given the space to explore, ask questions, or try to solve problems independently. In fact, the Merdeka Curriculum emphasizes the importance of real contextual learning experiences, which allow children to learn through interaction with their surroundings and local culture that is close to their lives. (Nafisa, Meilina Durrotun, 2023; Shalehah, 2023). This approach is in line with strengthening the Pancasila Student Profile, particularly in the dimensions of critical and independent reasoning, which emphasizes reflective, analytical thinking, and responsible decision-making. (Fadillah & Yusuf, 2022; Jamila et al., 2023).

One of the local potentials that can be integrated into early childhood education is the culture of coastal communities. This culture is rich in values of cooperation, perseverance, responsibility, and adaptation to the natural environment. These values are highly relevant to be instilled from an early age as part of character education. Unfortunately, most research on learning based on local wisdom still focuses on mainland cultures or common traditional games, such as Javanese or Sundanese games. There has not been much research specifically exploring how coastal culture can be integrated into early childhood education, especially in the context of problem-solving skills development.

Research by Rizkita shows that local culture-based learning can increase children's engagement and strengthen critical and independent thinking dimensions in the Pancasila Student Profile (Riztika Widyasari et al., 2024). Meanwhile, Choirunnisa emphasized that coastal cultural values such as cooperation and perseverance can be integrated into play activities to train children's problem-solving skills. (Choirunnisa et al., 2023) Octaloca also develops learning media based on local folklore, which has been proven to improve logical and creative thinking skills in early childhood. (Octaloca, 2021) Wulandari researched traditional games as a means of cognitive development in children and found that culture-based activities can improve children's problem-solving and cooperative skills (Wulandari, 2020). Finally, Ningsih developed a coastal environment-based contextual learning model that helps children understand cause-and-effect concepts and solutions in a more concrete way (Ningsih, 2012).

Based on the above description, it can be concluded that the integration of local culture, especially coastal culture, has great potential in supporting the development of early childhood thinking skills. However, there is still a gap in the development of early childhood learning models that systematically promote coastal cultural values as a learning context. Therefore, this study aims to develop a coastal culture-based early childhood education model that can improve early childhood problem-solving skills.

The results of this study are expected to contribute to the development of a contextual early childhood education curriculum and strengthen children's character through local culture. In addition, this study is also expected to serve as a reference for educators and policymakers in designing learning strategies that are relevant to children's lives and their surrounding environment.

METHODS

This study uses a qualitative approach with a phenomenological method chosen for its ability to deeply explore the essence of participants' subjective experiences in the context of coastal culture-based learning. The main focus of this study is to understand the life experiences of children, teachers, and parents in the implementation of learning, so that this study not only describes the phenomena that arise but also attempts to reveal the essential structure of these experiences.

The research was conducted at Cinta All Tuban Kindergarten, located in Tuban Regency, East Java Province, a coastal area with strong socio-cultural characteristics of coastal communities. The school environment is not far from the coastal area, so the economic, cultural, and social activities of the local community are greatly influenced by the lives of fishermen and maritime culture. These conditions provide a relevant context for the application of coastal culture-based learning integrated into early childhood play activities.

The research subjects consisted of 12 children aged 4-5 years from Group A of TK Cinta All Tuban, a classroom teacher as the main informant, and three parents as supporting informants. The research subjects were selected using purposive sampling, based on considerations of the subjects' active involvement in learning activities, direct experience in using coastal culture-based learning media, and the informants' ability to provide relevant and in-depth data in accordance with the research objectives.

Data was collected through participatory observation over a period of three weeks, semi-structured interviews, and documentation in the form of photographs of activities and field notes. Observations were conducted to capture the dynamics of children's interactions in activities such as playing fish market simulations, loading and unloading ships, role-playing as fishermen, and problem-solving activities based on real-life situations. Interviews were conducted to explore teachers' and parents' perceptions of children's responses to coastal culture-based learning, while documentation served as supporting data to reinforce the results of observations and interviews.

Data analysis was conducted using a phenomenological approach, namely bracketing to suspend the researcher's assumptions, identifying important statements from the interview and observation results, grouping statements into essential themes, and preparing textual and structural descriptions that explain what the experiences were and how they occurred. Data validity was ensured through triangulation of techniques and sources, peer discussions to reduce subjectivity, and member checks with teachers to ensure that interpretations were consistent with actual experiences in the field. In addition, this study took ethical considerations into account by obtaining written consent from schools and parents prior to implementation, maintaining the confidentiality of participants' identities, and ensuring that all data was used solely for academic purposes.

RESULT

1.1 Children's Experience in Identifying and Understanding Problems

The findings show that children aged 4-5 years are able to recognize and understand problems in the context of coastal culture-based games. In the fish market simulation, children were able to identify a lack of money, mismatches in the quantity of goods, and confusion in determining prices. Observations show that children are beginning to be able

to explain the source of problems without the help of teachers. Teachers say that children have become more sensitive because the context of the game resembles the real conditions of coastal communities.

In ship loading and unloading games, children demonstrate their ability to recognize physical obstacles such as heavy fish baskets or falling objects. Children can also analyze the causes of problems, such as excessive loads or poor hand-eye coordination. This shows that coastal culture-based activities provide natural stimuli for training problem identification skills.

The interview results reinforce these findings. Teachers stated:

"The children learn to identify for themselves what they find difficult. For example, if there is less money or the items are not in the right quantity, they can tell me without me asking them first."

Parents also revealed that children began talking about problems they encountered while playing at school and how they understood them. This change shows that the experience of identifying problems at school carried over to the home.

1.2 Problem-Solving Strategies and Developing Cooperation in Children

Children's ability to develop strategies to solve problems they encounter. In the net pulling game, children divide roles and set strategies so that the net can be pulled together. Children discuss the position and strength of their hands, demonstrating critical and collaborative thinking skills.

The teacher stated that the net-pulling game encouraged the children to understand the importance of cooperation. They seemed to begin to understand that problem solving required coordination with friends. The teacher said:

"If this is a fishermen's game, we have no choice but to work together. Otherwise, the nets won't move."

In the ship loading and unloading game, children develop strategies such as dividing the load, asking friends for help, and grouping items by size. Some children even try new methods, such as pushing objects instead of lifting them.

Parents confirmed changes in their children's behavior at home. Children showed the courage to try solutions before asking their parents. One parent said:

Now if he has a small problem, he likes to try first. He says, "I'll find a way first, Mom."

The strategies that develop in children include cognitive strategies (calculating, weighing options), social strategies (communicating and cooperating), and motor strategies (sharing burdens, coordinating hand-eye coordination). The integration of coastal culture has proven to be an effective means of stimulating all aspects of these problem-solving strategies.

1.3 Challenges in Integrating Coastal Culture into the Development of Problem-Solving Skills in Early Childhood

Although coastal cultural integration provides a meaningful learning experience, this study also found several challenges faced by teachers, children, and parents in its implementation. The first challenge arises from teachers' limited understanding of coastal

cultural symbols, activities, and values. Teachers realize that not all coastal games or activities can be easily adapted to the context of early childhood learning without modification. Some concepts, such as the process of fishing, loading and unloading boats, or the mechanism of buying and selling fish, need to be simplified so that 4-5-year-old children can understand them.

The third challenge arises from children's varying abilities to understand the coastal cultural context. Not all children have direct experience with coastal life, so some need more time to understand the meaning of the activities, roles, and issues that arise in the game.

The fourth challenge relates to parental support. Although some parents see the positive impact of learning, others do not understand the purpose of coastal cultural integration and therefore do not reinforce it at home. This makes the sustainability of children's problem-solving experiences less than optimal.

Overall, these challenges show that coastal cultural integration requires media support, teacher understanding, and collaboration with parents so that contextual learning can be more effective and have a lasting impact on children's problem-solving skills.

DISCUSSION

The results of the study show that coastal cultural integration creates contextual and meaningful learning for children aged 4-5 years. Through game simulations such as fish markets, loading and unloading boats, and pulling nets, children can identify problems, try various strategies, and work together with their peers (Suwardi & Rahmawati, 2019). These findings are consistent with previous research indicating that real-world learning supports the development of critical thinking and causal understanding in young children (Hardiyanti & Rosnaeni, 2023). In addition, coastal cultural values such as mutual cooperation and resilience have been proven to encourage cooperation and independence in children.

Theoretically, these findings are relevant to Piaget's theory, which states that children in the preoperational stage learn optimally through concrete experiences and symbolic play. (Jean, 2013). Coastal culture-based activities help children assimilate and accommodate when facing problems while playing. In addition, based on Vygotsky's theory, social interaction in play allows children to develop within their proximal development zone through cooperation and scaffolding from teachers (Madan & Singh, 2024).

The practical implications of this study emphasize the role of early childhood educators as designers of contextual play experiences (Muzakki & Fauziah, 2025). Teachers need to use local culture as a source of learning, design games that challenge children's thinking skills, and provide space for exploration before offering assistance. This approach is in line with the principles of the Merdeka Curriculum, which is child-centered and emphasizes active learning (Romlah, 2024).

Thus, coastal cultural integration not only serves as a learning context, but also as an effective pedagogical strategy in stimulating problem-solving skills, cooperation, and independence in early childhood.

CONCLUSION

This study concludes that integrating coastal culture into early childhood education is effective in improving problem-solving skills. Children can recognize problems, choose strategies, work together, and demonstrate independence. The coastal culture-based learning model is suitable as an alternative to contextual learning in early childhood education. Further research is recommended to develop coastal culture-based learning modules on a broader scale.

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BIBLIOGRAPHY

Choirunnisa, N. L., Rahmawati, D., & Mulyani, M. (2023). The Effectiveness of STEAM Learning Based on â€ œRobotisâ€ Projects to Improve Science Literacy of Elementary School Students. *Jurnal Penelitian Pendidikan IPA*, *9*(6), 4836–4841.

Diknas, Di. P. (2025). *Pedoman Pengenalan Kurikulum Pendidikan Anak Usia Dini*.

Fadillah, C. N., & Yusuf, H. (2022). Analisis Kurikulum Merdeka Dalam Satuan Pendidikan Anak Usia Dini. *Jurnal Bunga Rampai Usia Emas*, *8*(2), 120. https://doi.org/10.24114/jbrue.v8i2.41596

Hardiyanti, N., & Rosnaeni, R. (2023). Meningkatkan Kreativitas Anak Usia 5-6 Tahun Pada Pembelajaran Project Based Learning. *Jurnal Pemikiran Dan Pengembangan Pembelajaran*, *5*(2), 1320–1325. http://www.ejournal-jp3.com/index.php/Pendidikan/article/view/694%0Ahttp://www.ejournal-jp3.com/index.php/Pendidikan/article/download/694/526

Hobir, A., & Kurniawan, S. (2019). Menjadi Guru Profesional Dalam Menghadapi Dinamika Persaingan Global. *NUR EL-ISLAM: Jurnal Pendidikan Dan Sosial Keagamaan*, *6*(1), 128–152.

Jamila, J., Hasibuan Fauzi, M., & Ngayomi Yudha Wastuti, S. (2023). Modul Bimbingan dan Konseling Berbasis Project Based Learning dalam Penguatan Profil Pelajar Pancasila bagi Siswa. *Murhum : Jurnal Pendidikan Anak Usia Dini*, *4*(2), 865–875. https://doi.org/10.37985/murhum.v4i2.347

Jean, P. (2013). *Play, Dream and Imitation in Childhood, Play, Dream and Imitation in Childhood*. Routledge.

Krisnawati, A. C. (2023). Problem Solving Pada Anak Melalui Bermain. *Edukatika*, *1*(1), 22–36. https://doi.org/10.26877/edukatika.v1i1.128

Madan, M. D., & Singh, P. A. (2024). Theories of Learning: Piaget and Vygotsky. *Perspectives in Education, Curiculum and Pedagogy*, 291.

Muzakki, M., & Fauziah, P. (2025). Implementasi Pembelajaran Anak Usia Dini Berbasis BUdaya Lokal di PAUD Full Day School. *Jurnal Pendidikan Dan Pemberdayaan Masyarakat*. https://doi.org/https://doi.org/10.21831/jppm.v2i1.4842

Nafisa, Meilina Durrotun, and R. F. (2023). Implementasi Kurikulum Merdeka Dalam Penerapan pembelajaran Berdiferensiasi di Lembaga PAUD. *Jurnal Studi Guru Dan Pembelajaran*, *6*(2), 79–88.

Ningsih, S. (2012). *Penerapan Model Pembelajaran Kontekstual untuk Meningkatkan Pemahaman Benda-Benda Terapung Melayang dan Tenggelam dalam Air pada Anak Kelompok B TK Pertiwi Tempelrejo I Tahun Pelajaran 2011/2012*.

Nurrachmah, F. K., Adzkia, K. P., & Sulistyowati, W. (2023). Strategi Pembelajaran dalam Menstimulasi Kemampuan Pemecahan Masalah pada Anak Usia Dini. *Jurnal Rinjani Pendidikan Anak Usia Dini*, *1*(04), 145–156.

Octaloca, I. D. (2021). *Pengembangan Buku Cerita Rakyat Daerah Bengkulu "Putri Gading Cempaka" Untuk Meningkatkan Literasi Anak Usia 5-6 Tahun*. IAIN BENGKULU.

Pamungkas, J., Syamsudin, A., Harun, H., & Sudaryanti, S. (2019). Survei Pembelajaran Kearifan Lokal di Taman Kanak-Kanak Se-Provinsi Daerah Istimewa Yogyakarta. *Al-Athfal : Jurnal Pendidikan Anak*, *5*(1), 1–20. https://doi.org/10.14421/al-athfal.2019.51-01

Piaget, J. (2010). *The Psykology Of The Child*. Pustaka Pelajar.

Riztika Widyasari, Mahfud, Triana Kartika Santi, & Andhika Wahyudiono. (2024). Integration of Local Culture and Ijen Geopark in Early Childhood Education Student Learning in Banyuwangi. *Santhet (Jurnal Sejarah Pendidikan Dan Humaniora)*, *8*(2), 2193–2203. https://doi.org/10.36526/santhet.v8i2.4625

Romlah, S. (2024). Efektivitas Metode Bermain Sambil Belajar dalam Mengembangkan Kognitif Anak Usia Dini. *JIMU: Jurnal Ilmiah Multidisipliner*, *2*(02), 572–592.

Shalehah, N. A. (2023). Implementasi Kurikulum Merdeka Melalui Model Project Based Learning di Satuan PAUD. *Islamic EduKids: Jurnal Pendidikan Anak Usia Dini*, *5*(1), 14–24.

Sumardyono, Priatna, N., & & Anggraena, Y. (2016). *Guru Pembelajar Modul Matematika SMP: Model Pembelajaran Matematika, Statistika dan Peluang*. Direktorat Jenderal Guru dan Tenaga Kependidikan Hak.

Suwardi, S., & Rahmawati, S. (2019). Pengaruh Nilai-Nilai Kearifan Local Terhadap Pola Pengasuhan Anak Usia Dini (AUD). *Jurnal Al-Azhar Indonesia Seri Humaniora*. https://doi.org/https://doi.org/10.36722/sh.v5i2.347

Tia Ramlah, U., Riyanto, A. A., & Nuraeni, L. (2022). Media loose part play dalam meransang perkembangan kognitif anak usia dini. *Ceria (Cerdas Energik Responsif Inovatif Adaptif), 5(3), 293-299.*, *6*(3), 2614–4107.

Vygotsky. (2009). *Educational Psychology Active Learning edition*. Pustaka Pelajar.

Wahyuni, S., Khadijah, K., Budianti, Y., & Maisarah, M. (2021). Pengembangan Kurikulum Merujuk KKNI Pada Prodi PIAUD. *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini*, *4*(1), 14–30. https://doi.org/10.24042/ajipaud.v4i1.8334

Wulandari, A. (2020). Meningkatkan Kreativitas Anak melalui Teknik Finger Painting di KB Al Jannati Gampong Jawa Kota Banda Aceh. *Jurnal Ilmiah Mahasiswa Pendidikan Anak Usia Dini*, *5*(1).

Tesar, M. (2020). Towards a Post-Covid-19 'New Normality?': Physical and Social Distancing, the Move to Online and Higher Education. *Policy Futures in Education, 18*(5), 556–559. https://doi.org/10.1177/1478210320935671

Komara, E. (2014). *Belajar dan Pembelajaran Interaktif*. Bandung: PT Refika Aditama.