



**LOCAL WISDOM-BASED EDUCATIONAL GAMES FOR ENHANCING EARLY
CHILDHOOD MOTOR SKILLS: A CASE STUDY AT RA WATHONIYAH
SUSUKAN, CIREBON**

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Abstrak

Pembelajaran anak usia dini saat ini menunjukkan bahwa pengembangan keterampilan motorik halus masih banyak bergantung pada alat permainan edukatif (APE) pabrikan yang relatif mahal dan kurang memanfaatkan potensi lingkungan sekitar. Kondisi ini menyebabkan keterbatasan kreativitas guru dalam mengembangkan media pembelajaran yang kontekstual dan berbasis kearifan lokal. Penelitian ini bertujuan untuk mendeskripsikan dan menganalisis penggunaan permainan edukatif berbasis kearifan lokal serta dampaknya terhadap perkembangan keterampilan motorik halus dan kreativitas anak usia dini. Penelitian ini menggunakan pendekatan kualitatif dengan desain studi kasus di RA Wathoniyah Susukan, Cirebon, dengan 6 informan yang dipilih secara purposive. Data dikumpulkan melalui wawancara semi-terstruktur, observasi partisipatif, dan dokumentasi, kemudian dianalisis melalui reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa permainan edukatif berbasis kearifan lokal, seperti membuat mahkota dari daun buah nangka, mewarnai, dan membuat kolase dari kain perca, mampu meningkatkan keterampilan motorik halus, kreativitas, koordinasi mata-tangan, kelenturan jari, ketelitian, serta kemampuan mengekspresikan ide secara kreatif. Strategi efektif meliputi aktivitas eksplorasi, permainan kreatif, serta pembiasaan nilai-nilai gotong royong dan cinta lingkungan. Kebaruan penelitian ini terletak pada pemanfaatan kearifan lokal sebagai media pembelajaran yang tidak hanya mengembangkan keterampilan motorik halus, tetapi juga menanamkan nilai budaya serta kepedulian terhadap lingkungan. Disimpulkan bahwa pendekatan ini efektif dalam mendukung perkembangan motorik halus dan kreativitas anak usia dini. Disarankan agar guru mengoptimalkan pemanfaatan bahan lokal serta meningkatkan keterlibatan orang tua dalam proses pembelajaran.

Kata kunci: permainan edukatif; kearifan lokal; keterampilan motorik halus; kreativitas; anak usia dini.

Abstract

Early childhood learning currently indicates that the development of fine motor skills still largely depends on commercially manufactured educational play tools, which are relatively expensive and underutilize the potential of the surrounding environment. This condition limits teachers' creativity in developing contextual and locally based learning media. This study aims to describe and analyze the use of local wisdom-based educational games and their impact on the development of fine motor skills and creativity in early childhood. This study employed a qualitative case study design at RA Wathoniyah Susukan in Cirebon, involving six purposively selected informants. Data were collected through semi-structured interviews, participatory observation, and documentation, and analyzed through data

reduction, data display, and conclusion drawing. The results indicate that local wisdom-based educational games, such as making jackfruit leaf crowns, coloring, and creating fabric scrap collages, can improve children's fine motor skills, creativity, hand-eye coordination, finger flexibility, accuracy, and ability to express ideas. Effective strategies include exploratory activities, creative play, and the integration of values such as cooperation and environmental awareness. The novelty of this study lies in the use of local wisdom as a learning medium that not only enhances fine motor skills but also instills cultural values and environmental awareness. In conclusion, this approach effectively supports the development of fine motor skills and creativity in early childhood. It is recommended that teachers optimize the use of local materials and increase parental involvement in the learning process.

Keywords: educational games; local wisdom; fine motor skills; creativity; early childhood education.

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A. INTRODUCTION

Early childhood represents a 'golden age' in human development, a pivotal period marked by rapid progress across all developmental domains, including motor skills. Motor skills particularly fine motor skills play a crucial role in supporting a child's readiness for writing, drawing, and performing daily activities independently.¹ One effective strategy for developing early childhood motor skills is through the implementation of educational games based on local

wisdom. Such games do not only stimulate the child's physical and cognitive domains but also instill cultural values, a sense of togetherness, and an awareness of the surrounding environment.²

Early Childhood Education (ECE) serves as the primary foundation of the educational system, bearing the critical responsibility of nurturing and preserving a child's cultural values.³ However, in many early childhood education institutions, the use of educational games is often limited to

¹ R Sulkmawati, A., Rahman, T., & Giyartini, '). Meldia Mozaik Untuk Memfasilitasi Perkembangan Motorik Halus Anak Usia 4-5 Tahun: Tinjauan Literatur Sistematis', *Jurnal Paud Agapedia*, 5(2) (2021), 246-252.

² Indriyani, Pemanfaatan Bahan Ajar Berbasis Kearifan Lokal Dalam Pembelajaran Sains Di Sekolah Dasar',

Jurnal Sultra Elementary School (Jses), 5(1) (2024), 802-812.

³ S Latief, 'Pendidikan Anak Usia Dini (Paud) Sebagai Pondasi Pembentukan Karakter Dalam Era Revolusi 4.0 Dan Society 5.0: Teknik Dan Keberlanjutan Pendidikan Karakter', *Jurnal Literasiologi*, 3(45-59) (2020), 1-9.

modern media or manufactured products, leading to suboptimal use of local materials. Preliminary observations at RA Wathoniyah Susukan, Cirebon, reveal that teachers have initiated the development of environment-based educational games, such as crafting leaf crowns, as well as coloring and collage activities using fabric scraps (*kain perca*). The utilization of these local resources also serves as a vehicle for instilling values of creativity, simplicity, and gratitude for surrounding natural resources.⁴

Local wisdom-based activities do not only stimulate fine motor skills but also cultivate imagination, creativity, and social interaction through role-playing. This aligns with the principle of 'learning through play,' which emphasizes the importance of concrete experiences in the developmental process of early childhood.⁵ Field evidence reinforces the observational

findings that local wisdom-based educational games have a tangible impact on fine motor development, creativity, and the socio-cultural values of young children. In this context, teachers serve as facilitators who guide and model, while the school principal plays a strategic role in establishing policies that support contextual learning.⁶ Furthermore, parental involvement strengthens the synergy between school and home in supporting holistic child development. Consequently, implementing educational activities based on local wisdom can serve as an effective, cost-efficient, and meaningful instructional model for early childhood education institutions. These activities strategically leverage local potential and foster active participation from parents and guardians.

This research refers to several previous studies. First, a study by Rochimah

⁴ Indriyani, Pemanfaatan Bahan Ajar Berbasis Kearifan Lokal Dalam Pembelajaran Sains Di Sekolah Dasar', *Jurnal Sultra Elementary School (Jses)*, 5(1) (2024), 802-812.

⁵ Vivi Desrianti And Serli Marlina, 'Peningkatan Kemampuan Motorik Halus Anak Melalui Kegiatan Mozaik Bahan Alam Di Paud Kasih Ibu Mekar Sari Sawahlunto.', *Jurnal Pendidikan Tambusai*,

8(3) (2024), 42157-68 <<https://jptam.org/index.php/jptam/article/view/20976>>.

⁶ Meka M Tono, K., Ita, E., 'Pengembangan Alat Permainan Edukatif Bheto Leke Hitung Aspek Kognitif Berpikir Simbolik Pada Anak Usia 5-6 Tahun Di Tk St. Theresia Mangulewa', *Jurnal Citra Pendidikan Anak*, 3(4) (2024), 1162-1171.

entitled *“Analysis of Local Wisdom as an Innovative Approach in Early Childhood Education through Traditional Games”* utilizes a descriptive qualitative approach. Her research argues that local wisdom is a cultural heritage that must be preserved and introduced through education to create engaging instructional innovations. While the previous researcher primarily focused on the mechanics of the games themselves, the current study distinguishes itself by focusing on the developmental skills involved in the process of crafting the playtools.⁷

Second, a study by Purnamasari entitled *“The Implementation of Cirebonese Cultural Learning in Early Childhood Education Units”* employs a mixed-method descriptive quantitative and qualitative approach. Her research emphasizes the importance of culture-based learning in introducing local wisdom values to young children, specifically focusing on the rich artistic,

traditional, and social values of Cirebon. In contrast, the current study narrows its focus specifically to the application of local wisdom-based educational games as a strategic intervention to develop fine motor skills and creativity in early childhood.⁸ Third, a study by Nurkhasyanah entitled *“Improving Children's Fine Motor Skills through Plastine Media Play in Group A”* employs a Classroom Action Research (CAR) method conducted in two cycles, each consisting of planning, action, observation, and reflection. Her study involved 21 young children at RA Biharul Ulum Ma'arif Ujung Labuang, comprising 9 boys and 12 girls. In contrast, the present study emphasizes the implementation of local wisdom-based educational games as an instructional medium that not only develops motor skills but also instills cultural values and fosters children's creativity through the use of natural and traditional materials.⁹

⁷ & Meka M Tono, K., Ita, E., 'Pengembangan Alat Permainan Edukatif Bheto Leke Hitung Aspek Kognitif Berpikir Simbolik Pada Anak Usia 5-6 Tahun Di Tk St. Theresia Mangulewa', *Jurnal Citra Pendidikan Anak*, 3(4) (2024), 1162-1171.

⁸ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

⁹ Herlindah Nurkhasyanah, A., 'Meningkatkan Kemampuan Motorik

Therefore, this study aims to: (1) Describe the types of local wisdom-based educational games utilized for early childhood at RA Wathoniyah Susukan; (2) Analyze the impact of these local wisdom-based educational games on the development of children's motor skills; (3) Identify teacher strategies and effective learning environments that support physical-motor development through localized educational play; and (4) Explore the challenges and opportunities in implementing local wisdom-based educational games within early childhood education institutions. For young learners, this research provides an engaging learning experience that supports fine motor development, independence, creativity, and environmental awareness. Furthermore, this study is expected to serve as a valuable reference for parents and future researchers in developing early childhood education based on local wisdom.

B. METHODS

This study employs a qualitative approach with a case study design. This design was selected as the research aims to gain a profound and in-depth understanding of how the implementation of local wisdom-based educational games can develop early childhood fine motor skills within their natural context.¹⁰ The research was conducted at RA Wathoniyah Susukan, Cirebon, selected based on the characteristics of the students and the school's readiness to integrate local wisdom into its curriculum. The research subjects consisted of six informants selected through purposive sampling, comprising two classroom teachers and four parents/guardians who were directly involved in the learning activities.

Data were collected through participant observation, semi-structured interviews, and documentation. Observation was employed to examine the learning

Halus Pada Anak Melalui Bermain Media Plastisin Pada Kelompok A', *Jurnal Anak Bangsa* (Jas), 3(2).<https://doi.org/10.46306/Jas.V3i2.7126> (2024), 264-288.

¹⁰ Dian Tri Utami And Others, 'Implementasi Alat Permainan Edukatif

Berbasis Kearifan Lokal Bagi Guru Di Lembaga Paud', *Natijah: Jurnal Pengabdian Pendidikan Islam*, 1.1 (2024), 12-16 <<https://doi.org/10.25299/Njppi.2024.16396>>.

process firsthand; interviews were conducted to explore the experiences of teachers and parents; and documentation, including activity photographs and lesson plans, served to support data validation. Data analysis followed the Miles and Huberman interactive model, involving three stages: data reduction, data display, and conclusion drawing/verification.¹¹ Data trustworthiness was ensured through source triangulation—comparing information obtained from teachers and parents—and technical triangulation, which involved confirming the consistency between observations, interviews, and documentation. These measures were implemented to enhance the credibility of the research findings.

C. FINDINGS AND DISCUSSION

This study reveals that the implementation of local wisdom-based educational games at RA Wathoniyah Susukan, Cirebon, exerts a positive influence on the development of fine motor skills and creativity in early

childhood. The research findings are elaborated based on four primary focal points aligned with the research objectives, as follows:

1. Types of local wisdom-based educational games utilized for early childhood at RA Wathoniyah Susukan.

- a) Crafting head crowns from jackfruit leaves (*Artocarpus heterophyllus*)

Crafting head crowns from jackfruit leaves is an educational activity that introduces local wisdom while stimulating early childhood motor development. The findings indicate that this activity requires children to fold, arrange, and attach natural materials, thereby naturally refining their hand-eye coordination. Consequently, this study demonstrates that region-based cultural learning instills local wisdom values from an early age. In this context, children do not merely recognize culture symbolically but internalize it through meaningful direct experience. Leveraging local materials in early childhood

¹¹ Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D* (Alfabeta, 2022).

education fosters a more contextual and engaging atmosphere, which encourages children to become more active participants in the learning process.¹² The activity of crafting crowns from jackfruit leaves at RA Wathoniyah functions not merely as a game but as a platform for local wisdom-based learning that supports fine motor development and the early instillation of cultural values. It serves as a pedagogical tool where traditional practices and developmental milestones converge, allowing children to engage with their heritage while refining their physical dexterity.¹³ The Principal of RA Wathoniyah Susukan, Cirebon, stated: “We utilize jackfruit leaves because they are easily accessible around the school. The children learn that natural materials can be transformed into engaging games. In addition to exercising their hand movements, the children also learn how to arrange [materials] and

cooperate with one another” (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15, 2025, at 10:00 AM).

- b) Coloring images using colored pencils or crayons.

Coloring activities using colored pencils or crayons are routine practices implemented at RA Wathoniyah Susukan, Cirebon. These activities provide children with opportunities to control finger movements, practice their grip on writing instruments, and adjust hand pressure while coloring. This process indirectly refines fine motor skills while simultaneously fostering children's creativity in expressing their ideas and emotions through color.



Figure 1. Documentation of Coloring Activities.

¹² A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan

Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

¹³ Indriyani.

Fine motor physical development is closely interrelated with other developmental aspects, including creativity. Simple activities such as coloring serve as essential stimuli in building the foundation of a child's creative abilities. Furthermore, research by Rohmah (2024) demonstrates that art activities involving hand movements, such as finger painting, can enhance fine motor coordination, provide an enjoyable learning experience, and foster children's confidence in their creative work. This is supported by an account from the parent of a student named Aisyah, who stated: 'After coloring frequently at school, my child enjoys drawing at home more. She can choose her own colors and doesn't get bored easily. Her hand movements also seem more organized when she holds a crayon' (Interview with the parent of Aisyah, October 16, 2025, at 10:00 AM).

Therefore, coloring activities at RA Wathoniyah do not merely serve as filler tasks; rather, they constitute an integral part of a

learning strategy that supports the integrated development of children's fine motor skills and creativity.

- c) Creating collages of traditional house images using fabric scraps (perca).

The activity of creating traditional house collages from fabric scraps serves as an educational game that integrates local cultural elements with fine motor skill development. Children are engaged in cutting, gluing, and arranging fabric fragments according to the patterns of traditional houses. This activity progressively trains the children's precision, patience, and hand-eye coordination.

The findings of this study align with research by Widiastuti (2025), which concluded that collage activities using natural or simple materials are effective in enhancing fine motor skills in early childhood, particularly in cutting and pasting.

¹⁴ The introduction of local culture through visual media and hands-on practice helps children understand regional culture in a more concrete and meaningful manner. ¹⁵

Consequently, the traditional house collage activity at RA Wathoniyah not only contributes to the development of fine motor skills but also serves as a medium for introducing local culture relevant to the children's daily lives. The parent of a student named Ihsan stated: 'My child is very happy during college activities. At home, he often asks for more fabric scraps to paste. He says it's fun because he can choose his own colors and paste them as he likes' (Interview with the parent of Ihsan, October 16, 2025, at 10:00 AM).

2. The impact of local wisdom-based educational games on the development of fine motor skills and creativity in early childhood.

The research findings indicate that local wisdom-based

educational games implemented at RA Wathoniyah Susukan in Cirebon significantly contribute to the development of children's fine motor skills and creativity.

a. Early Childhood Fine Motor Skills Development.

Activities such as crafting jackfruit leaf crowns, coloring with pencils or crayons, and creating fabric scrap collages involve hand-eye coordination, finger muscle strength, and precision in task completion. These activities indirectly train children to progressively control their fine motor movements through enjoyable, meaningful learning experiences.

Collage activities using natural materials can enhance children's fine motor skills, particularly in cutting, pasting, and the precision and neatness of their work. The use of natural resources has been shown to increase

¹⁴ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

¹⁵ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

children's interest and concentration, allowing fine motor skills to develop optimally. This is highly relevant to the conditions at RA Wathoniyah, where the use of leaves and fabric scraps fosters greater focus and enthusiasm at every stage of the activity.¹⁶ Handcrafting activities are effective in improving early childhood fine motor skills, as children demonstrate an increased ability to control finger movements, use tools appropriately, and complete tasks with greater neatness.¹⁷

These findings reinforce the field results, demonstrating that local wisdom-based educational games function not only as play activities but also as planned, contextualized instruments for fine motor stimulation. The Principal of RA Wathoniyah Susukan, Cirebon, noted: 'When performing activities using leaves or fabric scraps, the development of their hand

movements is very apparent. The children become more confident in folding, cutting, and pasting independently. Although they initially required assistance, they eventually became capable of working on their own with greater neatness (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15, 2025, at 10:00 AM).

In conclusion, the local wisdom-based educational games implemented at RA Wathoniyah Susukan play a vital role in developing early childhood fine motor skills. Activities that use materials from the surrounding environment provide direct learning experiences, enhance movement coordination, and help children master the fundamental skills required for their subsequent developmental stages.

b. Enhancement of Early Childhood Creativity

¹⁶ Widiastuti, W., Jaya, I., & Hulwan, 'Meningkatkan Kemampuan Motorik Halus Anak Melalui Kegiatan Kolase Dengan Bahan Alam Di Tk Labschool Bani Saleh', *Jurnal Anak Bangsa*, 4(2) (2025), 288-296.

¹⁷ Febriyani, I., & Anugrah, 'Peningkatan Keterampilan Motorik Halus Anak Melalui Kegiatan Kerajinan Tangan Di Kelompok B Ra Al-Munawaroh', *Jurnal Pendidikan Anak Usia Dini*, 2(4) (2025), 1-13.

Creativity is defined as an individual process of generating effective new ideas, processes, methods, or products that are imaginative, aesthetic, and flexible. It involves the integration and differentiation of thought, which proves valuable across various fields for problem-solving purposes.¹⁸ The research findings at RA Wathoniyah Susukan, Cirebon, demonstrate that local wisdom-based educational games impact not only fine motor skills but also early childhood creativity. Activities such as coloring, crafting jackfruit leaf crowns, and assembling traditional house collages provide a platform for children to express themselves in accordance with their respective imaginations.



Figure 2. Documentation of Creativity Activities.

Finger painting activities can enhance children's creativity through enjoyable, hands-on experiences. Children feel a sense of pride in their creations and are encouraged to express their ideas freely. A similar condition is observed at RA Wathoniyah, where children exhibit confidence and satisfaction upon completing their work based on local materials.¹⁹ Children function as active subjects within educational games, fostering greater enthusiasm and the courage to express their ideas through their creative work.²⁰

¹⁸ Hamdi Yusliani¹, M Riza Muarrif², And Nadiya Anggraeni, 'Pengaruh Aktivitas Menggambar Menggunakan Lilin Terhadap Kreativitas Anak Di Taman Kanak-Kanak Assyofa Kota Padang', *Bunayya : Jurnal Pendidikan Anak*, 10.2 (2024), 112-25 <[Http://Dx.Doi.Org/10.22373/Bunayya.V9i2.2](http://Dx.Doi.Org/10.22373/Bunayya.V9i2.2)>.

¹⁹ & Tasuah Rohmah, F. S., 'Pengembangan Motorik Halus Melalui Finger Painting Pada Anak Usia 4-5 Tahun Di Tk Athfal Amanah Desa Jebengsari', *Indonesian Journal Of Early Childhood: Jurnal Dunia Anak Usia Dini*, 6(2) (2024), 45-56.

²⁰ & Tasuah Rohmah, F. S., 'Pengembangan Motorik Halus Melalui Finger Painting Pada Anak Usia 4-5 Tahun Di Tk Athfal

A parent of a student named Aisyah stated: 'After frequently participating in craft activities at school, my child has become more creative. At home, she enjoys collecting leaves or fabric scraps to create her own toys' (Interview with the parent of Aisyah, October 16, 2025, at 10:00 AM). A similar sentiment was shared by the parent of a student named Rindu, who revealed: 'My child is now confident in showing her work and telling stories about what she has made. She is happy when her work is praised by the teacher and her peers' (Interview with Rindu's parent, October 16, 2025, at 11:00 AM). Based on these descriptions, it can be concluded that local wisdom-based educational games play a vital role in fostering creativity in early childhood. Through activities that are contextual and culturally relevant, learning not only sharpens technical skills but also encourages children to think creatively, build self-confidence, and express

themselves boldly within an enjoyable learning environment.

3. Teacher strategies and the establishment of an effective learning environment that supports children's physical-motor development through local educational games.

a) The Role of Teachers in the Implementation of Educational Games.

Research findings indicate that teachers play a central role in the successful implementation of local wisdom-based educational games at RA Wathoniyah Susukan. Teachers function not only as instructors but also as facilitators who guide, model, and provide appreciation for children's creations. This approach fosters a sense of being valued among the children, motivating them to engage actively in every activity.

The Principal of RA Wathoniyah Susukan, Cirebon, stated: 'Before activities are implemented, the teachers usually hold discussions. We also

frequently share experiences with other educators or participate in training from supervisors to ensure that the designed activities align with the children's development' (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15, 2025).

This finding is consistent with Idhayani's research, which asserts that teachers serve as inspiring learning facilitators in local wisdom-based education. Teachers are required to manage activities creatively to ensure learning remains dynamic and responsive to children's needs. The professionalism of early childhood educators significantly influences the variety and quality of instruction, particularly in designing creative activities appropriate to children's developmental stages.²¹

Based on these roles, professional and reflective teachers are the key to optimizing local

wisdom-based educational games to develop early childhood motor skills.

b) Utilizing the Environment as a Learning Resource.

The use of natural materials, such as jackfruit leaves and fabric scraps, introduces objects that are familiar to the children's daily lives. This condition helps students understand that the learning process is not confined to the classroom but can occur through the exploration of their surrounding environment.

These results are aligned with Purnamasari's research, which reveals that regional culture-based learning plays a vital role in introducing local wisdom values to early childhood. The local environment and culture can serve as contextual learning media, even though in practice, resource limitations remain a challenge. Furthermore, research by Idhayani emphasizes that local wisdom-

²¹ Y Winitri, R., Hapidin, H., & Nurani, 'Perbedaan Hasil Belajar Matematika Anak Usia 6-7 Tahun Ditinjau Dari Pemahaman

Guru', *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 4(2) (2020), 491-501.

based instructional materials should be adapted to the children's environment and daily lives to ensure a more meaningful learning experience.^{22 23} A parent of a student named Ihsan expressed: 'When the teacher asks for natural materials, we as parents also provide assistance. The child learns that leaves or leftover fabric at home can be utilized for learning, rather than being discarded' (Interview with the parent of Ihsan, October 16, 2025, at 10:00 AM). By utilizing the environment as a learning resource, children not only develop motor skills but also learn to appreciate nature and local culture from an early age.²⁴

c) A Supportive Learning Atmosphere.

Teacher narratives directed toward children constitute a vital component of instructional strategies that cultivate meaningful learning experiences.²⁵ Research results indicate that a conducive, comfortable, and enjoyable learning atmosphere is a pivotal factor in supporting the development of children's motor skills through local wisdom-based educational games. At RA Wathoniyah Susukan, play activities conducted in groups, utilizing natural materials, and carried out in a relaxed, low-pressure environment empower children to explore and engage in various fine motor activities more boldly. The children appear more focused, enthusiastic, and immersed in the learning process

²² Indriyani, Pemanfaatan Bahan Ajar Berbasis Kearifan Lokal Dalam Pembelajaran Sains Di Sekolah Dasar', *Jurnal Sultra Elementary School (Jses)*, 5(1) (2024), 802-812.

²³ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

²⁴ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di

Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

²⁵ Hamdi Yusliani¹, M Riza Muarrif², And Nadiya Anggraeni, 'Evaluasi Keterampilan Storyteller Dalam Menyampaikan Cerita Pada Anak Usia Dini Di Taman Kanak-Kanak Ruman Putri', *Bunayya: Jurnal Pendidikan Anak*, 10.2 (2024), 112-25 <[Http://Dx.Doi.Org/10.22373/Bunayya.V9i2.2](http://Dx.Doi.Org/10.22373/Bunayya.V9i2.2)>.

without the fear of making mistakes.

The natural center learning model significantly enhances children's fine motor skills when supported by a comfortable and enjoyable learning environment. A specifically designed environment, which provides space for children to play and explore freely, has been proven to help children develop fine motor skills optimally.²⁶ Nature-based learning exerts a positive influence on children's fine motor development, particularly when they are directly involved in exploratory activities using natural materials. A learning atmosphere in open spaces or environments that emulate nature allows children to move more freely, enhances hand-eye coordination, and fosters a sense of joy in learning. However, the success of such a learning environment is highly dependent

on the teacher's readiness in designing activities and providing appropriate supervision.²⁷

The Principal of RA Wathoniyah Susukan Cirebon explained: 'When the children are divided into small groups, the classroom atmosphere becomes more orderly. They do not fight over materials and are more focused on their respective craft tasks' (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15, 2025). Thus, a supportive learning environment—in both physical and psychological terms—constitutes a vital element in the implementation of local wisdom-based educational games. A safe, comfortable, and stimulation-rich environment encourages children to be active, creative, and optimal in developing their fine motor skills.

²⁶ S Yuliana, D., & Bahri, 'Kemampuan Motorik Halus Anak Usia 4-5 Tahun Melalui Model Pembelajaran Sentra Alam Di Paud (Kober) Bintang Kecil Kecamatan Karawaci Kota Tangerang', *Ceria: Jurnal Program Studi Pendidikan Anak Usia Dini*, 8(1) (2019), 54-62.

²⁷ Mukhlis And Saidah Yustika, 'Dynamics Of Nature-Based Learning In Developing Motoric Skills: Teacher And Parent Perspectives', *Humanisma: Journal Of Gender Studies*, 9.1 (2025), 64-79 <<https://creativecommons.org/licenses/by-sa/4.0/>>.

4. Challenges and Opportunities in the Implementation of Local Wisdom-Based Educational Games in Early Childhood Education (ECE) Institutions.

a. Challenges in the Implementation of Local Wisdom-Based Educational Games.

The implementation of these educational games still faces various challenges, particularly regarding the diversity of children's abilities, limited instructional time, and the availability of teaching materials during media usage. Research findings indicate that teachers report some children still require intensive assistance, especially when using tools such as scissors and skewers, or when assembling natural materials. Furthermore, certain behaviors emerge where children do not fully follow the teacher's instructions, such as competing for media or producing creations that deviate from the provided examples.

An interview with the Principal of RA Wathoniyah

Susukan corroborates these findings. She stated: 'In a single class, the children's abilities are indeed unequal. Some can follow along quickly, while others require one-on-one assistance, all while instructional time remains limited. Therefore, teachers must be adept at managing both time and attention' (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15, 2025). The implementation of local culture-based learning in ECE settings has not yet reached its full potential due to internal barriers, such as limited educator resources and media, as well as varying factors of children's readiness and interest.²⁸ Furthermore, early childhood education in Indonesia continues to face challenges, including concerns from both teachers and parents about safety, as well as limited teachers' capacity to design

²⁸ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan

Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

structured, environment-based activities.²⁹

1) Disparities in Children's Abilities and Instructional Time Constraints.

Furthermore, challenges arise from the aspects of curriculum and lesson planning. Teachers must align local wisdom-based games with the themes and timeframes established in the Daily Learning Implementation Plan (RPPH). Teacher professionalism significantly influences the success of innovative learning. Educators are required to possess creativity, readiness, and a willingness to continuously develop their competencies to ensure that local wisdom-based instruction operates effectively, even under restrictive conditions.³⁰ An interview with the Principal of

RA Wathoniyah Susukan corroborates these findings. She stated: 'In a single class, the children's abilities are indeed unequal. Some can follow along quickly, while others require one-on-one assistance, all while instructional time remains limited. Therefore, teachers must be adept at managing both time and attention' (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15, 2025). These findings indicate that variations in children's abilities are a natural condition in early childhood education; however, they necessitate adaptive classroom management strategies to ensure that all children receive optimal learning opportunities..

2) Material Availability and Teacher Preparedness in Instructional Planning.

²⁹ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

³⁰ Mukhlis And Saidah Yustika, 'Dynamics Of Nature-Based Learning In Developing

Motoric Skills: Teacher And Parent Perspectives', *Humanisma: Journal Of Gender Studies*, 9.1 (2025), 64-79 <<https://creativecommons.org/licenses/by-sa/4.0/>>.

Disparities in children's fine motor skills represent a primary challenge in implementing local wisdom-based educational games. Not all children possess the same level of readiness to utilize tools and complete play activities independently within the designated timeframe.³¹ Providing adequate space for expression and appropriate motivation can significantly enhance children's creativity, attention span, and self-confidence. This condition is further reinforced by the statement of a parent, who noted: 'Sometimes the materials at school are limited, so the teachers ask for help from the parents. However, I believe this is beneficial, as it allows us to become actively involved' (Interview with the parent of a student named Ihsan, October 16, 2025).

In conclusion, the challenges in implementing local wisdom-based

educational games stem not only from the children's developmental readiness but also from issues related to instructional planning, time management, and media availability. Nevertheless, these hurdles can be effectively addressed through intensive teacher scaffolding, proactive collaboration with parents, and the educators' ability to creatively navigate limitations.

b. Opportunities for Developing Local Wisdom-Based Learning in Early Childhood Education (ECE).

Educational games that utilize natural materials and the surrounding environment are proven to create a learning atmosphere that is enjoyable, contextual, and meaningful for children. Children become engaged not only physically but also emotionally and socially through role-playing activities, collaborative group work, and the exploration of simple materials

³¹ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan

Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

found in their immediate surroundings.

1) Developing Children's Imagination and Creativity

Local wisdom-based educational games provide ample space for children to develop their imagination and creativity. Children are free to express their ideas through the selection of colors, shapes, and the methods of assembling materials according to their respective imaginations.

Other opportunities are also evident in the development of children's creativity and self-confidence. Harjanty's research demonstrates that providing motivation and ample space for expression in learning activities can significantly enhance children's creativity, attention, and concentration. Within the context of local wisdom-based educational games, children have the

opportunity to develop their imagination, create according to their own ideas, and experience a sense of fulfillment regarding their work³²

2) Role-Playing as a Medium for Social and Emotional Development

This activity assists children in developing social skills, interacting with peers, and expressing emotions positively. These findings align with Rochimah's research, which states that traditional games and local wisdom-based activities can increase children's enthusiasm, develop motor skills, and foster a love for local culture from an early age. The learning process becomes more vibrant because children feel a connection to the media used and possess the freedom to explore³³.

³² S Yuliana, D., & Bahri, 'Kemampuan Motorik Halus Anak Usia 4-5 Tahun Melalui Model Pembelajaran Sentra Alam Di Paud (Kober) Bintang Kecil Kecamatan Karawaci Kota Tangerang', *Ceria: Jurnal Program Studi Pendidikan Anak Usia Dini*, 8(1) (2019), 54-62.

³³ Indriyani, Pemanfaatan Bahan Ajar Berbasis Kearifan Lokal Dalam Pembelajaran Sains Di Sekolah Dasar', *Jurnal Sultra Elementary School (Jses)*, 5(1) (2024), 802-812.



Figure 1. Documentation of children's fine motor activities utilizing local wisdom-based media.

3) Strengthening Contextual and Meaningful Learning Experiences

Direct engagement with materials encountered in their daily lives ensures that the learning process does not feel abstract. This experience assists children in connecting school-based learning with their life at home and within their surrounding environment. Furthermore, local wisdom-based instruction provides a significant opportunity to build an inclusive and collaborative learning environment through the active involvement of teachers, parents, and the community.³⁴ Direct

engagement with materials encountered in their daily lives ensures that the learning process does not feel abstract. This experience assists children in connecting school-based learning with their life at home and within their surrounding environment. Furthermore, local wisdom-based instruction provides a significant opportunity to build an inclusive and collaborative learning environment through the active involvement of teachers, parents, and the community.³⁵ The Principal of RA Wathoniyah Susukan emphasized during the interview that: 'Children find it easier to comprehend the activities because the materials used are closely related to their daily lives. This makes the learning process more vibrant and far from mundane' (Interview with the Principal of RA Wathoniyah Susukan Cirebon, October 15,

³⁴ A. V Purnamasari, Y. M., & Wahyudi, 'Pembelajaran Berbasis Budaya Cirebon Di Satuan Paud: Implementasi Dan Tantangan', *Awlady: Jurnal Pendidikan Anak*, 11(1) (2025), 81-91.

³⁵ Dian Tri Utami And Others, 'Implementasi Alat Permainan Edukatif

Berbasis Kearifan Lokal Bagi Guru Di Lembaga Paud', *Natijah: Jurnal Pengabdian Pendidikan Islam*, 1.1 (2024), 12-16 <<https://doi.org/10.25299/Njppi.2024.16396>>.

2025). This qualitative evidence suggests that the proximity of teaching aids to the child's immediate environment acts as a psychological bridge, reducing cognitive barriers and fostering a more engaging instructional atmosphere.

Consequently, the implementation of local wisdom-based educational games holds significant potential to be developed as an ECE learning model that is not only cost-effective and accessible but also culturally relevant. Supported by enhanced teacher competence, active parental involvement, and consistent institutional policies, local wisdom-based learning can serve as an effective strategy for sustaining the motor development, creativity, and character building of young children.

D. CONCLUSION

The implementation of local wisdom-based educational games at RA Wathoniyah Susukan Cirebon has demonstrated a positive impact on early childhood development, particularly in enhancing fine motor skills, creativity, and social interaction.

This study confirms that local wisdom-based games serve as an effective contextual learning strategy to stimulate fine motor skills and creativity. Key findings indicate that activities such as crafting jackfruit-leaf crowns, coloring, and creating traditional house collages with recycled fabric not only develop hand-eye coordination and finger dexterity but also instill local cultural values, environmental awareness, and self-confidence. The scientific contribution of this study lies in demonstrating that simple, low-cost materials from the surrounding environment can serve as meaningful, contextual, and holistic learning media—offering a viable alternative to dependence on expensive, factory-made educational tools. This successful implementation is further bolstered by the synergy between teachers as creative facilitators, supportive school environments, and active parental involvement.

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