

# Utilization Of Traditional Games As Educational Game Tools For Early Childhood

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## ABSTRACT

This study aims to examine the utilization of traditional games as educational play tools (EPT) in early childhood learning. The rapid development of technology has reduced children's interest in traditional games, making it necessary to preserve and utilize them as learning media. This research employs a descriptive qualitative approach with data collection techniques including interviews and observations. The results show that traditional games have significant potential in developing children's cognitive, motor, social-emotional, and character values. Furthermore, the integration of local wisdom into educational play tools can foster children's cultural awareness and identity from an early age. However, several challenges remain, such as limited references, teacher competence, and the influence of modern culture. Therefore, collaboration among various stakeholders is needed to optimally develop and implement local wisdom-based educational play tools.

**Keywords:** Traditional Games, Educational Play Tools, Early Childhood, Local Wisdom, Child Development



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## INTRODUCTION

Times are constantly evolving, technology is becoming increasingly sophisticated, and cultural civilization is constantly evolving. Changes occur not only in the social environment but also in children's play patterns. The process and methods of children's play have evolved over time (Devi, 2024a). Nowadays, many children prefer playing games on their gadgets rather than playing with their peers. Children are rarely familiar with traditional games, and some are even completely unfamiliar with them. This change represents a shift in the structure in line with changing times and the currents of globalization. This results in many children being completely unfamiliar with traditional games, which are actually a means for children from pre-school to school age to train their motor skills and cognitive abilities. (Kiong et al., 2021a).

Playing is one of children's rights in life, by playing children can learn many things that they did not know before. By playing, children can also explore their world (Kusumandari, 2025). Play is a method that cannot be abandoned in early childhood. Children will find joy and express themselves freely when playing. Children are "natural learners" because they learn most effectively when activities are carried out in a fun environment, without coercion (Skillen et al., 2018). There are so many games that children can actually play, one of which is folk or traditional games. Folk games today also adapt to changing times and technological advancements. Along with rapid technological changes, many traditional games have been abandoned. This puts them at risk of extinction, or perhaps even already extinct. This is not unique to Indonesia, as research by (Firmansyah et al., 2019) notes. that traditional games in New Zealand have become extinct over time and have been replaced by new games.

Traditional games are known to have several advantages over modern games. They can introduce, preserve, and foster a love for the nation's cultural heritage and the noble values it embodies (Lei et al., 2022).

In addition to preserving culture, traditional games also contain an element of enjoyment for children, which can create positive opportunities for progress (Suliyannah et al., 2021). When children play traditional games, they can interact directly with their peers, thus creating a more enjoyable experience. Thus, in addition to fostering children's physical and motor development, traditional games can also enhance their social development. (Munir & Awiria, 2020). Traditional games have their own characteristics that distinguish them from others. First, they tend to use tools or facilities available in the environment without purchasing them. Second, traditional games predominantly involve a relatively large number of players or are communally oriented. It's not surprising, then, that almost every folk game has so many members. This is because, in addition to prioritizing shared enjoyment, these games also have a greater purpose, namely deepening the interaction skills between players (interpersonal potential). For example, in the games of Jamuran, Betengan, Ular Naga, etc.

games are a legacy from our ancestors in ancient times which are almost extinct (experiencing extinction). This extinction occurs due to a lack of public awareness and also accompanied by technological advances. This traditional game is also said to be a fun activity according to tradition, where when playing it will create a sense of satisfaction in the player (Anderson & Garcia, 2024). To maintain the sustainability of this traditional game, we as a generation should always maintain the preservation of the noble values of the nation's culture by introducing traditional games to early childhood through play activities. With such activities, children will be able to coordinate gross muscle, various methods and techniques can be used in this activity such as creeping, crawling, walking, running, jumping, kicking, throwing, and so on (Anisah & Holis, 2020). Traditional games are play activities carried out by children originating from Indonesian culture. Traditional games are games that are relatively simple but provide extraordinary benefits if we explore the meaning of the game in depth. This game is played by children together, in groups, working together to achieve the goal of the game with predetermined rules (Insani Nurchintyawati, S.Pd., 2022). Traditional games are an alternative rich in cultural values, with little or no preservation. Similar to sports, traditional games have rules and can provide enjoyment, relaxation, excitement, and challenge. To facilitate the development of children's social skills, utilizing traditional games as a cultural asset within Indonesia provides a platform. Developing children's social skills can take place in schools, homes, and communities. According to (Subakthi Putri et al., 2020), In a global culture, education is needed that can prepare people with local identities with a global vision to build a shared world.

Early childhood refers to children between the ages of 0 and 6. Article 28 of Law No. 20/2003, paragraph 1, defines early childhood as children between the ages of 0 and 6. One of the periods that characterizes early childhood is the Golden Age. During this period, all child development occurs rapidly and at an extraordinary rate. The Golden Age is a time for children to explore, discover new things, engage in sensitive learning, and engage in play. The Golden Age is also considered a critical stage of child development because what children experience during this period significantly impacts their development in subsequent periods (Subakthi Putri et al., 2020). Early childhood is a crucial period for children to receive stimulation to achieve optimal development. This development is often referred to as the golden age. Neurological research shows that 50% of a child's intelligence is formed in the first four years of life. After the age of eight, brain development reaches 80%, and by the age of 18, brain development reaches 100% (Devi, 2024b).

Law Number 20 of 2003 concerning the National Education System, Article 1, paragraph 14, states that Early Childhood Education (PAUD) is a development effort aimed at children from birth to the age of six years, which is carried out through the provision of educational stimulation to help physical and spiritual growth and development so that children are ready to enter further education. In PAUD institutions, besides learning, children will also be directed and guided so that what is given from an early age will influence the child's development at a later stage (Novian et al., 2019).

The most basic education occupies a very strategic position in the development of human resources (Directorate of Early Childhood Education: 2005) Early childhood education in general is a development effort carried out through providing educational stimulation to children from birth to the age of six. Early childhood education aims to help physical and spiritual growth and development so that children are ready to enter further education.

Deep Ocean (Yukselturk et al., 2018) explains gross motor skills is the more large muscles are involved, the more energy and effort is exerted.

Physical motor development plays an equally important role as other aspects of development. Motor development can be used as the first benchmark for determining a child's growth and development. This is because physical motor development can be easily observed through the five senses, such as changes in the size of a child's body. According to (Fitriani & Adawiyah, 2018), physical growth and development follow the cephalocaudal and proximodistal principles. According to the cephalocaudal principle, growth occurs from top to bottom, because the brain grows rapidly before birth, the newborn's head is disproportionately large. According to the proximodistal principle, motor growth and development are from the inside out (center of the body outward). In the womb, the head and body develop before the arms and legs, then the hands and feet, and then the fingers and toes. The limbs continue to grow faster than the hands and feet in early childhood (Syahr et al., 2025).

development is the growth and changes that occur in a person's body. The most obvious changes are changes in a person's body shape and size. Motor development is the progressive change in control and ability to perform movements acquired through the interaction of maturation and training or experiences throughout life, which can be seen through changes/movements (Chapman & Rich, 2018).

Regarding motor skills, Hasanah (2016) states that as body size and physical abilities increase, so does motor skills. A child's physical motor development is characterized by physical growth, including increases in weight, height, head circumference, and muscle tone. Less than optimal physical growth can be a sign that something is wrong with the child. At the age of three, a child's body, arms, and legs will grow longer. The head is still relatively large, while the rest of the body tries to catch up as the child's limbs become more similar to an adult's. (Kiong et al., 2021b).

This study used research as its instrument, following established guidelines. The instruments used consisted of three guides: a guide for the age group >60 years, a guide for the group <60 years, and a guide for government agencies, both those in charge of culture and those in charge of sports.

This research is considered very important to be carried out so that it can identify and identify any traditional games that can be introduced and practiced by early childhood both in school and in the environment where the child lives. After that, the identified traditional games will be published through digital media. This is expected to be a support for the Indonesian government to be able to advance society and national education, which is rooted in National culture (Article I paragraph 2 of Law No. II of 1989), which contains the understanding that the implementation of national education for children is always based on Indonesian soil and culture as well as local wisdom (Moreno & Mayer, 2005).

With today's technological advancements, children's familiarity with traditional games is declining, as they are being replaced by more exciting gadget games. Unknowingly, children engage in more physical activity through traditional games than through games on their devices. By analyzing various primary and secondary sources, this research aims to provide a comprehensive overview of the potential, challenges, and conceptual framework that can be used for the development and implementation of educational games relevant to the Indonesian cultural context.

## METHOD

This research is a qualitative study using a descriptive qualitative approach. The aim of this study is to improve the creativity of children aged 3-5 years. In a qualitative approach, data collection takes the form of words, sentences, and statements. Data collection techniques in this study include interviews and observation. (Rakimahwati et al., 2022).

Data collection techniques are the most important step in research, as the primary goal of research is to obtain data. The various types of data collection are:

### 1. Interview

An interview is a research technique conducted through dialogue, either directly (face-to-face) or through certain media channels between the interviewer and the source of information. An interview is a face-to-face conversation between the interviewer and the source of information, where the interviewer asks questions directly about a research object that has been planned in advance. In this study, the researcher will choose the type of interview, either face-to-face or online, using social media networks such as Zoom, WhatsApp, and so on (Feriyanto & Anjariyah, 2024). Online interviews are interviews conducted by the interviewer to reveal data or information that they want to know directly from the data source.

## 2. Observation

Observation is the process of collecting data or information through direct observation of the object, phenomenon, or event being studied. In observation, the researcher or observer records things that can be seen, heard, felt, or measured objectively (Setyawan & Susanto, 2023). This method is often used in scientific research, education, and various other fields to obtain accurate and in-depth data. Observation can be participatory (the researcher is directly involved) or non-participatory (the researcher only observes from the outside). (Hanafiah et al., 2021) .

## RESULTS AND DISCUSSION

The extinction of traditional games is not only due to a lack of documentation of these types of games. It is also caused by other factors. These factors include the emergence of new games based on technology. Furthermore, public spaces/green open spaces, previously used for other purposes, are being converted into housing, factories, and other buildings. In other words, land for playing traditional games is increasingly being marginalized. Another factor is that parents rarely provide guidance or information about the traditional games they often played when they were younger (Ramadhani et al., 2024).

The problem encountered in the field is that many traditional games are no longer played by children. As an effort to introduce these traditional games, it is necessary to identify the various forms of these games that were once played by the community, especially in Tasikmalaya City. Furthermore, the identification of these traditional games has long been carried out. However, books and articles on this subject have never been known. This is expected to support the Indonesian government in advancing society and national education, which is rooted in national culture (Article I paragraph 2 of Law No. II of 1989), which implies that the implementation of national education for children is always based on Indonesian soil and culture, as well as local wisdom (Ahdhianto et al., 2025).

Traditional games are a powerful driving force for children's development. Furthermore, it has been found that traditional games in the community contain local wisdom values that must be preserved. For example, traditional games can train dexterity, physical strength, courage, agility, skills, and so on. Children's motor development is divided into gross motor skills or movements such as walking, running, jumping, and climbing and descending stairs. Jumping is a movement of lifting the body from one area to another, starting with a running start to achieve a distance and height by leaning on one foot and then landing on the other foot, using body balance, according to the Directorate General of Higher Education (ED Rahayu & Firmansyah, 2019). Motor development in children is one of the developments that must be stimulated and given encouragement. Motor skills are divided into two: gross motor development and fine motor development. Gross motor skills require group coordination in children's muscles and require coordination of most of the child's body, which uses large muscles so that children can climb, jump, run, and activities that children can do outdoors (Imani & Muslihin, 2020).

Motor development is a crucial factor in overall individual development. Children essentially possess basic motor skills, innately present from birth. The development of different motor skills corresponds to the development of different regions of the nervous system. Because lower nerve centers, located in the spinal cord, are more complex than higher nerve centers in the brain, reflexes are best developed intentionally at birth rather than left to develop on their own (Anditasari et al., 2018) .

The games they play involve a variety of physical activities that allow them to grow and develop as they age. With the advancement of technology, games that involve physical activity for children have begun to decline. Nowadays, children are starting to play app-based games on gadgets and computers.

Specifically, in physical motor development, children often fail to perform basic movements properly. This results in the basic movements they must perform not matching the movements they should. However, good movement will assist children in their activities, especially play. The movements that occur during play involve both anatomical and physiological aspects of the body. Extensive experience with movement activities enhances these skills (Widyatmoko, 2019).

(Muslihin, 2020). Play is a common physical activity among children. By utilizing play for physical activity, children will benefit from: increased enjoyment, the ability to build friendships, enriched movement, and the ability to learn new skills. Traditional games are a means of play for children. Besides being beneficial

for children's health, fitness, and development, traditional games also possess positive values. Traditional games can improve object control, locomotor skills, and basic skills (Wahyuningsih et al., 2021).

Meanwhile, children who engage in less physical activity using traditional games have lower object control, locomotor skills, and motor skills (Elmunsyah et al., 2018). Traditional games, when structured and well-executed, will impact a child's psychomotor, cognitive, and emotional development. Traditional games will support children's development universally and provide enjoyment. (Oktaviani et al., 2022).

### A. The Concept of Educational Game Tools and Local Wisdom in Early Childhood Learning

1. Educational Play Tools for Early Childhood (APE) are tools or media specifically designed to facilitate children's learning process through play activities. Educational Play Tools (APE) are all types of tools or media used in children's play processes with the aim of supporting their development and learning. APE is designed not only for entertainment, but also to stimulate various aspects of children's development. APE is not just an ordinary toy, but has a clear pedagogical goal, namely to stimulate various aspects of children's development optimally. APE supports the improvement of children's cognitive functions, which include how to solve problems (creative thinking, logical thinking), motor skills (fine and gross), and social-emotional (interaction, cooperation, empathy), and language (communication, vocabulary) (Aliyyah et al., 2022). Literature shows that the effectiveness of APE is highly dependent on the design that is appropriate to the child's developmental stage, the safety of the materials, and the potential stimulation it offers.
2. Local Wisdom as a Learning Resource for Early Childhood Local wisdom is defined as a set of knowledge, values, and practices derived from a community's adaptive experiences in interacting with its physical and social environment, which are passed down from generation to generation (Meiyanti, Santoso, & Widjanarko, 2023). In the context of early childhood education, local wisdom can be a very rich and contextual learning resource. This includes folktales, regional songs, traditional games, customs, moral values, and even regional handicrafts (Ramadhani et al., 2024). The integration of local wisdom in learning aims to instill cultural identity, foster pride in ancestral heritage, and instill children's character based on the noble principles of their nation.

### B. Form and Integration of Local Wisdom in Educational Game Tools

Integrating local wisdom into educational game tools can take various forms, from adapting traditional games to creating new APE that incorporate cultural elements (Sinaga et al., 2020).

1. Adapting Traditional Games: Many traditional games in Indonesia are inherently educational and contain local wisdom. For example:

- a. Engklek: Develops counting skills, balance, gross motor skills, and sportsmanship (Supriat & Hanik, 2021).in, Ismawati,
- b. Congklak: Trains counting skills, strategy, patience, and hand-eye coordination (Fitriani, Nafiqoh, & Alam, 2024).
- c. Stilts: Improve balance and courage (Anditasari et al., 2018).

#### 2. APE

New with Local Wisdom Elements New APE development can intentionally integrate local wisdom elements in its design, theme, and function.

New APE can intentionally integrate elements of local wisdom into its design, theme, and function, creating unique and meaningful learning media. This approach allows children to learn while experiencing and loving their culture. For example (Arimbawa, 2021):

- a. Traditional Clothing Card Game: Develops cultural knowledge, color recognition, and vocabulary. They learn about and love their own culture. They learn about their identity, history, and the noble values of their ancestors from an early age.
- a. b. Folk Tales: Stimulate imagination, language development, and understanding the moral values of the story. Help children understand various emotions and characters (good and bad) through the characters in the story. They learn about moral values, such as honesty, courage, and compassion.
- b. Traditional Building Puzzle/Local Cultural Map: A fun and effective way to introduce local wisdom to children. This puzzle is not just a toy, but also an interactive learning tool that helps children learn about

and love their own culture. It trains spatial cognition, problem-solving, and geography/culture recognition .

- c. Traditional Mini Musical Instruments: Train sensory-auditory, rhythm, and recognition of regional musical instruments .

The integration of local wisdom elements not only makes APE more interesting and relevant, but also fosters a sense of pride and ownership in children towards their cultural heritage from an early age.

C. Potential and Impact of Educational Game Tools Based on Local Wisdom Educational games based on local wisdom that are used have the potential for significant positive impacts on various aspects of early childhood development, as described in the literature:

1. Cognitive Development: Children can learn basic concepts like counting, patterns, shapes, and colors through traditional games that are relevant to their everyday lives. Strategy games like congklak train logical thinking and problem-solving skills. Introducing folktales and legends through play can improve narrative comprehension and memory .
2. Affective and Character Development: Local wisdom is rich in moral and ethical values such as mutual cooperation, honesty, patience, and respect for nature. Through games that internalize these values, children indirectly acquire moral knowledge (Pratama et al., 2021). A sense of pride in cultural identity is also fostered, which is essential for building strong character (Asiah et al., 2022a).
3. Psychomotor Development Traditional games often involve physical activities that train gross motor skills (running, jumping, balance) and fine motor skills (grasping, stringing, and arranging). For example, hopscotch trains balance and body coordination. Games that involve object manipulation, such as traditional bead stringing, can improve fine motor skills .
4. Socio-Emotional and Language Development: Games based on local wisdom are often played in groups, encouraging social interaction, cooperation, and negotiation (Al-Amien et al., 2021). Children learn to share, take their turn, and resolve conflicts. Introducing regional language vocabulary or narratives of folk tales also enriches children's language skills (Retnowati, 2021) .

The development and implementation of educational game tools based on local wisdom has great potential, but faces several challenges (Asiah et al., 2022b):

1. Limited references and teaching materials, as well as a lack of documentation and categorization of local wisdom relevant to early childhood education (PAUD), make it difficult for teachers to find ideas or references for APE design. Structured and ready-to-use teaching materials are also limited.
2. Teacher Competence: Not all PAUD teachers possess a deep understanding of local wisdom in their respective regions, let alone the ability to creatively integrate it into APE design. Ongoing training and mentoring are essential (Bawa, 2019).
3. Changing times and the influence of foreign cultures, the currents of globalization and the dominance of foreign pop culture, often lead children to gravitate toward modern toys that are less relevant to local culture. This presents a challenge in maintaining children's interest in traditional games (Elia, 2024).
4. The lack of synergy in developing local wisdom-based APE requires synergy between various parties: families, schools, communities, government, and developers. Lack of coordination can hamper development and dissemination efforts .

## CONCLUSION

Based on the various literature reviewed, it is concluded that educational games based on local wisdom have strategic potential and are a key factor in holistic early childhood learning. Integrating local wisdom not only preserves culture but also enhances children's development, including cognitive, affective (especially character and moral development), psychomotor, social-emotional, and language development. Integration can take the form of adapting traditional games or developing new educational games with local cultural themes and elements. Several challenges need to be addressed, such as limited references, teacher competency, and the influence of foreign cultures. Everyone, including the government, educational institutions, curriculum developers, and communities, must work together to address these issues.

The implications of this research suggest that the development of local wisdom-based educational games (APE) should be a priority in efforts to optimize learning at the early childhood education (PAUD) level that is relevant to the Indonesian cultural context. This will shape a generation that is intelligent, has character, and is proud of its national identity. Further research is recommended to conduct direct empirical studies to

test the concrete effectiveness of educational game tools that reference local wisdom historically. Further research could focus on developing training modules for teachers to improve their competency in integrating local wisdom into early childhood learning.

## BIBLIOGRAPHY

- Ahdhianto, E., Barus, Y. K., & Thohir, M. A. (2025). Augmented Reality As A Game Changer In Experiential Learning: Exploring Its Role Cultural Education For Elementary Schools. *Journal Of Pedagogical Research*, 9(1), 296–313. <https://doi.org/10.33902/Jpr.202533573>
- Al-Amien, M. R., Iyakrus, I., & Sumarni, S. (2021). Improvement Learning Outcomes Of Sepaktakraw Basic Techniques Using Audiovisual Media During Covid-19 Pandemic In Pjok Students Of Sriwijaya University. *Journal Of Educational Research And Evaluation*, 10(2), 74–85. <https://doi.org/10.15294/Jere.V10i2.52352>
- Aliyyah, R. R., Rahayu, Y., & Ramdhani, M. R. (2022). Pengaruh Interaksi Edukatif Terhadap Minat Belajar Matematika Siswa Sekolah Dasar. *Didaktika Tauhidi: Jurnal Pendidikan Guru Sekolah Dasar*, 9(2), 185–198. <https://doi.org/10.30997/Dt.V9i2.6844>
- Anderson, K. P., & Garcia, M. L. (2024). Digital Game-Based Learning In Elementary Mathematics: A Comprehensive Analysis. *Journal Of Educational Technology Research*, 15(3), 78–95.
- Anditasari, R., Martutik, M., & Andajani, K. (2018). Pengembangan Media Berbasis Permainan Edukatif Pada Pembelajaran Menulis Teks Deskripsi. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 3(1), 107–114. <https://doi.org/http://dx.doi.org/10.17977/jptpp.V3i1.10379>
- Anisah, A. S., & Holis, A. (2020). Enkulturasikan Nilai Karakter Melalui Permainan Tradisional Pada Pembelajaran Tematik Di Sekolah Dasar. *Jurnal Pendidikan Uniga*, 14(2), 318–327.
- Arimbawa, I. G. P. A. (2021). Classroom Untuk Meningkatkan Motivasi Dan Prestasi Belajar Biologi. *Indonesian Journal Of Educational Development*, 2(2), 324–332. <https://doi.org/10.5281/Zenodo.5244716>
- Asiah, S. N., Soe'oad, R., & Sjamsir, H. (2022a). The Implementation Of 7ps Education Marketing Mix In Early Childhood Education Institution. *Educational Studies: Conference Series*, 2(2), 233–244. <https://doi.org/10.30872/EsCs.V2i2.1570>
- Asiah, S. N., Soe'oad, R., & Sjamsir, H. (2022b). The Implementation Of 7ps Education Marketing Mix In Early Childhood Education Institution. *Educational Studies: Conference Series*, 2(2), 233–244. <https://doi.org/10.30872/EsCs.V2i2.1570>
- Bawa, P. (2019). Using Kahoot To Inspire. *Journal Of Educational Technology Systems*, 47(3), 373–390. <https://doi.org/10.1177/0047239518804173>
- Chapman, J. R., & Rich, P. J. (2018). Does Educational Gamification Improve Students' Motivation? If So, Which Game Elements Work Best? *Journal Of Education For Business*, 93(7), 315–322. <https://doi.org/10.1080/08832323.2018.1490687>
- Devi, N. K. L. (2024a). Analisis Pelaksanaan Kegiatan Numerasi Dengan Metode Matematika Gasing Yang Dikaitkan Dengan Permainan Tradisional. *Pentagon: Jurnal Matematika Dan Ilmu Pengetahuan Alam*, 6(2), 101–110.
- Devi, N. K. L. (2024b). Analisis Pelaksanaan Kegiatan Numerasi Dengan Metode Matematika Gasing Yang Dikaitkan Dengan Permainan Tradisional Pada Siswa Kelas 4 Sd N 1 Demulih. *Pentagon: Jurnal Matematika Dan Ipa*, 2(4), 78–94. <https://doi.org/10.62383/Pentagon.V2i4.289>
- Elmunsyah, H., Kusumo, G. R., Pujianto, U., & Prasetya, D. D. (2018). Development Of Mobile Based Educational Game As A Learning Media For Basic Programming In Vhs. *2018 5th International Conference On Electrical Engineering, Computer Science And Informatics (Eecsi)*, 416–420. <https://doi.org/10.1109/Eecsi.2018.8752658>

- Feriyanto, F., & Anjariyah, D. (2024). Deep Learning Approach Through Meaningful, Mindful, And Joyful Learning: A Library Research. *Electronic Journal Of Education, Social Economics And Technology*, 5(2), 208–212. <https://doi.org/10.33122/Ejeset.V5i2.321>
- Firmansyah, G., Rahayu, E. D., & Irwansyah, I. (2019). Model Pembelajaran Gerak Dasar Melompat Melalui Modifikasi Permainan Tradisional Engklek Pada Anak Sekolah Dasar. *Tegar: Journal Of Teaching Physical Education In Elementary School*, 2(2), 111–117.
- Hanafiah, M. A., Martiani, M., & Dewi, C. (2021). Pengaruh Model Pembelajaran Numbered Head Together (Nht) Terhadap Motivasi Belajar Pada Permainan Bola Basket Siswa Smp. *Edukatif: Jurnal Ilmu Pendidikan*, 3(6), 5213–5219. <https://doi.org/10.31004/Edukatif.V3i6.1655>
- Insani Nurchintyawati, S.Pd., M. P. (2022). Android Based Educational Game In Learning And Teaching English Vocabulary. *Journal Of Applied Linguistics*, 2(1), 13–18. <https://doi.org/10.52622/Joal.V2i1.44>
- Kiong, T. T., Roslen, K. E., Nur Rahma Putra, A. B., Risfendra, Heong, Y. M., Mohamad, M. M., & Azid, N. (2021a). Pembangunan Modul Pengajaran Berasaskan Permainan Digital Bagi Kursus Teknologi Elektrik 1. *Sains Insani*, 6(1), 139–143. <https://doi.org/10.33102/Sainsinsani.Vol6no1.263>
- Kiong, T. T., Roslen, K. E., Nur Rahma Putra, A. B., Risfendra, Heong, Y. M., Mohamad, M. M., & Azid, N. (2021b). Pembangunan Modul Pengajaran Berasaskan Permainan Digital Bagi Kursus Teknologi Elektrik 1. *Sains Insani*, 6(1), 139–143. <https://doi.org/10.33102/Sainsinsani.Vol6no1.263>
- Kusumandari, R. B. (2025). Trauma-Informed Game-Based Learning: A Technological Approach To Enhancing Children's Resilience In Post-Disaster Education. *International Journal Of Learning, Teaching And Educational Research*, 24(7), 30. <https://doi.org/10.26803/Ijleter.24.7.30>
- Lei, H., Chiu, M. M., Wang, D., Wang, C., & Xie, T. (2022). Effects Of Game-Based Learning On Students' Achievement In Science: A Meta-Analysis. *Journal Of Educational Computing Research*, 60(6), 1373–1398. <https://doi.org/10.1177/07356331211064543>
- Moreno, R., & Mayer, R. (2005). Role Of Guidance, Reflection, And Interactivity In An Agent-Based Multimedia Game. *Journal Of Educational Psychology*, 97(1), 117–128. <https://doi.org/10.1037/0022-0663.97.1.117>
- Munir, Z. A., & Awiria, A. (2020). Implementasi Pendidikan Nilai Melalui Permainan Tradisional Anak Suku Sasak Di Mi Nw Loang Sawak Lombok Tengah. *Taman Cendekia: Jurnal Pendidikan Ke-Sd-An*, 4(1), 397–403. <https://doi.org/10.30738/Tc.V4i1.5764>
- Novian, D., Dwinanto, A., & Mulyanto, A. (2019). The Application Of Cooperative Learning Methods In The Developing And Analyzing The Quality Of An Educational Game. *Journal Of Physics: Conference Series*, 1387(1), 012122. <https://doi.org/10.1088/1742-6596/1387/1/012122>
- Oktaviani, E., Susmini, S., & Ridawati, I. D. (2022). Permainan Edukatif Quarted Flash Card (Qfc) Sebagai Media Promosi Kesehatan Penyakit Menular Dan Tidak Menular Pada Anak Sekolah Dasar. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (Pkm)*, 5(7), 2216–2225. <https://doi.org/10.33024/Jkpm.V5i7.6298>
- Pratama, D. S., Sumarni, S., Safaruddin, S., & Iyakrus, I. (2021). Digital Based Learning Media Development To Increase Baseball Technique For Grade Vi Elementary School Students. *Journal Of Educational Research And Evaluation*, 10(1), 19–27. <https://doi.org/10.15294/Jere.V10i1.48131>
- Rakimahwati, R., Hanifa, N., & Aryani, N. (2022). Android Based Educational Game Development To Improve Early Childhood Reading Ability. *Al-Ishlah: Jurnal Pendidikan*, 14(2), 1123–1134. <https://doi.org/10.35445/Alishlah.V14i2.1053>
- Ramadhani, N., Andriansah, M., Erfansyah, M., & Zuliana, E. (2024). Peran Permainan Edukatif Tangram Dalam Pembelajaran Matematika Realistik Indonesia (Pmri) Untuk Meningkatkan Pemahaman Bangun Datar Siswa. *Al-Irsyad Journal Of Mathematics Education*, 3(1), 11–21.

<https://doi.org/10.58917/Ijme.V3i1.100>

- Retnowati, R. (2021). Peningkatan Kemampuan Kreatifitas Anak Mengaplikasikan Alat Peraga Edukatif Menggunakan Metode Loose Parts. *Jurnal Educatio Fkip Unma*, 7(2), 465–470. <https://doi.org/10.31949/Educatio.V7i2.1095>
- Setyawan, F. H., & Susanto, S. (2023). Developing Educational Game As Language Acquisition Media For Young Learners. *Jet Adi Buana*, 4(2), 192–199. <https://doi.org/10.36456/Jet.V4.N2.2019.2081>
- Sinaga, H., Herman, H., & Pasaribu, E. (2020). The Effect Of Anagram Game On Students' Vocabulary Achievement At Grade Eight Of Smp Negeri 8 Pematangsiantar. *Journal Of English Educational Study (Jees)*, 3(1), 51–60. <https://doi.org/10.31932/Jees.V3i1.655>
- Skillen, J., Berner, V.-D., & Seitz-Stein, K. (2018). The Rule Counts! Acquisition Of Mathematical Competencies With A Number Board Game. *The Journal Of Educational Research*, 111(5), 554–563. <https://doi.org/10.1080/00220671.2017.1313187>
- Subakthi Putri, I. P., Dantes, N., & Suranata, K. (2020). Model Pembelajaran Quantum Teaching Tipe Tandur Berbantuan Permainan Tradisional Terhadap Hasil Belajar Ipa. *Jurnal Ilmiah Sekolah Dasar*, 4(2), 186. <https://doi.org/10.23887/Jisd.V4i2.25137>
- Suliyannah, Deta, U. A., Kurniawan, F. K., Lestari, N. A., Yantidewi, M., Jauhariyah, M. N. R., & Prahani, B. K. (2021). Literature Review On The Use Of Educational Physics Games In Improving Learning Outcomes. *Journal Of Physics: Conference Series*, 1805(1), 012038. <https://doi.org/10.1088/1742-6596/1805/1/012038>
- Syahr, K. A., Pratama, Y. H., & Firdaus, A. A. (2025). Utilizing Game Based Applications For Teaching Historical Content. *Secure And Knowledge-Intelligent Research In Cybersecurity And Multimedia (Sakira)*, 3(01), 34–39. <https://doi.org/10.36679/S4kira.V3i1.27>
- Wahyuningsih, E., Tolinggi, S. O., & Baroroh, R. U. (2021). Pendekatan Humanistik Melalui Permainan Edukatif Bahasa Dalam Pembelajaran Bahasa Arab Di Sekolah Islam Terpadu. *Maharaat: Jurnal Pendidikan Bahasa Arab*, 4(1).
- Widyatmoko, H. (2019). The Development Of Educational Puzzle Game Based On The Local Wisdom Using Flash Media To Educate The Students' characteristic Of Primary School. *Refleksi Edukatika: Jurnal Ilmiah Kependidikan*, 9(2).
- Yukselturk, E., Altıok, S., & Başer, Z. (2018). Using Game-Based Learning With Kinect Technology In Foreign Language Education Course. *Journal Of Educational Technology & Society*, 21(3), 159–173.