



Development of wordwall educational games based on *Peo-Heda* local wisdom to improve children's social skills

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ABSTRACT

This research aims to develop the GAULL (Wordwall Educational Game) Puzzle Application, based on the local culture of Woe Are "PEO-HEDA", as an educational medium that can improve early childhood social skills. The study's background reveals that children's social skills, particularly in terms of cooperation, empathy, communication, and conflict resolution, remain relatively low. In fact, these social values are the foundation of children's social development, and interaction through collaborative play can accelerate the development of social cooperation. This research employs the R&D method, utilising the ADDIE model, which encompasses the stages of analysis, design, development, implementation, and evaluation. The subjects of the study were 22 children aged 5–6 years at Satap SDK Olabolo Kindergarten, Golewa District, Ngada Regency. Application development is carried out using the Wordwall platform, which incorporates puzzle games to support contextual learning. The results of the material expert's validation gave a score of 32 (in the very feasible category), while the media expert and design expert gave scores of 40.5, which also indicate very high feasibility. These results suggest that GAULL fulfils the technical and pedagogical aspects as a learning medium that is in accordance with the characteristics of early childhood social development. Findings in the field show that the use of GAULL has a positive impact on improving children's social skills. Children exhibit more active interaction when sharing, participating in group tasks, and demonstrating empathy and cooperation while using the GAULL application.

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INTRODUCTION

Social development is a fundamental aspect of early childhood education, particularly in the 5–6 year age range, when children begin to form social relationships outside the nuclear family. Skills such as cooperation, sharing, effective communication, and empathy greatly determine a child's readiness to enter the next level of education (Dwi et al., 2023). However, conditions in some PAUD institutions show that children's social skills are still low, which can be seen from the lack of interaction, the tendency to play alone, and the lack of ability to resolve conflicts. The causative factors include unresponsive parenting, limited social stimulation, and the dominance of conventional methods that do not provide space for children to participate actively (Elan & Handayani, 2023).

Game Digital Education is a technology-based game (for computer, tablet, or smartphone) specifically designed to help children learn while playing (Berliana et al., 2024). Its main purpose is not just entertainment, but also to stimulate cognitive development, language, social-emotional, and children's motor skills according to their stage of development (Sari, 2024). In the context of Early Childhood Education, digital educational games are one of the Interactive learning media that integrate elements of play, learning, and technology in a fun and meaningful way (Pancawati & Widayati, 2024). The link in integrating local wisdom involves learning to be More contextual, Characteristic, and relevant to the real life of the student, while also preserving the Nation's cultural identity in the midst of the times' development (Devina et al., 2023). Local wisdom is all forms of knowledge, values, norms, habits, traditions, and practices that live and develop in a society, and are inherited from generation to generation (Andini, 2024). Local wisdom reflects how people adapt to their environment, both natural and social, and become an essential part of the cultural identity of a region (Dhiu et al., 2025). Local wisdom, as a learning medium, refers to utilising elements of local culture, traditions, and practices as a means or tool to convey subject matter (Susanti, 2021). This means that learning is not only sourced from textbooks, but also from real life and local culture around learners (Mustahidin et al., 2025). Good early childhood education not only emphasises the academic aspect but also develops social skills as part of forming the nation's character (Pendidikan et al., 2019). Early childhood social skills refer to a child's ability to interact with others positively and effectively, encompassing skills such as establishing relationships, cooperating, sharing, understanding the feelings of others, and adapting to the social norms in their environment (Pebriani et al., 2024). Social skills develop from the time a child is born and continue to grow through everyday interactions with their parents, teachers, peers, and social environment (Ash-shalihah, 2024). According to Erik Erikson's theory of social development, at an early age (0–6 years), children are at the stage of initiative vs. Guilt, where they begin to learn to take on social roles and build relationships with others (Konsep et al., n.d.).

Previous research has shown that digital-based educational games have a positive impact on early childhood learning. According to (Ruciani & Saputro, 2025) Interactive digital media can increase children's focus and motivation to learn. Meanwhile, research by (SH & Hermansyah, 2025) concluded that value-based digital games can improve children's understanding of social and cultural values locally. On the other hand, the approach based on local wisdom has also been widely studied in the context of character education (Mundzir, 2024). (Anggreni et al., 2025) stating that local wisdom can be an authentic source of value to shape children's character from an early age. Local culture offers a rich and authentic context for children to understand concepts such as cooperation, deliberation, and mutual respect (Anak et al., 2019). However, most of the development of culture-based learning media is still focused on print media or simple game tools (Banyumas, 2025). This research tries to answer this gap by presenting technology-based media that is integrated with cultural values. In addition, this study refers to a constructivist approach in early childhood learning. This approach emphasizes that children build understanding through direct experience and social interaction. Wordwall-based puzzle games are designed for children to actively engage in building knowledge through exploration, discussion, and cooperation (Hasanah & Info, 2023). The use of Wordwall as a platform was chosen because of its flexibility in creating image, text, and story-based games (Aini et al., 2024). Wordwall also supports various types of educational games that are easily accessible to teachers and students through simple devices such as tablets or school computers (Zakiyyatul, 2024).

This problem is exacerbated by the real-life conditions at the Satap SDK Olabolo Kindergarten, Golewa District, Ngada Regency, where the teacher reported that the children still struggle to cooperate, are less able to share roles in games, and have not demonstrated empathy optimally. Research (Fuadia, 2022) It also emphasizes that social and emotional factors have a strong influence on children's behaviour, so that intervention in social aspects is an urgent need. However, until now, there is no digital learning media specifically designed to develop children's social skills in these institutions, especially those based on local culture (Setiawaty et al., n.d.).

Another gap found is the lack of integration of local wisdom in digital learning media. In fact, the PAUD curriculum and national policies emphasize the importance of fun, contextual, and culturally rooted learning as part of character education (Rasyid & Wihda, 2024). Many educational apps are available, but most do not contain social values that are close to the child's life (Education et al., 2024). This creates a research gap, namely the lack of digital media that truly elevates local culture as a source of social value for early childhood (Anggraini, 2023).

In the context of Ngada Regency, the Woe Are culture encompasses two important elements that are rich in social values, namely PEO and HEDA. PEO is a symbol of unity that teaches cooperation, sportsmanship, and solidarity through traditional group games. Meanwhile, HEDA, as a conventional house, functions as a symbol of togetherness, deliberation, and strong kinship relationships. These two elements are in harmony with early childhood social competence and have great potential to be used as a culture-based learning medium (Winandar et al., 2023). Unfortunately, the use of PEO-HEDA in the form of interactive digital media remains unfounded.

To answer this need, the researcher developed the PEO-HEDA culture-based GAULL (Wordwall Educational Game) Puzzle Application as an interactive and easily accessible digital learning medium. The app utilizes the Wordwall platform in the form of a puzzle game, allowing children to compose pictures, symbols, and stories about PEO-HEDA culture while engaging in group interactions (Budiarti, 2024). This play process is designed to stimulate social skills, including cooperation, task sharing, discussion, and reflection on social values (Wahyuni & Sari, 2022). The primary objective of this study is to enhance early childhood social skills and integrate local cultural values of Woe Are into a fun and contextual learning process. Thus, this research is here to bridge the use of educational technology with the preservation of local cultural values, as well as meet the needs of early childhood social stimulation. In addition, the development of GAULL supports the Merdeka Learning policy, which emphasises meaningful learning and strengthening culture-based social character (Rohmatika, 2023).

METHOD

This research employs a Research and Development (R&D) approach, utilising the ADDIE development model, which comprises five stages: Analysis, Design, Development, Implementation, and Evaluation (Anafi et al., 2021). This model was chosen because it enables a systematic workflow for producing valid, feasible, and effective learning media. (1) Analysis: This stage is carried out to identify learning needs and the potential of local culture that can be integrated into the media. Data were obtained through observation of classroom learning activities, interviews with PAUD teachers, and literature studies related to Woe Are culture (PEO and HEDA elements). The results of the analysis indicate that there is a need for contextual media that can enhance children's social skills, particularly in areas such as cooperation, communication, sharing, and empathy. (2) Design: At the design stage, the content and structure of the GAULL (Wordwall Educational Game) Puzzle application are arranged by incorporating elements of PEO-HEDA culture. Planning includes: (1) game storyboard arrangement; (2) cooperative-based gameflow design; (3) the selection of representative visual elements (traditional houses, play tools, symbols of togetherness); (4) preparation of media validation instruments and social skills assessment instruments. The instruments used consisted of two types, expert validation instruments, with a Likert scale of 1–4: not feasible, 4: very feasible), including 18–22 indicators, the suitability of visual appearance with the local culture; clarity of game navigation; the suitability of the material with early childhood social

development; The Social Skills Assessment instrument, using a Likert scale of 1–4, includes four main indicators, namely: cooperation, communication, empathy and sharing. Development: At this stage, the GAULL application is developed using the Wordwall platform in the form of an interactive, drag-and-drop puzzle. The product was then validated by three experts, namely one PAUD material expert, qualified as S1 Early Childhood Education with expertise in children's social development; one local cultural expert, qualified as S2 Anthropology/Ngada Culture, understanding the elements of PEO-HEDA; one learning media expert, qualified as a S3 in Educational Technology, experienced in the development of interactive digital media. Validation encompasses pedagogical aspects, cultural suitability, visual feasibility, the quality of interactivity, and the suitability of materials. Implementation: The implementation was carried out on 22 children aged 5–6 years at Satap SDK Olabolo Kindergarten. Children are divided into small groups to play GAULL puzzles. Observations were carried out using social skills instruments that had been prepared, and teachers recorded children's behaviour based on indicators of cooperation, communication, empathy, and sharing. The implementation process also records children's engagement as well as their reactions to cultural content in the app. Evaluation: Evaluations are of two types. Formative evaluations are conducted during the development process and initial testing to identify technical deficiencies (e.g., navigation, image clarity) and content (e.g., cultural accuracy). Summative evaluation is carried out after implementation to assess the overall effectiveness of the product. The data analysis technique with expert validity analysis uses the average score formula:

$$\text{Score} = \frac{\text{Total Score}}{\text{Max Score}} \times 100$$

Eligibility categories:

81%–100%	: Very deserving
61%–80%	: Proper
41%–60%	: Quite decent
<40%	: Less Worthy

The analysis of social skill improvement was conducted by comparing scores before and after using the app (simple gain score). The gain results were used to assess the effectiveness of the GAULL application in improving children's social skills. $\text{Gain} = \text{Post score} - \text{Pre score}$.

RESULT AND DISCUSSION

RESULTS

This research is a development project with the main product in the form of a GAULL application (Wordwall Puzzle Educational Game), based on the local culture of "Peo-Heda", which aims to improve early childhood social skills. The development process utilises the ADDIE model, which encompasses analysis, design, development, implementation, and evaluation. The results of the research at each stage are explained as follows.

Stages of Analysis

The analysis stage was conducted through classroom observations, teacher interviews, and a literature review related to culture-based learning. The needs analysis reveals several key findings: Children require interactive stimuli. The results of the observation indicate that children aged 4–6 years require activities that foster cooperation, empathy, and communication. Referring to Piaget's theory of cognitive development, children in the preoperational stage develop through cooperative play activities and puzzles that help Social Cooperation and Role-taking (A et al., 2023). Local culture reinforces the meaning of learning. Teachers emphasize that children understand social values more easily if learning is based on local culture (Sumarni et al., n.d.). This aligns with Vygotsky's theory of Social Interaction, which posits that culture is a crucial context in the development of social skills (Jean, 2024). The school environment needs contextual media. Schools in Sangadeto Village

have a strong need for learning media that is close to the child's environment. According to Bronfenbrenner, microsystem factors, including family, school, and local culture, significantly influence social development (Yanti & Tasu, 2025). From the results of the analysis above, an interactive digital media platform based on the culture of Woe Are is needed, "Peo-Heda," so that children learn through social contexts familiar to their lives.

Design Stage

The design stage focuses on preparing a conceptual framework for media based on the results of a needs analysis, cultural material analysis, and the selection of game forms suitable for children's development, as well as design principles grounded in development theory. In the design stage, it focuses on preparing a conceptual framework based on needs analysis and material analysis. Application development is carried out taking into account the following theories:

Table 1. Application development framework

Theory	Implications in gaull design	The
Piaget (1970)	Puzzles and collaborative games are designed to spark cooperative play	
Vygotsky (1978)	Each game provides scaffolding through simple instructions and images of the Woe Are culture.	
Erikson (1963)	Children are encouraged to take a role in games to increase initiative and social interaction	

components of GAULL Design consist of: game structure, PEO-HEDA cultural puzzles arranged by segment. Visual display: bright colours, simple icons, and illustrations of local culture. Game hints: simple narrative, easy to understand for early childhood. Research instruments include social observation sheets and validation sheets from media, material, and cultural experts. Based on the results of this design, an initial blueprint will be developed in the next stage.

Development Stage

The development stage is realized in the creation of the GAULL application using the Wordwall platform with the following process: Preparation of Woe Are cultural illustration "Peo-Heda" into puzzle pieces; Incorporation of content into Wordwall to produce interactive games; Expert validation of: (1) Media design quality (media expert); (2) Suitability of social material (subject matter); (3) The cultural accuracy of Woe Are (cultural experts). The validation results showed that the media was in the "very feasible" category, with some revisions to the text size, clarity of instructions, and the addition of visual colours. GAULL's final products are then ready to be tested at the implementation stage.

Implementation Stage

The implementation stage was carried out through a guided trial in early childhood in Sangadeto Village. The assessment was conducted using observation techniques and a pre-post assessment.

Table 2. Children's Social Skills Development (Pre-Post Use of the GAULL Application)

Social indicators	Pra score	Post score	Increase (%)
Cooperation in groups	2,8	4,4	57%
Ability to share with friends	2,5	4,1	64%
Empathy for friends	2,7	3,6	33%
Communication and expression skills	3,0	4,3	43%
Average total	2,75	4,1	49%

The data showed a significant improvement in all social indicators after the use of the GAULL application. The highest increase occurred in the indicator of sharing ability (64%), followed by cooperation (57%), while the lowest increase was in empathy (33%). These findings support the (Dwi et al., 2023) that children's social interaction is increased through fun group play activities.

The teacher noted that during the use of the GALUL app, children were seen to be more actively interacting in collaborative play. Collaborative encouragement was observed where they negotiated, shared, and used four "W"s explained by (Tenggoh-tenggohan & Estiani, 2022) that associative and cooperative play is the basis for children's social development. Teacher observation quotes support the theory: (1) Children begin to show mindfulness in turns; (2) Local cultural values, such as bowling, strengthen sharing behaviour. It instils the spirit of helping, (3) Children's empathy develops gradually and requires social habits; (4) Communication improves because children are stimulated to express ideas through contextual and straightforward language.

Aspects	Score	Reason
Cooperation	Tall	Group play in GAULL demands coordination; Children must negotiate and work together to solve puzzles
Share	Tall	The local cultural elements of "Peo-Heda" contain the value of cooperation and mutual help, internalized through play activities
Empathy	Low	This aspect is effective and requires a longer social experience; The game focuses more on practical cooperation than emotional reflection
Communication	Tall	Play activities involve discussion, instruction, and verbal expressions that encourage children to communicate actively

Evaluation is carried out formative and summative. Formative Evaluation is carried out through several stages, namely: expert validation, design revision, instruction readability test, and visual appearance improvement. Summative Evaluation is conducted after implementation. The results of implementing the application of media in the learning process and practice are as follows. The media is regarded as highly credible by all experts. Children and teachers gave a very positive response. Children's social skills increased by 49%. Local culture is proven to strengthen the learning context. Before the use of the GAULL application, most children played alone or scrambled over game tools. After the intervention, children were better able to work together, share, and communicate positively. This increase shows the effectiveness of interactive digital media in developing early childhood social behaviours (Alivia et al., 2025). After several sessions of playing with the GALUL app, a noticeable behaviour change was observed: the child was better able to share, collaborate, and communicate with friends. For example, concrete behaviour changes are 1) children who previously often took turns now offer help to their friends, 2) quiet children begin to talk and give advice while playing puzzles actively (Kualitatif et al., 2018). In general, the application of the GAULL application can improve early childhood social skills in almost all indicators. High scores in the aspects of cooperation, sharing, and communication show the effectiveness of educational games based on local wisdom in building positive social interactions. However, the empathy aspect requires additional interventions such as behavioural reflection and ongoing teacher guidance (Apipah et al., 2024). The primary objective of this design process is to enhance the development of early childhood social skills. The display of the product design results can be seen in Figure 1 below:



Figure 1. Product Design Results of Development

This application is developed by utilizing certain software. After completing the internal test stage, the validation process was conducted by two experts: material experts and application design experts. The validation results showed that the app fell into the "excellent" category, with an average score of 4.50 given by each subject matter expert and 4.40 given by each application design expert. The implementation stage is carried out after the application is declared feasible by experts. Furthermore, this Educational Game Application was tested on a limited basis with two teachers and 22 children at the Satap SDK Olabolo Kindergarten to gather the users' direct responses. The data from the test results, as presented by teachers, are shown in Table 4. Based on the assessment of the two teachers, the application was reviewed from the aspects of material presentation, learning design, application design, and usability, and obtained an average score of 4.30. It was included in the "very good" category.

Table 4. Product trial results by teachers

Assessment aspect	score	average
Presentation of the material	4,62	Excellent
Learning design	4,43	Excellent
2 App design	4,52	Excellent
Uses	4,45	Excellent
Total Average	4,49	Excellent

Meanwhile, the data on the results of product trials conducted by the children of the Satap SDK Olabolo kindergarten is presented in Table 5. The child's response to the use of the product achieved an average score of 4.28, placing it in the excellent category.

Table 5. Product Trial Results by Children

Assessment aspect	score	average
Presentation of the material	4,64	Excellent
Learning design	4,50	Excellent
2 App design	4,53	Excellent
Uses	4,55	Excellent
Total Average	4,54	Excellent

DISCUSSION

The Effectiveness of Digital Media on Social Skills

The results showed that the GAULL application (Wordwall Puzzle Educational Game) effectively improves early childhood social skills in the aspects of cooperation, sharing, and communication. In general, these findings align with previous studies that emphasise the potential of interactive digital media to stimulate children's social interaction (Pawitri et al., 2025). However, compared to earlier research that mostly used generic digital media, such as educational videos, general learning applications, or standard interactive games, this research offers novelty because it combines digital media with the context of local culture, directly incorporating "Peo-Heda" into the game mechanism. Thus, the scientific contribution of this research lies not only in the improvement of social skills but also in the integration of local wisdom as a social stimulus, which has not been explored in similar studies.

Theoretical Analysis

Piaget's Perspective: Overcoming Egocentrism through Collaborative Puzzles. Piaget explained that in the preoperational stage, children are still egocentric but begin to build abilities of decentering through social interaction (Pembelajaran, 2022). Previous studies using digital applications have generally stimulated problem-solving individuals. The novelty of this research lies in GAULL, which combines digital puzzles with Cooperative Play, allowing children to actively learn to understand their friends' perspectives during the process of assembling a Peo-Eda cultural puzzle. Digital-based collaborative interactions like this are rarely applied in previous media that are more individual play.

Vygotsky's perspective: Culture-based scaffolding. Previous research confirms the role of teachers as more knowledgeable others (MKOs) in the use of digital media. However, scaffolding in an earlier study was generally linguistic-instructional without a cultural context. The novelty of this research lies in GAULL, which not only provides scaffolding through instruction but also through symbols, language, and cultural narratives of Woe Are, thereby enabling children's ZPD to develop through digital interactions that incorporate socio-cultural values. In other words, this study connects ZPD to cultural contexts, not just technical or academic guidance.

Erikson's Perspective: Initiative and a Sense of Competence in a Cultural Context. The research findings are consistent with Erikson's theory, which suggests that early childhood lays the foundation for initiative and a sense of competence. Previous research has shown that digital media can increase children's self-confidence; however, it does not explore the connection between this and the context of cultural identity. **Novelty of this study:** Children's sense of achievement emerges when they successfully put together a Peo-Eda cultural puzzle, which provides a positive emotional experience as well as a sense of pride in their own culture. Digital media is not only a learning tool but a means of developing socio-cultural identity.

The Effectiveness of Local Cultural Integration

The integration of Woe Are cultural values in GAULL results in contextual, meaningful, and identity-oriented learning. Compared to previous research that tended to use neutral and non-culture-based digital media. The novelty of this research lies in (1) digital media based on local wisdom. Most previous research has only utilised common digital media, such as educational videos, interactive cards, or learning apps featuring cartoon characters. GAULL is a digital game based on local culture, allowing children not only to interact socially but also to internalise the values of cooperation, solidarity, and cultural pride. (2) Contextualization of social values through cultural symbols. Puzzle Peo-Heda instils social values such as mutual aid, collaboration, and respect for others. Unlike previous research that provided social stimulation in a generic manner, this study translates cultural values into real social experiences. (3) Learning that connects the classroom with the community. The use of visuals, local languages, and indigenous representations creates a connection between the learning experience and the social life of children at home and in the community (Lokal et al., 2025). This study reinforces the findings of about contextual teaching and learning (CTL), but this study goes further by integrating: CTL, cultural identity, and digital social interaction in a single media model.

Ecopedagogical Dimension; In Peo-Heda is contained the value of harmony between humans, nature, and communities is contained. This ecopedagogic element extends social learning into collective awareness, a feature not previously seen in digital media. Thus, GAULL not only stimulates social

skills but also serves as a means of character education based on local culture, which is relevant to the Merdeka curriculum and helps strengthen the Pancasila Student Profile.

The limitations of the research conducted include: (1) Limited duration of intervention. The use of media was limited to a few trial sessions, so it did not fully describe the long-term impact on social development. (2) Limited digital facilities. Not all PAUD institutions have adequate tools, so the effectiveness of GAULL is highly dependent on the availability of technology. (3) Variation in children's abilities. Differences in the level of social development of individuals affect the speed of adaptation to the game. (4) Teachers' skills in digital facilitation. Some teachers still require additional training to utilise Wordwall-based media effectively.

Meanwhile, this research suggests that continuous support is necessary for teachers to effectively integrate digital media, grounded in local culture, into children's social learning routines. Further research should add a longitudinal (long-term) phase to see the sustainability of social behaviour changes. GAULL innovations can be adapted for use in other local cultural contexts to enrich cross-cultural learning and social literacy in various regions of Indonesia.

CONCLUSION

The results of the study show that the GAULL application, based on the culture of Woe Are "Peo-Heda", has a significant impact on the development of early childhood social skills. Through puzzle play, children engage in cooperation, communication, and positive interactions that align with the stages of social development outlined in Piaget and Vygotsky's theories. GAULL is able to create a fun learning atmosphere while stimulating social activities through collaborative play and puzzle-solving tasks that require coordination between children.

In terms of effectiveness, the results of expert validation and field trials show that GAULL meets the technical, pedagogical, and operational feasibility criteria. Teachers and children responded positively, especially regarding the ease of use, visual appearance, and the app's ability to increase active participation. The increase in social ability scores at the implementation stage reinforces that this media is effective as an interactive learning tool that is in accordance with the needs of early childhood development. The integration of the local culture of Woe Are "Peo-Heda" has been proven to increase the relevance and meaningfulness of learning, as children more easily understand the material through a context that is familiar to daily life. This is in line with Vygotsky's view that culture and the social environment play an important role in the formation of children's social abilities. GAULL not only functions as a digital medium, but also as a means of preserving local culture that is packaged in a modern and attractive way. Based on these results, it is recommended that PAUD teachers encourage the use of the GAULL application as a culture-based social learning medium, both in group activities and cultural-themed learning. Developers can further add new features, such as multiplayer collaborative features, social ability auto-assessment, and Woe Are's traditional language and music audio integration.

The GAULL model can be replicated using local wisdom from other regions to enrich culture-based learning media and maintain the sustainability of local values through child-friendly digital media. Early childhood education policymakers can use GAULL as an example of the implementation of local culture-based Independent Learning that is relevant for village schools. Follow-up research can test the impact of GAULL on other aspects such as emotion regulation, social creativity, or cultural literacy.

REFERENCES

- A, K. L. U. T., Hidayah, C. A., & Dwistia, H. (2023). *Kognitif Anak Melalui Metode Bermain Puzzle pada Kelompok Anak B di IT Quen Srimenanti Tanjung Raja*. 2(3).
- Aini, M. N., Arofatul, L., & Uswatun, I. (2024). *Pengembangan Media Game Edukasi Wordwall sebagai Media Pembelajaran Bahasa Indonesia Siswa Sekolah Dasar*. 7(2), 780–789.
- Alivia, R., Arum, D., Putri, R., Dewi, K., & Widyasari, C. (2025). *Kreativitas Digital dalam Media Pembelajaran Sosial-Emosional Anak*. 7(1), 160–170. <https://doi.org/10.23917/ecrj.v7i1.8768>
- Anafi, K., Wiryokusumo, I., Leksono, I. P., Komputer, P. K., & Education, J. (2021). *PENGEMBANGAN MEDIA PEMBELAJARAN MODEL ADDIE MENGGUNAKAN SOFTWARE UNITY 3D*. 9(4), 433–438.
- Anak, P., Dini, U., & Kearifan, B. (2019). *Jurnal Noken volume 4 (2) Halaman : 107-117*. 4, 107–117.
- Andini, A. D. (2024). *Pengaruh Penggunaan Aplikasi Wordwall terhadap Hasil Belajar IPAS Siswa Sekolah Dasar*. 13(4), 5695–5706.
- Anggraini, T. W. (2023). *Pendidikan Guru Madrasah Ibtidaiyah, Fakultas Ilmu Tarbiyah dan Keguruan, Universitas Negeri Raden Fatah Palembang, Indonesia*. 2(4), 253–268.
- Anggreni, M. A., Fachrurrazi, A., Pgri, U., & Buana, A. (2025). *Revitalisasi Kearifan Lokal Untuk Membangun Identitas Budaya Pada Anak Usia Dini*. 1, 172–187.
- Apipah, I., Rahmawati, I., Noviyani, L., Pangandaran, A. F., Pangandaran, A. F., Al, S., & Pangandaran, F. (2024). *Peran Pendidikan Anak Usia Dini pada Perubahan Sosial Masyarakat di Dusun Cicurug Desa Cibanten Edu Happiness : 03(1)*, 27–35.
- Ash-shalihah, R. A. (2024). *Perkembangan Sosial Emosional Anak Usia Dini dalam Berinteraksi dengan Teman Sebaya Kelas Darussalam Usia 5-6 Tahun*. 2(3).
- Banyumas, K. M. (2025). *Jurnal Implementasi*. 5(1), 44–47.
- Berliana, D., Rusdiyani, I., & Atikah, C. (2024). *Game Edukasi Berbasis Canva untuk Meningkatkan Kemampuan Kognitif Anak Usia Dini*. 8(1), 201–210. <https://doi.org/10.31004/obsesi.v8i1.5913>
- Budiarti, E. (2024). *Pengaruh Aplikasi Wordwall terhadap Perkembangan Bahasa dan Sosial Emosional Anak Usia Dini*. 7(2), 825–834.
- Devina, F., Nurdin, E. S., Ruyadi, Y., Kosasih, A., & Nugraha, R. A. (2023). *Penguatan Karakter Pancasila Anak Usia Dini melalui Kearifan Budaya Lokal : Sebuah Studi Literatur*. 7(5), 6259–6272. <https://doi.org/10.31004/obsesi.v7i5.4984>
- Dhiu, K. D., Meo, E. M., Ema, M., & Lokal, B. (2025). *Implementasi Budaya Lokal Dalam Pembelajaran Anak Usia Dini Di Tk Negeri Tibakisa , Nagekeo*. 4, 1–8.
- Dwi, R., Rahma, N., & Widyasari, C. (2023). *Interaksi Teman Sebaya dalam Mengembangkan Perilaku Sosial Anak Usia Dini*. 4(2), 416–429. <https://doi.org/10.37985/murhum.v4i2.329>
- Education, E., Fuaody, C. N., Anggraeni, I., Maulidia, L., Nugraha, R. G., & Indonesia, U. P. (2024). *Jurnal basicedu*. 8(1), 327–337.
- Elan, E., & Handayani, S. (2023). *Pentingnya Peran Pola Asuh Orang Tua untuk Membentuk Karakter Anak Usia Dini*. 7(3), 2951–2960. <https://doi.org/10.31004/obsesi.v7i3.2968>
- Fuadia, N. N. (2022). *Perkembangan sosial emosi anak usia dini*. 3, 31–47.
- Hasanah, U., & Info, A. (2023). *Untuk meningkatkan kemampuan kognitif anak usia dini*. 17(2), 491–502. <https://doi.org/10.30595/jkp.v17i2.17650>

- Jean, K. (2024). *Jurnal Review Pendidikan dan Pengajaran, Volume 7 Nomor 4, 2024* | 16376. 7, 16376–16383.
- Konsep, E., Perkembangan, T., & Penerapan, D. A. N. (n.d.). *EPISTEMIC : JURNAL ILMIAH PENDIDIKAN EPISTEMIC : JURNAL ILMIAH PENDIDIKAN*. xx(xx), 153–172.
- Kualitatif, S., Anak, K., Dini, U., & Keluarga, M. (2018). *Pembentukan Karakter Anak Usia Dini : Keluarga , Sekolah , Dan Komunitas ?* 2(1), 13–19.
- Lokal, K., Budaya, R., & Ajar, T. (2025). *KEARIFAN LOKAL SEBAGAI REPRESENTASI BUDAYA DALAM PENGAJARAN BIPA : ANALISIS*. 1, 450–460.
- Mundzir, M. (2024). *Implementasi Pendidikan Karakter Berbasis Kearifan Lokal dalam Membentuk Generasi Berintegritas*.
- Mustahidin, A. A., Lesiani, L., & Drihestyawati, E. (2025). *Praktik Pembelajaran Inklusif Berbasis Kearifan Lokal Pada Satuan Paud*. 5(2), 1–15.
- Pancawati, N., & Widayati, M. (2024). *Aktualisasi Game Edukatif Digital pada Perkembangan Kemampuan Literasi Baca Tulis Anak Usia Dini*. 8(4), 624–635.
- Pawitri, A., Mansoer, Z., & Mappapoleonro, A. M. (2025). *Pemanfaatan Penggunaan Media Digital yang Aman dalam Pendidikan Anak Usia Dini Safe Use of Digital Media in Early Childhood Education*. 8(1), 889–898. <https://doi.org/10.56338/jks.v8i1.6975>
- Pebriani, M., Darmiyanti, A., & Media, S. (2024). *Pengaruh Media Sosial terhadap Perkembangan Anak Usia Dini dan Tinjauan dari Psikologi Perkembangan*. 3, 1–9.
- Pembelajaran, P. D. (2022). *EPISTEMIC : JURNAL ILMIAH PENDIDIKAN EPISTEMIC : JURNAL ILMIAH PENDIDIKAN*. 01(02), 131–152.
- Pendidikan, J., Anak, I., Dini, U., & Utara, S. (2019). *Mengembangkan sosial emosional anak usia dini melalui bermain*. 2(1).
- Rasyid, R., & Wihda, K. (2024). *Jurnal basicedu*. 8(2), 1278–1285.
- Rohmatika, D. (2023). *Kebijakan Merdeka Belajar dan Implikasinya dalam Pembelajaran di Sekolah Menengah Atas Dina Rohmatika*. 9(1), 92–103.
- Ruciani, S., & Saputro, B. A. (2025). *Pengembangan Media Wordwall Berbasis Gamifikasi untuk Literasi Permulaan Anak Usia 5 – 6 Tahun : Studi R & D Model ADDIE*. 9(6), 2507–2517. <https://doi.org/10.31004/obsesi.v9i6.7498>
- Sari, B. M. (2024). *Permainan Interaktif Anak Usia Dini Sebagai Media Pembelajaran pada*. 5, 2049–2058.
- Setiawaty, R., Fahrizal, D., Ariani, N. P., & Nikmah, M. U. (n.d.). *Integrasi Kearifan Lokal Dalam Media Pembelajaran di SD : Sistic Literature Review*. 4(2025), 500–510.
- Sumarni, M. L., Jewarut, S., Melati, F. V., Informasi, T., & Bhuana, I. S. (n.d.). *Integrasi Nilai Budaya Lokal Pada Pembelajaran di Sekolah Dasar*. 5(3), 2993–2998.
- Susanti, S. M. (2021). *Inovasi Pembelajaran Anak Usia Dini Berbasis Kearifan Lokal melalui kegiatan Eco print di masa pandemic covid-19*. 5(2), 1987–1996. <https://doi.org/10.31004/obsesi.v5i2.594>
- Tenggoh-tenggohan, T., & Estiani, M. (2022). *Aulad : Journal on Early Childhood Stimulasi Perkembangan Sosial Anak melalui Permainan*. 5(3), 355–364. <https://doi.org/10.31004/aulad.v5i3.386>
- Wahyuni, A., & Sari, N. F. (2022). *Peningkatan Keterampilan Sosial melalui Metode Bermain Kooperatif Tipe Make A Match pada Anak Usia Dini*. 6(6), 6961–6969. <https://doi.org/10.31004/obsesi.v6i6.2300>

- Winandar, A. K., Winantu, W., Laem, O. L., Antoh, M., & Sari, N. P. (2023). Model Pembelajaran Kontekstual Berbasis Budaya Lokal dalam Pendidikan Anak Usia Dini di Papua. *Jurnal Ilmiah Wahana Pendidikan*, 9(4), 627–637.
- Yanti, M. S., & Tasu, N. (2025). *Peran Keluarga dan Sekolah dalam Mendukung Kesiapan Akademik Menuju Sekolah Dasar : Systematic Literature Review*. 9(June), 1616–1624. <https://doi.org/10.31004/obsesi.v9i5.7091>
- Zakiyyatul, N. (2024). *Literatur Review : Pengaruh Aplikasi Wordwall terhadap Minat Belajar pada Anak Usia Dini*. 6, 213–220.