Indonesian Technology and Education Journal
E-ISSN: 2985-8216; P-ISSN: 2985-8208
https://journal.diginus.id/index.php/ITEJ

Parent–School Collaboration through Parenting Programs in Nature-Based Early Childhood Education

Widyaswika Malane[1*], Rohmiati[2], Zulaeni Esita[3]
[1,23] *Universitas Muhammadiyah Kendari, Kendari, Indonesia*

Corresponding e-mail : widyaswikamalanemsp@gmail.com

ARTICLE INFO

Keywords:

Early childhood education;
Nature-based education;
Parent–school collaboration;
Parental involvement;
Parenting programs.

Article History

Received: April 28, 2026
Revised: July 28, 2026
Accepted: August 25, 2026

ABSTRACT

Parent–school collaboration is essential for ensuring continuity between early childhood learning experiences at school and at home, particularly in nature-based educational settings. This study examines how parenting programs facilitate parent–school collaboration and identifies factors that support or constrain their implementation. A qualitative case study was conducted at TK Alam Aisyiyah (Labschool 2 UM Kendari), involving six purposively selected participants comprising two teachers and four parents. Data were collected through interviews, observations, and documentation and analyzed using Miles, Huberman, and Saldaña's interactive model, incorporating data condensation, data display, and conclusion verification. The findings revealed four interconnected areas of collaboration: continuous two-way communication, parental participation in school activities, reinforcement of learning and developmental practices at home, and collaborative monitoring of children's development. These practices enabled parents and teachers to exchange information, coordinate educational support, and adapt learning guidance to family circumstances. Collaboration was facilitated by parental awareness, teacher commitment, institutional support, open communication, and mutual trust. However, work responsibilities, limited time, scheduling difficulties, and unequal participation constrained parental engagement. The study concludes that parenting programs serve as practical mechanisms for connecting school-based educational experiences with family practices rather than introducing new dimensions of parent–school partnership. These findings highlight the importance of flexible, accessible, and context-responsive parenting programs in strengthening school–family collaboration in nature-based early childhood education.

This is an open access article under the CC BY-SA license

To cite this article : Malane, W., Rohmiati, Esita, Z. (2026). Parent–School Collaboration through Parenting Programs in Nature-Based Early Childhood Education. *Indonesian Technology and Education Journal, 4*(2), 460-475. Doi. 10.61255/itej.v4i2.1905

INTRODUCTION

The development of high-quality human resources is a strategic priority for achieving sustainable development. Investment in early childhood education has long-term implications for children's cognitive, social, and emotional development, as well as their readiness to progress to subsequent levels of education. Early childhood is widely recognized as a critical period of rapid development, during which appropriate stimulation can influence learning, character formation, and children's ability to adapt to their social environment. Therefore, the provision of high-quality early childhood education constitutes an important foundation for developing healthy, capable, and well-rounded future generations.

The success of early childhood education is not determined solely by the quality of learning provided within educational institutions. Children spend a substantial proportion of their time with their families, making the home environment highly influential in shaping behavior, learning habits, social values, and emotional development. Parents are children's first and primary educators, and their support is essential for maintaining continuity between learning experiences at home and at school. Previous studies have also emphasized that parental involvement and participation can strengthen children's educational experiences and promote more consistent support across home and school settings (Aprilliyanti et al., 2022; Mulia & Kurniati, 2023; Fuaddiana & Hibana, 2024).

This perspective is consistent with Bronfenbrenner's Ecological Systems Theory, which explains that child development is shaped by interactions among interconnected environments, particularly the family and school. A constructive relationship between these settings can provide children with more consistent learning and developmental experiences, whereas weak connections between home and school may create discontinuities in expectations, support, and educational practices (Bronfenbrenner, 1979). In this context, the relationship between family and school constitutes an important component of the child's developmental ecology.

A complementary perspective is provided by Epstein's School, Family, and Community Partnerships framework, which identifies communication, family involvement, support for learning at home, and shared participation in educational processes as important elements of effective partnership (Epstein et al., 2018). In early childhood education, such partnerships can be implemented through planned and participatory activities that create meaningful opportunities for parents to engage with the school. Fuaddiana and Hibana (2024), for example, identified structured activities such as parenting sessions and learning activities involving parents as concrete forms of school–family partnership, while Hardianto (2022) emphasized the importance of organized models of school and parent participation.

One strategy used by early childhood education institutions to strengthen such partnerships is the parenting program. Parenting programs do not merely provide parents with information about child-rearing practices; they can also serve as spaces for communication, consultation, and collaboration between teachers and families. Through these programs, schools can foster a shared understanding of educational goals, strengthen parents' capacity to support their children at home, and encourage continuity between educational practices at home and at school (Rahma et al., 2024). Previous research has also shown that parenting programs can expand parents' knowledge, strengthen family–school relationships, and support greater alignment between education at home and at school (Camalia et al., 2025). Related Indonesian literature has also addressed digital parent–school collaboration through parenting programs, parental roles in early childhood education, character development through parenting activities, and parenting in relation to young children's social behavior (Latif et al., 2023; Sitorus, 2024; Mustarsida et al., 2023; Junita & Anhusadar, 2021).

Previous studies have also demonstrated an association between parenting knowledge and parental involvement in early childhood education. Adriana and Zirmansyah (2018) found that parenting knowledge influenced parental involvement, suggesting that strengthening parents' understanding of child development and education can promote more active participation in children's learning. However, much of the existing literature has focused primarily on the effectiveness of parenting programs, parenting practices, or levels of parental participation.

The nature-based educational context warrants particular attention because it provides distinctive learning experiences in which children learn through direct experience, exploration, observation, and interaction with their surroundings. Nature-based learning positions the environment as a contextual learning resource rather than merely as the physical setting in which learning takes place, thereby supporting meaningful and holistic learning experiences for young

children (Limbong, 2025). Within this context, family involvement becomes particularly relevant because children's experiences and stimulation at school require appropriately aligned support at home. TK Alam Aisyiyah (Labschool 2 UM Kendari) integrates nature-based learning with the ongoing implementation of a parenting program. These characteristics make it a relevant context for examining how parent–school collaboration is developed when children's learning experiences extend across and connect the school, home, and natural environment. Related Indonesian research has examined nature-based learning in relation to children's independence in a kindergarten setting (Subandi & Jayadinata, 2026).

Based on this gap, the present study aims to analyze how parenting programs support collaboration between parents and an early childhood education institution in a nature-based educational setting and to identify the factors that facilitate or constrain such collaboration. Rather than proposing a new dimensional structure of school–family partnership, this study examines how established forms of collaboration continuous communication, parental involvement in school activities, support for children's learning at home, and joint monitoring of children's development are enacted through parenting programs in a nature-based early childhood education context. The contribution of this study is therefore primarily contextual and process-oriented: it provides an in-depth account of how parenting programs function as a mechanism for connecting school practices, family support, and children's nature-based learning experiences across school and home settings. By focusing on these interaction processes within a specific nature-based early childhood education setting, the study extends existing school–family partnership literature and offers practical insights for developing parenting programs that are more responsive to the characteristics and needs of families.

METHOD

Research Design

This study employed a qualitative case study design to describe and interpret parent–school collaboration through parenting programs in nature-based early childhood education at TK Alam Aisyiyah (Labschool 2 UM Kendari). The qualitative case study approach was selected to obtain an in-depth understanding of the experiences, interactions, and forms of collaboration established between the school and parents within their natural context. The study was conducted from July to August 2026, during the first semester of the 2026/2027 academic year, at TK Alam Aisyiyah (Labschool 2 UM Kendari), Konda Satu Village, Konda District, South Konawe Regency, Southeast Sulawesi, Indonesia. The research site was selected purposively because the school regularly implements parenting activities as part of its efforts to strengthen school–family partnerships.

Participants and Sampling

The study involved six participants, consisting of two teachers and four parents of children enrolled at TK Alam Aisyiyah (Labschool 2 UM Kendari). Participants were selected purposively according to their direct experience with the parenting program and parent–school collaboration. The teachers were directly involved in the implementation of parenting activities and regularly interacted with parents. The parents had attended and/or participated in parenting activities and had experience communicating and collaborating with the school in supporting their children's learning and development. The parent participants represented varied everyday circumstances, including paid employment, homemaking, and small-business responsibilities, providing different perspective es on participation and home-based support. Data saturation was assessed by comparing information across participants during data collection. Saturation was considered to have been reached when recurring patterns appeared across the main areas of parent–school

collaboration and subsequent interviews did not yield substantively new information relevant to the research questions.

Data Collection and Analysis

Data were collected through in-depth interviews, observation, and documentation. Interviews were conducted with all six participants and lasted approximately 30–45 minutes per participant. The interviews were not audio-recorded. Participants' responses were documented through written notes made during and immediately after the interviews, and these notes were subsequently organized and used as textual data for analysis. Because no audio recordings or verbatim transcripts were produced, participant statements in the findings are treated as note-based accounts and are reported in paraphrased form rather than as verbatim quotations.

Direct observation was used as a supplementary data collection technique to obtain contextual understanding of parenting activities and parent–school interactions in the research setting. Because the observations were not documented through systematic field notes, they were used primarily to support contextual understanding rather than as a stand-alone source of evidence in the thematic analysis. Documentation was used as a supplementary data source and included photographs of parenting activities, participant attendance records, parenting program documents, and meeting minutes. These materials were examined to provide contextual information and to complement the interview data.

Data trustworthiness was established primarily through source triangulation by comparing information obtained from the two teachers and four parents. Information from the interviews was also considered alongside available documentary materials and contextual observations to examine consistency across the evidence. Data were analyzed using the interactive model of Miles, Huberman, and Saldaña (2020) through three stages: data condensation, data display, and conclusion drawing and verification. The analysis followed a combined deductive-inductive approach. Initial analytical domains were informed by the research questions and the conceptual framework on school–family partnership, while the empirical content within each domain was developed from participants' accounts. During data condensation, the written interview notes were reviewed to identify information relevant to parent–school collaboration. Similar information was grouped into categories and compared across participants. These categories were then organized around four analytical areas: communication, parental involvement in school activities, support for children's learning at home, and collaboration in monitoring children's development. Supporting and inhibiting factors identified in participants' accounts were retained as additional empirical categories. The condensed and categorized data were presented narratively, and the resulting interpretations were reviewed against the interview notes and available supporting evidence before conclusions were drawn and verified.

Before the interviews, each participant received an explanation of the study's purpose and procedures and voluntarily agreed to participate through informed consent. Participants' confidentiality was protected by using identification codes in reporting the findings. Formal institutional ethical approval or exemption was not documented for this study; therefore, no ethics approval number is reported. The lead researcher conducted the study as an insider researcher while serving as the principal of TK Alam Aisyiyah (Labschool 2 UM Kendari). This dual role provided in-depth familiarity with the school context but also created a potential power imbalance, particularly in relation to teacher participants, and a risk of socially desirable responses or researcher subjectivity. This limitation was explicitly considered during interpretation. To reduce potential bias, the researcher compared information across participant groups, considered interview accounts alongside available documentary materials and contextual observations, organized the research data systematically, and grounded interpretations in the

documented participant accounts rather than solely in the researcher's institutional knowledge (Brannick & Coghlan, 2007).

RESULTS AND DISCUSSION

Parenting Program as a Medium for Building Communication between School and Family

The findings indicate that the parenting program at TK Alam Aisyiyah (Labschool 2 UM Kendari) functions as one of the mechanisms that strengthens communication between the school and families. Communication is not limited to parenting activities but continues through WhatsApp groups, face-to-face interactions when parents drop off or pick up their children, telephone or private communication when needed, communication books, and consultations between teachers and parents. These channels are used to share information about school activities, children's development and habits, and forms of support that can be continued at home.

Accounts from the two teachers revealed a consistent pattern of ongoing communication with parents. G-01 explained that communication takes place through WhatsApp groups, direct conversations when parents drop off or pick up their children, and during parenting activities. These interactions are used to convey information about school activities, children's development, and parenting materials. G-01 also noted that communication occurs almost every day as needed, particularly when there are developments concerning a child that need to be shared with parents.

This account was reinforced by G-02, who identified WhatsApp and face-to-face interaction as the most frequently used communication channels. When specific concerns arise regarding a child, teachers may also contact parents privately. According to G-02, communication occurs frequently, especially when school information or developments concerning a child need to be communicated. The convergence of the two teachers' accounts suggests that school–family communication is not confined to a single formal forum but is maintained flexibly in response to children's needs and school activities.

Parents described a similar pattern, although the intensity and timing of their responses varied according to their daily circumstances. OT-02, who was occupied with work, explained that she continued to follow information about her child through WhatsApp and direct communication. OT-03, a homemaker, reported that she regularly monitored information from the school and could ask the teacher directly whenever clarification was needed. OT-04, who ran a small grocery business, stated that WhatsApp enabled her to remain connected with school information even when she could not respond immediately because of work responsibilities. These variations show that flexible communication channels allow parents with different daily routines to remain connected with the school.

The data also demonstrate that communication is two-way rather than merely informational. G-01 explained that parents are given opportunities to discuss concerns through parenting activities, private consultations, and WhatsApp groups. Topics commonly discussed include children's development, habits at home, learning difficulties, and appropriate forms of stimulation. Parents confirmed this pattern. OT-03, for example, explained that teachers provide opportunities for parents to ask questions or express opinions, either when collecting their children or through WhatsApp, and that teachers provide suggestions that can be applied at home. OT-04 similarly noted that WhatsApp made it easier to discuss her child with the teacher while continuing to manage her business.

Taken together, the cross-participant pattern indicates that the parenting program forms part of a broader communication system between the school and families. Communication occurs through both formal activities and everyday interactions and enables the exchange of information about children's development, habits, and needs. Although parents differ in how quickly and frequently they respond because of their respective time constraints and responsibilities, both

teachers and parents generally described communication as open, accessible, and responsive to need. The contribution of this subtheme therefore lies not merely in the availability of multiple communication channels, but in the continuity and two-way nature of communication that links children's experiences at school with support provided at home.

Parenting Program as a Means of Increasing Parental Involvement in School Activities

The findings indicate that the parenting program serves as one of the mechanisms that encourages parental involvement in various activities at TK Alam Aisyiyah (Labschool 2 UM Kendari). Parental involvement was reflected not only in attendance at parenting sessions but also in participation in parent meetings, religious activities, outing classes, market days, thematic culmination activities, activities involving children, and other school programs. The forms of involvement identified in the data included attendance, contributions of time and effort, sharing ideas, assisting with activity preparation, accompanying children, and participating voluntarily according to each parent's capacity and availability.

Accounts from both teachers indicated that parental involvement was generally positive, although the level of participation was not uniform. G-01 explained that most parents attended parenting activities and supported various school programs through their presence, effort, and ideas. G-02 similarly reported that parents participated in parenting sessions, market days, outing classes, thematic culmination activities, religious events, and activities involving children. However, G-02 emphasized that the degree of involvement varied according to parents' available time and individual responsibilities.

This finding suggests that parental involvement in the present context cannot be understood solely in terms of whether parents attend every school activity. It is also reflected in parents' efforts to adjust their schedules, provide support when they are able to participate, and remain connected to school activities despite work-related or time constraints.

Parents' accounts revealed variations that further strengthened this interpretation. OT-02, a working parent, explained that she tried to attend parenting and other school activities by adjusting her work schedule when information was provided in advance. OT-03, a homemaker, had relatively greater flexibility to participate, although household responsibilities and family matters still required her to manage her time. Meanwhile, OT-04, who operated a grocery business, also tried to attend by arranging for someone else to look after the shop. These differing circumstances indicate that parental participation occurs in varying forms and intensities, while remaining motivated by a shared desire to support children's education and development.

Beyond attendance, parental involvement was also demonstrated through concrete contributions to school activities. OT-01 reported assisting with school activities, including helping to prepare refreshments for parenting sessions, and described this participation as voluntary. OT-01 perceived such involvement as beneficial for increasing knowledge of early childhood education and strengthening relationships with teachers and other parents. Similarly, OT-03 explained that she participated voluntarily because she wanted to support her child's activities and gain a better understanding of her child's experiences at school.

From the perspective of children's experiences, both teachers perceived parental involvement as providing emotional and social support. G-02 explained that when parents were involved, children appeared happier, more confident, and more strongly supported by their families. This finding suggests that parental involvement contributes not only to the implementation of school activities but also to the meaning children attach to their educational experiences.

Taken together, the cross-participant pattern indicates that parental involvement extends beyond formal attendance. It includes willingness to participate, contributions of time, effort, and ideas, assistance with activity preparation, accompaniment of children, and efforts to adjust

personal schedules in order to remain involved. The variation among working parents, homemakers, and parents operating a business suggests that involvement should be understood contextually in relation to each family's circumstances. Thus, the findings show that the school does not merely provide opportunities for parents to attend activities, but also creates forms of participation that parents can engage in according to their respective capacities.

Parenting Program as a Means of Strengthening Children's Learning at Home

The findings indicate that the parenting program supports parents in extending school guidance into everyday learning and caregiving practices at home. This support was reflected in the application of positive routines, encouragement of children's independence, communication with children, learning through play, reading activities, and age-appropriate daily guidance. The data also show that parents adapted these practices to their available time and family circumstances rather than applying them in an identical manner.

Both teachers reported that parents were encouraged to apply simple parenting materials in daily activities at home. G-01 explained that teachers provided examples of simple activities and reminders through WhatsApp, particularly regarding positive routines that were appropriate to children's ages. G-02 similarly described guidance related to children's habits, independence, communication, and simple activities that parents could carry out with their children at home. According to both teachers, the application of these practices was followed through communication with parents and through changes observed in children at school.

The teachers also observed that home support varied according to parents' available time. G-01 reported that many parents attempted to accompany their children in learning, reading books, engaging in educational play, and developing independent habits, while some parents experienced time constraints. G-02 likewise noted that children who received regular support at home tended to appear more confident, more independent, and better able to participate in classroom activities. These observations suggest that the contribution of home learning lies not only in formal academic practice but also in everyday routines that reinforce children's confidence, responsibility, and independence.

Parents' accounts provided further evidence of how parenting materials were translated into practice at home. OT-02 explained that she applied guidance on communicating with her child, allowing the child to become more independent, and providing support without excessive pressure. Because of work commitments, she usually accompanied the child after work, in the evening, or for longer periods on holidays. OT-03 described encouraging independence, speaking positively with the child, allowing the child to try tasks independently, and avoiding excessive pressure during learning. She also attempted to repeat positive routines introduced at school. OT-04 similarly reported applying parenting materials while adjusting the timing of support to the demands of running a grocery business.

These accounts show that learning at home is embedded in everyday family interactions rather than being limited to scheduled academic tasks. Parents described accompanying children while playing and learning, reinforcing routines taught at school, encouraging independence, and maintaining communication with teachers when guidance was needed. The pattern across participants also shows that home support was adapted to family circumstances: working parents tended to use evenings or holidays, homemakers had relatively more flexible time, and parents managing a business adjusted their involvement around work demands.

The findings therefore indicate a degree of continuity between school guidance and family practices at home. This continuity does not mean that home and school activities were identical; rather, parents attempted to reinforce similar developmental goals through routines, communication, play, and guidance that were feasible within their household context. The

parenting program functioned as one channel through which parents received ideas and guidance that could be interpreted and applied in everyday family life.

Parenting Program as a Means of Strengthening Collaboration in Monitoring Children's Development

The findings indicate that the parenting program supports collaboration between teachers and parents in monitoring children's development. This collaboration is maintained through routine exchanges of information, direct consultations, WhatsApp communication, communication books where needed, developmental reports, and discussions when particular developmental changes or difficulties are identified. Through these interactions, information about children's experiences and behavior at school can be considered alongside parents' observations at home, allowing both parties to develop a more comprehensive understanding of each child's needs.

Accounts from both teachers showed a consistent pattern of two-way developmental monitoring. G-01 explained that information about children's development was communicated through direct conversations, developmental reports, WhatsApp, and consultations when necessary. The information covered several areas of development, including religious and moral development, language, motor skills, social-emotional development, cognition, art, and children's behavior at school. Parents generally responded by asking questions and discussing their children's development. G-02 similarly reported that teachers and parents exchanged information about children's development and habits in both school and home settings through WhatsApp, direct communication, consultations, and developmental reports. Communication could occur whenever a particular issue or developmental change needed to be discussed.

These accounts suggest that developmental monitoring is not confined to formal reporting periods. Rather, it is embedded in routine school–family communication. The exchange of observations from two different settings enables teachers and parents to compare children's behavior, emerging abilities, habits, and difficulties and to determine whether similar forms of support should be continued across school and home.

Parents' accounts further supported this pattern. OT-02 reported frequently exchanging information with the teacher, particularly when changes in the child were observed. Information was obtained from the teacher's accounts, activity reports, and the child's behavior at home, while the teacher also provided suggestions regarding practices that could be continued at home. OT-03 similarly described a reciprocal process in which the teacher communicated developments or particular habits observed at school, while the parent shared relevant information about the child's condition at home. The teacher then provided suggestions for follow-up at home. OT-01 also confirmed frequent exchanges about the child's development and reported receiving suggestions and guidance during parenting activities.

The collaborative nature of monitoring became particularly evident when children experienced learning difficulties or displayed particular behaviors. G-02 explained that teachers invited parents to discuss the child's situation at home and jointly identify possible responses. Either the teacher or the parent could initiate the communication, depending on where the issue was first observed. Agreed strategies were then adjusted to the child's needs and monitored jointly to determine whether changes occurred. Parents described a similar process. OT-02 explained that when a difficulty arose, the teacher or parent initiated a discussion about what was occurring at school and at home, after which both attempted to use a similar approach. OT-03 likewise reported continuing at home the strategies discussed with the teacher.

This cross-participant pattern indicates that collaborative monitoring involves more than the transmission of developmental information from school to parents. It includes reciprocal observation, discussion, recommendations for home-based follow-up, and joint problem-solving.

Importantly, the data suggest that the value of this collaboration lies in connecting observations made in different settings. Teachers have access to children's behavior and learning experiences at school, whereas parents observe children in everyday family contexts. Bringing these perspectives together allows support to be adjusted more closely to children's emerging needs.

Supporting and Inhibiting Factors in Parent–School Collaboration through Parenting Programs

The findings indicate that parent–school collaboration was supported by parental awareness, teacher commitment, principal support, open communication, the continued implementation of parenting activities within the program context, and parents' trust in the school. Meanwhile, the inhibiting factors included limited time, work commitments, difficulties in coordinating schedules, distance from home to school for some families, and variations in parental participation. Cross-participant findings show that these factors were not experienced to the same extent by every family but were influenced by each family's work conditions, available time, and responsibilities.

Supporting Factors

Accounts from both teachers indicate that teacher commitment and open communication are important elements in establishing consistent relationships with parents. G-01 explained that teachers actively build communication, provide information, and maintain positive relationships with parents. Parents' awareness of the importance of their children's education also encourages their involvement in parenting activities and collaboration with the school. G-02 reinforced this finding by explaining that parents who understand the importance of family involvement tend to participate more actively and are more open to discussing their children's development.

Principal support also emerged as a contextual factor supporting program implementation, as reported by the teachers through the provision of direction, facilities, and support for parenting activities. In addition, the repeated implementation of parenting activities provided opportunities for teachers and parents to maintain communication and discuss emerging needs related to supporting children.

Parents' accounts show that their willingness to collaborate was associated with an awareness of shared responsibility for supporting children's development and with the perceived benefits of parenting activities. OT-02 continued to make efforts to participate despite work commitments because parenting activities were considered important for increasing knowledge about how to support the child. OT-03 also perceived parenting activities as beneficial for understanding how to educate and support the child at home. Meanwhile, OT-04 reported that parenting activities increased her knowledge of parenting and that open communication with teachers made it easier to obtain feedback concerning the child.

Overall, the supporting factors originated from both sides of the partnership. Teacher commitment, principal support, open communication, and the repeated implementation of parenting activities created opportunities for interaction between the school and families, while parental awareness and trust in the school encouraged their involvement. However, these findings are limited to the context of the present study and are not intended as evidence of the long-term sustainability of the partnership.

Inhibiting Factors

The barriers that emerged most consistently across the interviews were limited time, work commitments, difficulties in coordinating activity schedules, and variations in parents' responsiveness or participation. G-01 explained that work commitments prevented some parents from attending all parenting activities and that activity schedules sometimes conflicted with parents' other responsibilities. G-02 also explained that identifying a time that could accommodate all parents was challenging because each family had different commitments.

Parents' experiences reveal variation in how these barriers were encountered. OT-02, as a working parent, experienced time constraints but attempted to reorganize work when activity schedules were communicated in advance. OT-03, as a homemaker, had relatively greater flexibility, although household duties or family matters occasionally coincided with school schedules. OT-04, who operated a grocery business, needed to arrange for someone else to manage the shop before attending school activities. These variations indicate that barriers to participation need to be understood in relation to each family's circumstances.

Distance from home to school was reported by the teachers as a barrier for some parents, particularly in relation to punctual attendance, but it did not emerge as a major barrier for all parents interviewed. Therefore, this finding is more appropriately understood as a situational constraint. Compared with distance, limited time, work commitments, and scheduling difficulties emerged more consistently across the data.

To clarify the relationships among the findings, the four established areas used to organize the analysis are summarized in Table 1. Figure 1 presents them as an empirical synthesis of how the parenting program supported collaboration in this case. Neither the table nor the figure is intended to propose a new dimensional structure or a formally validated model.

Table 1. Summary of Four Analytical Areas of Parent–School Collaboration

Dimension	Key Practices Identified	Contribution to the Partnership
Communication	WhatsApp, face-to-face communication, telephone calls, communication books, and consultations	Continuous two-way exchange of information about activities, children's development, and support at home
Parental involvement	Parenting activities, parent meetings, religious activities, outing classes, market days, thematic culmination activities, and activities involving children	Parents contribute through attendance, time, effort, ideas, activity preparation, and accompaniment of children
Learning at home	Positive routines, independence, learning through play, reading, positive communication, and everyday guidance	Links school guidance with practices for supporting children's learning and development at home
Monitoring children's development	Information exchange, consultations, developmental reports, communication books where used, and follow-up guidance	Develops a shared understanding of children's development, emerging difficulties, and appropriate follow-up actions

Table 1 shows that the four analytical areas are distinguishable but interdependent. Communication enables information exchange; parental involvement connects families with school activities; learning at home translates school guidance into feasible family practices; and developmental monitoring uses observations from home and school to coordinate follow-up. These findings summarize the empirical pattern identified across participants.

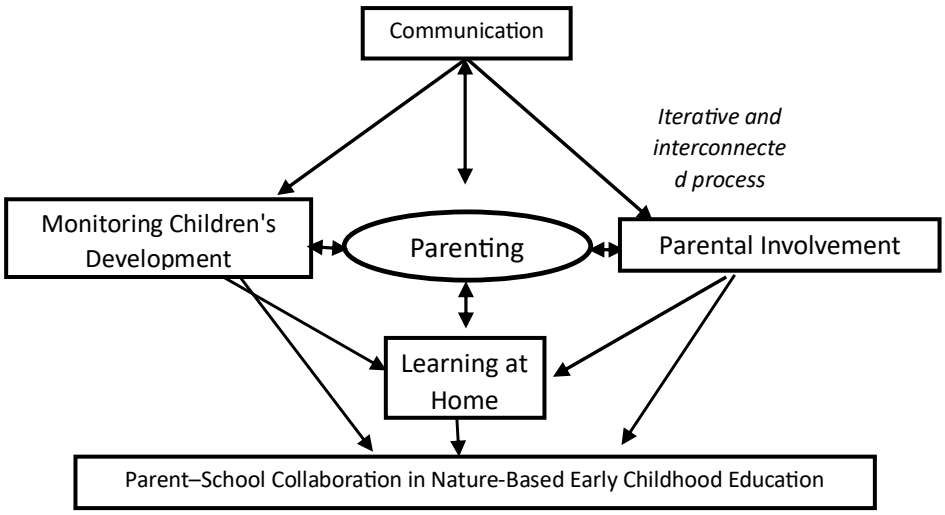

Figure 1. Empirical Synthesis of How Parenting Programs Support Parent–School Collaboration in Nature-Based Early Childhood Education

Fugure 1 presents the four empirical areas communication, parental involvement, learning at home, and monitoring children's development as interconnected components through which the parenting program supported parent–school collaboration in this case. The figure summarizes the recurrent pattern observed across the findings and does not represent a newly validated dimensional model.

DISCUSSION

The discussion interprets the empirical findings presented in the Results section by relating them to established school–family partnership frameworks, previous studies, and the specific characteristics of nature-based early childhood education.

Communication between School and Family

Digital communication in this case did more than provide an additional channel for contact. WhatsApp, face-to-face interaction, and parenting sessions operated as a layered communication system that connected formal program activities with everyday exchanges about children's needs. Hsu and Chen (2023) demonstrate the broader potential of digital platforms for family-school partnerships, while Epstein et al. (2018) identify communication as a central partnership practice. The present case adds process detail by showing how digital and direct channels were combined to maintain continuity rather than functioning as separate or occasional forms of contact.

Bronfenbrenner's mesosystem concept helps explain why this continuity matters: information from home and school becomes more useful when it is exchanged and interpreted across settings rather than remaining within one environment (Bronfenbrenner, 1979). In this study, communication was therefore not simply evidence that a mesosystem existed; it was the practical mechanism through which observations, expectations, and forms of support were connected.

Previous work has shown that planned parenting activities can strengthen school-parent partnerships (Fuaddiana & Hibana, 2024; Camalia et al., 2025). What is more distinctive in this case is that the parenting program was embedded in an ongoing communication network rather than operating as a stand-alone event. This is particularly relevant in a nature-based early childhood setting, where children's school experiences include activities beyond routine classroom instruction and parents need accessible channels to understand how those experiences can be supported at home.

Overall, the communication findings indicate that the contribution of the parenting program lies in maintaining a continuous two-way connection between school and family. In the nature-based context of TK Alam Aisyiyah, this connection helps parents remain informed about children's school experiences and developmental needs while allowing teachers to incorporate information from home. The contribution is therefore process-oriented: communication sustains the movement of information and support across settings rather than constituting a new partnership dimension.

Parental Involvement in School Activities

Epstein et al. (2018) conceptualize family involvement as a core component of school–family partnership, but the present case shows that involvement should not be reduced to physical attendance. Parents participated through time, effort, ideas, preparation, accompaniment, and schedule adjustment. This qualifies a simple participation/non-participation distinction by showing that involvement is negotiated around family capacity and may remain meaningful even when parents cannot attend every activity.

The nature-based setting gives this variation additional contextual significance. Parents were involved not only in parenting sessions and meetings but also in outing classes, thematic culmination activities, religious activities, and other child-centered school programs. These forms of participation place parents closer to children's experiential school activities and create opportunities to understand what children encounter at school, while still allowing involvement to take different forms according to work and family circumstances.

Research on parenting knowledge and family participation has shown that parents' understanding and opportunities for engagement can influence involvement (Adriana & Zirmansyah, 2018; Fuaddiana & Hibana, 2024). The present case extends this discussion by showing that the practical question is not only whether opportunities exist, but whether those opportunities are sufficiently flexible for differently situated families to use them. Flexibility therefore emerges as part of the partnership process, not merely as an administrative convenience.

Thus, the parenting program supported parental involvement by creating multiple entry points for participation rather than requiring a uniform pattern of attendance. In this nature-based early childhood setting, such flexibility helps connect parents with both formal parenting activities and broader experiential school programs, while acknowledging differences in work, household, and small-business responsibilities.

Children's Learning at Home

Epstein's Learning at Home dimension provides a useful conceptual reference (Epstein et al., 2018), but the present case adds detail about how school guidance was translated rather than simply transferred. Parents adapted guidance into routines, play, reading, positive communication, and support for independence according to the time and conditions available in each household. The important process was therefore adaptation: continuity was maintained without requiring home and school activities to be identical.

This interpretation also extends beyond confirming the importance of supportive parenting reported in previous studies (e.g., Arwan et al., 2025). In a nature-based early childhood context, continuity does not require families to reproduce the school's physical environment or every school activity at home. Instead, parents can reinforce related developmental purposes through feasible everyday practices such as play, independence, communication, and positive routines. The case therefore shows how a parenting program can mediate between a distinctive school approach and diverse household realities.

Accordingly, Learning at Home in this case is best understood as a flexible translation process. Parenting activities provide ideas and shared guidance, while families adapt them to their own schedules and resources. This process-oriented finding is more specific than simply showing that parents support learning at home: it explains how continuity between a nature-based school context and family practices can be maintained without assuming uniform implementation.

Collaborative Monitoring of Children's Development

Epstein et al. (2018) position communication and family involvement as central to partnership, but collaborative monitoring in this study shows how these practices become operational when teachers and parents use exchanged information to decide what should be followed up. Monitoring was therefore not a one-way report from school to family; it involved comparing observations, interpreting differences, and coordinating responses across settings. Bronfenbrenner's mesosystem perspective is useful here because the value of monitoring lies in linking observations from different environments rather than privileging one source of information (Bronfenbrenner, 1979). In a nature-based early childhood setting, where learning experiences extend across classroom, outdoor, and family contexts, this cross-setting exchange is especially relevant for building a more complete understanding of children's emerging needs.

Liandani et al. (2024) emphasize parental involvement in monitoring early childhood development. The present case adds a more specific process account: information exchange was followed by consultation, recommendations for home-based follow-up, and joint responses when difficulties were identified. This shifts the emphasis from monitoring as observation toward monitoring as coordinated interpretation and action. Thus, collaborative monitoring contributes to parent–school partnership by closing the loop between information exchange and follow-up. It is not proposed as a new partnership dimension; rather, it illustrates how established communication and involvement practices can be used to connect children's experiences across school and home in a context-sensitive way.

Supporting and Inhibiting Factors

The strategies used to reduce barriers - advance notice, WhatsApp and direct communication, individual approaches, and schedule adjustment - show that flexibility is part of how the partnership is enacted. Epstein et al. (2018) and Hsu and Chen (2023) help explain the importance of accessible communication, while Fuaddiana and Hibana (2024) highlight planned opportunities for parent participation. This case adds that accessibility must be matched by adaptation to families' actual work and household conditions. In a nature-based school context that includes parenting sessions, outing classes, thematic activities, and other child-centered programs, such flexibility determines whether parents can remain connected to school experiences even when full attendance is not possible.

Integrated Interpretation and Contribution of the Study

Taken together, the findings suggest that the contribution of this case is not the identification of four new dimensions of parent–school collaboration. Rather, the study shows how established forms of collaboration are enacted through a parenting program in a specific nature-based early childhood setting. Communication keeps information moving across settings; parental involvement creates opportunities for families to enter school activities in different ways; learning at home translates school guidance into feasible household practices; and developmental monitoring brings observations back into shared discussion and follow-up.

This process can be understood as recurrent rather than as a linear causal sequence. Parenting activities create opportunities for shared understanding, everyday communication sustains contact, parents adapt participation and home support to their circumstances, and reciprocal monitoring allows teachers and families to revise support when new needs emerge.

The case therefore contributes a process-oriented account of how partnership is maintained under conditions of unequal time, work responsibilities, and family capacity.

The nature-based specificity of the case lies in the need to maintain continuity without requiring families to reproduce school experiences in exactly the same form at home. Parents participated in experiential school activities such as outing classes and thematic events and, at home, reinforced related developmental purposes through play, routines, communication, reading, and support for independence. Parenting programs therefore appear to function as a bridging mechanism between the school's experiential orientation and the practical realities of family life.

These interpretations remain bounded by the qualitative design, the small purposively selected participant group, the use of note-based rather than audio-recorded interview data, and the specific context of a single nature-based early childhood education setting. They should therefore be read as a contextual explanation of how collaboration was enacted in this case, not as evidence of causal effects or long-term sustainability.

CONCLUSIONS

This study demonstrates that parenting programs facilitate parent–school collaboration in nature-based early childhood education through four interconnected practices: continuous two-way communication, parental involvement in school activities, reinforcement of children's learning at home, and collaborative monitoring of children's development. Rather than introducing new dimensions of school–family partnerships, these findings illustrate how established collaborative practices operate within a nature-based educational setting. The collaboration is supported by parental awareness, teacher commitment, institutional support, open communication, and mutual trust, while limited time, work responsibilities, scheduling difficulties, and variations in parental participation remain significant challenges. The principal contribution of this study lies in demonstrating how parenting programs function as a practical bridge between school-based learning experiences and family practices, allowing educational support to be adapted to children's developmental needs and diverse household circumstances.

These findings suggest that early childhood education institutions should develop flexible and inclusive parenting programs by maintaining accessible communication channels, providing advance notice of activities, accommodating parents' schedules, and encouraging collaborative monitoring of children's development. Such strategies may strengthen continuity between school and home without requiring uniform parental participation. Nevertheless, the findings should be interpreted within the limitations of a single qualitative case study involving six purposively selected participants, with interview data documented through written notes rather than audio recordings. Consequently, the results provide context-specific insights rather than broadly generalizable or causal evidence. Future studies should examine parenting programs across diverse educational settings using comparative or longitudinal approaches to investigate how parent–school collaboration develops and is sustained over time.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to TK Alam Aisyiyah (Labschool 2 UM Kendari) for the support and facilities provided during the conduct of this study. The authors also gratefully acknowledge the teachers and parents who participated in the study and provided valuable information during the data collection process. Special appreciation is extended to Dr. Hj. Rohmiati, S.Pd.,M.Pd.I. and Zulaeni Esita, S.Psi.,M.A. for their guidance, constructive feedback, and support throughout the research process and the preparation of this article. The authors also express their heartfelt gratitude to the first author's husband, Dr. Ahmad Muhlis Nuryadi, S.Pi.,M.Si., and their children for their prayers, patience, understanding, encouragement, and continuous support throughout the completion of this research and article.

AUTHOR CONTRIBUTION STATEMENT

WM conceptualization, methodology, investigation, data collection, data curation, formal analysis, interpretation of findings, and writing-original draft. R conceptual guidance, methodology review, validation, supervision, and writing-review and editing. ZE validation, supervision, interpretation support, and writing-review and editing. All authors reviewed and approved the final version of the manuscript and agreed to be accountable for the integrity of the work.

AI DISCLOSURE STATEMENT

During the preparation and language-editing stage of this manuscript, the authors used ChatGPT (OpenAI) to improve academic wording, grammatical clarity, and readability. The tool was not used to generate research data, conduct data analysis, interpret findings, or formulate conclusions. All AI-assisted text was critically reviewed and verified by the authors, who retain full responsibility for the accuracy, originality, integrity, and final content of the manuscript.

REFERENCES

Adriana, N. G., & Zirmansyah. (2018). Pengaruh pengetahuan parenting terhadap keterlibatan orangtua di lembaga PAUD. Jurnal AUDHI, 1(1), 40–51. https://doi.org/10.36722/jaudhi.v1i1.565

Aprilliyanti, F., Hanurawan, F., & Sobri, A. Y. (2022). Keterlibatan orang tua dalam penerapan nilai-nilai luhur pendidikan karakter Ki Hajar Dewantara. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 6(1), 1–8. https://doi.org/10.31004/obsesi.v6i1.595

Arwan, B., Arismunandar, Herman, & Mustafa. (2025). Gaya pengasuhan orang tua terhadap perkembangan anak usia 5–6 tahun. Jurnal Ilmiah Penelitian Mahasiswa, 3(2), 31–41. https://doi.org/10.61722/jipm.v3i2.771

Brannick, T., & Coghlan, D. (2007). In defense of being "native": The case for insider academic research. Organizational Research Methods, 10(1), 59–74. https://doi.org/10.1177/1094428106289253

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard University Press.

Camalia, R. S., Nur, L., & Purwati, P.. (2025). Kontribusi program parenting terhadap pendidikan karakter anak usia dini: Systematic literature review. CERIA (Cerdas Energik Responsif Inovatif Adaptif), 8(1), 76–87.

Epstein, J. L., Sanders, M. G., Sheldon, S. B., Simon, B. S., Salinas, K. C., Jansorn, N. R., Van Voorhis, F. L., Martin, C. S., Thomas, B. G., Greenfeld, M. D., Hutchins, D. J., & Williams, K. J. (2018). School, family, and community partnerships: Your handbook for action (4th ed.). Corwin.

Fuaddiana, A. D., & Hibana. (2024). Kemitraan orang tua dengan sekolah dalam meningkatkan pembelajaran partisipatif di TK Kusuma 1 Kab. Sleman. Mitra Ash-Shibyan: Jurnal Pendidikan dan Konseling, 7(2), 113–126. https://doi.org/10.46963/mash.v7i02.2051

Hardianto, D. (2022). Analisis program dan model kemitraan blended partisipasi sekolah dan orang tua. Jurnal Inovasi Teknologi Pendidikan, 9(2), 204–216. https://doi.org/10.21831/jitp.v9i2.54117

Hsu, P.-C., & Chen, R.-S. (2023). Analyzing the mechanisms by which digital platforms influence family-school partnerships among parents of young children. Sustainability, 15(24), 16708. https://doi.org/10.3390/su152416708

Junita, E. N., & Anhusadar, L. (2021). Parenting dalam meningkatkan perkembangan perilaku sosial anak usia 5–6 tahun. Yaa Bunayya: Jurnal Pendidikan Anak Usia Dini, 5(2), 57–63.

Latif, M. A., Amir, R., Marzuki, K., Gaffar, F., & Nurhayati, S. (2023). Kolaborasi strategis lembaga PAUD dan orang tua di era digital melalui program parenting. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 7(3), 3169–3180. https://doi.org/10.31004/obsesi.v7i3.4485

Liandani, M., Purwanggi, A., Rahayu, E., & Khoiriyah, H. (2024). Pengabdian masyarakat pemantauan tumbuh kembang anak usia dini di TK PKK I Yosodadi Metro. Jurnal Pengabdian kepada Masyarakat Nusantara, 5(1), 715–720. https://doi.org/10.55338/jpkmn.v5i1.2783

Limbong, I. E. (2025). Pembelajaran berbasis alam terbuka sebagai pendekatan kontekstual dalam penguatan literasi sains anak usia dini di daerah pesisir. Al-Hanif: Jurnal Pendidikan Anak dan Parenting, 5(2), 60–67.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2020). Qualitative data analysis: A methods sourcebook (4th ed.). SAGE Publications.

Mulia, P. S., & Kurniati, E. (2023). Partisipasi orang tua dalam pendidikan anak usia dini di wilayah pedesaan Indonesia. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 7(3), 3663–3674. https://doi.org/10.31004/obsesi.v7i3.4628

Mustarsida, U., Maarif, M. A., & Rusydi, I. (2023). Manajemen pengembangan karakter anak usia dini melalui kegiatan parenting. Munaddhomah: Jurnal Manajemen Pendidikan Islam, 4(4), 855–866. https://doi.org/10.31538/munaddhomah.v4i4.689

Rahma, R. A., Rahmania, L. A., & Sari, Z. N. (2024). Development of blended learning-based family institution partnership model in stimulating early children's development. JPPM (Jurnal Pendidikan dan Pemberdayaan Masyarakat), 11(1), 62–72. https://doi.org/10.21831/jppm.v11i1.72228

Sitorus, M. A. (2024). Pendekatan peran orang tua di satuan pendidikan anak usia dini. Demagogi: Journal of Social Sciences, Economics, and Education, 2(1), 12–21. https://doi.org/10.61166/demagogi.v2i1.10

Subandi, R. S., & Jayadinata, A. K. (2026). Hubungan pembelajaran berbasis alam dengan kemandirian murid pada TK Alam Purwakarta. Jurnal Manajemen Pendidikan dan Ilmu Sosial, 7(4), 3069–3076. https://doi.org/10.38035/jmpis.v7i4

Suyadi, & Ulfah, M. (2013). Konsep dasar PAUD. PT Remaja Rosdakarya.

Zulauf-McCurdy, C. A., McManus, M. S., Golez, M., & Fettig, A. (2024). A systematic review of interventions to promote parent-teacher relationships in early care and education: Exploring the social process between parents and teachers. SAGE Open, 14(4), 1–14. https://doi.org/10.1177/21582440241288114