



## Camping Day as a Learning Innovation in Improving Children's Social-Emotional Intelligence in Kindergarten

Rislah Arini\*

Universitas Negeri  
Padang, Indonesia

Nurhafizah

Universitas Negeri  
Padang, Indonesia

Farida Mayar

Universitas Negeri  
Padang, Indonesia

Serli Marlina

Universitas Negeri  
Padang, Indonesia

---

### Article Info

#### Article history:

Received: Feb, 15, 2026

Revised: April, 29, 2026

Accepted: May, 16, 2026

#### Keywords:

Camping Day;  
Early Childhood Education;  
Experiential Learning;  
Social-Emotional Intelligence;  
Social-Emotional  
Development.

---

### Abstract

The increasing global concern regarding children's declining social-emotional competence within academically dominated early childhood education systems has intensified the demand for innovative pedagogical approaches capable of fostering holistic developmental growth. Despite the growing recognition of experiential learning and Social and Emotional Learning (SEL) frameworks, many kindergarten learning environments continue to rely heavily on classroom-centered instruction that provides limited opportunities for authentic emotional interaction, collaborative engagement, and adaptive social participation. Addressing this gap, the present study investigated the effectiveness of Camping Day activities as a structured experiential learning model for strengthening children's social-emotional intelligence in kindergarten education. The study employed a quasi-experimental one-group pretest-posttest design involving 60 children aged five to six years from four kindergartens in Kampar Regency, Indonesia. Data were collected through structured observations, semi-structured teacher interviews, and field documentation based on five SEL dimensions, namely self-awareness, self-management, social awareness, responsibility, and relationship skills. Quantitative data were analyzed using descriptive statistics and paired sample t-tests, while qualitative findings were interpreted thematically to provide contextual and conceptual depth. The findings revealed a statistically significant improvement in children's social-emotional intelligence following participation in Camping Day activities, with the mean score increasing from 2.08 to 3.41 ( $t = 8.73$ ,  $p < .001$ ). The most substantial improvements were identified in emotional regulation, collaborative responsibility, communication, and peer interaction. The findings further demonstrate that pedagogically mediated experiential outdoor learning creates emotionally meaningful learning ecologies that strengthen children's adaptive behavior and interpersonal competence through authentic social engagement. This study contributes conceptually by positioning Camping Day as a structured socio-emotional immersion model that extends experiential learning and SEL discourse within contemporary early childhood education while offering a globally relevant pedagogical perspective for fostering holistic child development.

---

**To cite this article:** Arini, R. Nurhafizah. Mayar, F. Marlina. S. (2026), Camping Day as a Learning Innovation in Improving Children's Social-Emotional Intelligence in Kindergarten. *Al Qodiri: Jurnal Pendidikan, Sosial dan Keagamaan*, 24 (2), 330-344.

---

## INTRODUCTION

Early childhood education has undergone a significant paradigm shift in recent years, moving beyond cognitive-oriented instruction toward more holistic developmental approaches that prioritize children's emotional well-being, social adaptability, and interpersonal competence. Within this transformation, social-emotional intelligence has emerged as one of the most critical developmental domains because it influences children's capacity to regulate emotions, establish relationships, resolve conflicts, and participate effectively in social environments. International educational frameworks increasingly recognize that children's long-term academic success and psychological resilience are strongly associated with their social-emotional competencies rather than cognitive achievement alone (Hosokawa et al., 2024; Williams et al., 2022). In early childhood

---

\* Corresponding author:

Rislah Arini et al, Universitas Negeri Padang, Indonesia  
[rislah.arinii@gmail.com](mailto:rislah.arinii@gmail.com)

settings, social-emotional intelligence encompasses children's ability to recognize feelings, demonstrate empathy, manage behavior, cooperate with peers, and respond appropriately to social situations (Herut et al., 2024; Xiang et al., 2022). These competencies become especially important during the ages of five to six years, a developmental period characterized by rapid emotional growth and intensified peer interaction. Nevertheless, many kindergarten learning environments still emphasize routine classroom instruction and academic preparation while providing limited opportunities for authentic socio-emotional engagement. As a result, the development of children's social-emotional intelligence often remains fragmented and insufficiently stimulated through meaningful learning experiences.

The growing concern regarding children's social-emotional development is supported by various empirical realities observed in early childhood educational contexts. Several studies have reported that many kindergarten children continue to experience difficulties in emotional regulation, peer collaboration, self-confidence, and adaptive social interaction during classroom activities (Alaçam, 2026; Oğuz & Pınar, 2025). Similar conditions were identified in the preliminary observations conducted in several kindergartens in Kampar Regency, where children frequently demonstrated emotional instability, low responsibility, limited communication skills, and dependence on teachers during conflict resolution. Some children tended to withdraw from group interaction, while others struggled to share, cooperate, or respond constructively when faced with disappointment or unfamiliar situations. Teachers also observed that children often became easily frustrated during collaborative activities and had difficulty expressing emotions appropriately. Such conditions indicate that classroom-centered instructional practices alone may no longer adequately address the increasingly complex socio-emotional developmental needs of young children. Moreover, children's reduced engagement in direct outdoor interaction and the increasing dominance of passive learning environments have further limited opportunities for experiential social learning. Therefore, innovative educational approaches capable of fostering authentic emotional and social experiences are urgently required in contemporary early childhood education.

One educational approach considered highly relevant for addressing these developmental challenges is experiential learning, which emphasizes learning through direct experience, reflection, and active participation in meaningful situations. Experiential learning positions children not merely as recipients of information but as active participants who construct understanding through interaction with their physical and social environments (Skrefsrud, 2022; Varman et al., 2023). From the perspective of Kolb's experiential learning theory, concrete experience and active experimentation are essential components in the development of adaptive behavior and emotional competence. Similarly, Vygotsky's social constructivist perspective emphasizes that children's learning and emotional growth are fundamentally shaped through social interaction and collaborative engagement with others. In early childhood education, experiential learning creates opportunities for children to develop self-awareness, cooperation, communication, and emotional control in authentic contexts rather than through abstract instruction alone. Outdoor learning activities are particularly valuable because they expose children to dynamic social situations that stimulate responsibility, empathy, and problem-solving abilities simultaneously. Consequently, integrating experiential learning into kindergarten education offers considerable potential for strengthening children's social-emotional intelligence in more contextualized and developmentally meaningful ways.

Among various forms of experiential learning, Camping Day activities represent an educational innovation that combines outdoor exploration, collaborative learning, and social interaction within structured pedagogical experiences. Camping Day activities generally involve group cooperation, environmental exploration, independence training, problem-solving tasks, and social participation that encourage children to interact actively with peers and teachers. Through these activities, children encounter real-life situations requiring emotional regulation, responsibility, adaptability, and interpersonal communication in ways that cannot be fully replicated through conventional classroom instruction. Previous studies have shown that outdoor educational experiences can strengthen children's confidence, cooperation, and emotional resilience by creating authentic learning interactions (Coştu & Karakuş, 2025; Ghani et al., 2025). In addition, the Social and Emotional Learning (SEL) framework developed by CASEL emphasizes that competencies such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-

making develop more effectively when children engage in meaningful social experiences (Gimbert et al., 2023; Tan & Chua, 2024). Camping Day activities therefore possess strong pedagogical relevance because they integrate experiential learning principles with social-emotional competency development in natural learning situations. However, despite their educational potential, Camping Day programs in many kindergartens are still frequently implemented as recreational activities rather than as systematically designed learning strategies aimed at achieving measurable developmental outcomes.

Previous research has consistently highlighted the positive relationship between outdoor learning experiences and children's social-emotional development. Pamungkas & Handayani, (2022) found that outbound-based activities improved children's confidence, courage, and collaborative behavior through cooperative interaction. Similarly, Garaigordobil et al., 2022; Lin et al., (2025) reported that experiential activities significantly strengthened children's social adaptability and communication skills during peer interaction. Studies conducted by Mann et al., (2022); Molyneux et al., (2023) further demonstrated that meaningful outdoor learning experiences enhanced children's active engagement, emotional participation, and social responsiveness in educational settings. Other scholars have emphasized that child-centered experiential approaches are effective in supporting self-regulation, empathy, and relationship-building skills because children learn directly from authentic social situations rather than through passive instruction alone Xie & Li, (2026). Furthermore, research grounded in Social and Emotional Learning frameworks has shown that collaborative learning environments contribute positively to children's emotional maturity and interpersonal competence (Huang & Lajoie, 2023; Kusumaningsih & Sun, 2025). Collectively, these studies confirm that experiential and outdoor learning approaches can serve as powerful mechanisms for supporting holistic early childhood development. Nevertheless, most existing studies predominantly emphasize general outdoor activities without systematically examining how structured experiential programs specifically contribute to comprehensive social-emotional intelligence development.

Although previous investigations provide valuable insights into experiential learning and social-emotional development, several critical limitations remain insufficiently addressed within the existing body of literature. First, many studies focus primarily on recreational outdoor participation rather than conceptualizing outdoor activities as intentionally structured pedagogical interventions designed to strengthen multiple dimensions of social-emotional intelligence simultaneously. Second, prior research often concentrates on isolated developmental aspects such as confidence or cooperation, while comprehensive dimensions including self-awareness, emotional regulation, responsibility, social awareness, and relationship skills receive comparatively limited attention. Third, the majority of existing studies employ descriptive observational approaches without sufficiently integrating broader theoretical perspectives such as experiential learning theory, social constructivism, or Social and Emotional Learning frameworks into the interpretation of findings. Furthermore, limited evidence exists regarding how Camping Day activities can function as a contextualized experiential learning model capable of systematically supporting holistic social-emotional development in kindergarten education. Existing research also rarely examines the pedagogical mechanisms through which outdoor experiential interaction contributes to children's emotional adaptation and collaborative competence in authentic educational settings. These limitations indicate a substantial research gap concerning the need for more theoretically grounded and pedagogically structured investigations into Camping Day as an experiential learning innovation for early childhood education.

Based on these considerations, the present study aims to analyze the implementation of Camping Day activities as a learning innovation for improving children's social-emotional intelligence in kindergarten settings. Specifically, this study examines children's development in aspects of self-awareness, self-management, social awareness, responsibility, and social relationship skills during participation in structured outdoor experiential learning activities. The study contributes theoretically by strengthening the application of experiential learning and Social and Emotional Learning frameworks within early childhood education, particularly in understanding how authentic outdoor experiences influence children's emotional and social competencies. Practically, the findings are expected to provide educators and kindergarten institutions with an alternative child-centered learning model capable of fostering more meaningful, interactive, and

developmentally responsive educational experiences. In addition, this research offers empirical evidence supporting the integration of structured experiential outdoor activities into kindergarten learning programs as part of broader efforts to enhance holistic child development. Through these contributions, the study seeks to enrich contemporary discussions regarding innovative pedagogical strategies for strengthening social-emotional intelligence in early childhood education contexts.

## METHOD

This study employed a quasi-experimental research design using a one-group pretest-posttest approach to investigate the effectiveness of Camping Day activities in improving children's social-emotional intelligence in kindergarten settings. The quasi-experimental design was selected because the study aimed to examine developmental changes in children's social-emotional competencies before and after participation in structured experiential outdoor learning activities within natural educational environments where random assignment was not feasible (Cham et al., 2024; Makhoulf et al., 2024). This design enabled the researchers to observe authentic behavioral development while maintaining the ecological validity of the learning context. The study was also supported by experiential learning theory, which emphasizes concrete experience, active participation, and reflective interaction as central components in children's emotional and social development (Herman et al., 2025; Sriarun et al., 2025). In addition, the study integrated the Social and Emotional Learning (SEL) framework developed by CASEL, particularly focusing on self-awareness, self-management, social awareness, relationship skills, and responsible behavior as core dimensions of children's social-emotional intelligence (Naseem et al., 2024). The use of a quasi-experimental design was therefore considered appropriate because it allowed the researchers to evaluate the pedagogical impact of experiential outdoor learning activities on children's socio-emotional development under realistic kindergarten conditions.

The research was conducted in four kindergarten institutions located in Kampar Regency, Indonesia, namely TK1, TK2, TK3, and TK4. These institutions were selected because they shared relatively similar educational characteristics, learning environments, and socio-cultural backgrounds, thereby supporting contextual consistency across research settings. Preliminary observations conducted before the study revealed that children's social-emotional development in these institutions had not yet been optimally stimulated through existing classroom-centered instructional practices. The study was implemented during the second semester of the 2025/2026 academic year, specifically from January to March 2026. During this period, researchers collaborated with classroom teachers to organize and implement structured Camping Day activities as part of outdoor experiential learning programs. The activities were conducted in open educational environments designed to facilitate children's direct interaction, collaboration, emotional engagement, and independent participation. The research setting was intentionally maintained in a naturalistic educational context to ensure that children's behavioral responses reflected authentic developmental conditions rather than artificially manipulated experimental situations.

The population of this study consisted of all kindergarten children aged five to six years enrolled in the participating institutions during the research period. Participants were selected using purposive sampling techniques because the study required children who fulfilled specific developmental and participation criteria relevant to the research objectives. The final sample consisted of 60 children distributed equally across the four kindergarten groups, including 15 children from each institution. The inclusion criteria involved children aged five to six years, regular attendance during classroom learning activities, active participation in all Camping Day sessions, and parental consent for research involvement. Children who were absent during pretest or posttest observations, did not participate fully in Camping Day activities, or experienced conditions limiting direct participation during outdoor learning sessions were excluded from the study to maintain data consistency and comparability. The selected developmental age range was considered highly relevant because children between five and six years experience rapid emotional growth, increased peer interaction, and emerging social responsibility, making this stage particularly responsive to experiential learning interventions (Ansari & Rizvi, 2023; McCrea & Mirchandani, 2025). Furthermore, early childhood learners at this age are developmentally capable of demonstrating

observable changes in emotional regulation, cooperation, empathy, communication, and adaptive behavior within social learning environments.

The primary data collection instrument consisted of a structured social-emotional intelligence observation sheet developed based on the Social and Emotional Learning framework and early childhood developmental standards proposed in previous educational research (Özdemir Cihan & Dilekmen, 2024; Xu et al., 2024). The instrument was designed to measure five major dimensions of social-emotional intelligence, namely self-awareness, self-management, social awareness, responsibility, and social relationship skills. Each dimension included several observable behavioral indicators adapted to the developmental characteristics of kindergarten children. The self-awareness dimension included indicators such as emotional recognition, emotional expression, and adaptation to new situations. Self-management indicators focused on emotional control, participation consistency, and motivational persistence during activities. Social awareness indicators examined empathy, tolerance, and responsiveness toward peers with different behaviors or backgrounds. Responsibility indicators measured children's compliance with group rules, task completion, and accountability during collaborative activities. Meanwhile, social relationship skills included cooperation, communication, sharing behavior, and conflict resolution strategies during group interaction. Children's developmental achievements were assessed using a four-level developmental rubric consisting of Not Yet Developed (BB), Beginning to Develop (MB), Developing as Expected (BSH), and Developing Very Well (BSB). Each indicator was scored using a behavioral frequency and quality scale ranging from 1 to 4, allowing researchers to quantitatively compare children's developmental progress before and after the intervention.

In addition to structured observations, semi-structured interviews were conducted with classroom teachers to obtain contextual insights regarding children's behavioral characteristics, emotional responses, classroom interaction patterns, and observable developmental changes during the implementation of Camping Day activities. The interview protocol was developed to support data triangulation and strengthen the interpretative validity of the quantitative findings. Interview questions focused on children's emotional adaptation, peer interaction, responsibility, confidence, and participation before and after experiential learning activities. Field documentation was also collected in the form of observational notes, activity records, photographs, and implementation reports to provide supporting evidence regarding children's involvement during Camping Day sessions. These multiple data sources were integrated to ensure comprehensive understanding and methodological rigor throughout the research process.

The validity and reliability of the research instruments were established through rigorous multistage procedures to ensure measurement accuracy, consistency, and scientific credibility. Content validity was examined through expert judgment involving three specialists in early childhood education, educational psychology, and social-emotional learning. The experts evaluated the relevance, representativeness, clarity, and developmental suitability of each observational indicator in relation to the study objectives and SEL framework dimensions. Revisions were subsequently conducted based on expert recommendations to improve conceptual alignment and linguistic clarity. Following content validation, a pilot study was conducted involving 20 children outside the primary research sample to examine item feasibility, observer consistency, and scoring practicality. Instrument reliability was analyzed using Cronbach's Alpha coefficient through SPSS version 26. The overall reliability coefficient reached 0.87, indicating high internal consistency according to the reliability criteria proposed by (Mirza et al., 2022; Zhong et al., 2023). In addition, inter-rater reliability procedures were implemented by involving two trained observers during several observational sessions. Prior to data collection, observers participated in calibration sessions to standardize scoring interpretation and minimize observational subjectivity. Cohen's Kappa analysis demonstrated substantial agreement between observers, confirming the stability and reliability of the observational measurements throughout the study.

The implementation of Camping Day activities was conducted systematically through several structured stages. During the preparation phase, researchers coordinated with school administrators, classroom teachers, and parents regarding research schedules, ethical procedures, participant involvement, and activity implementation mechanisms. Preliminary observations were subsequently conducted to identify children's initial social-emotional conditions prior to intervention. Pretest observations were then administered using the social-emotional intelligence

observation sheet to establish baseline developmental data. The Camping Day intervention was implemented over four consecutive weekly sessions, with each session lasting approximately three to four hours. The activities included collaborative tent-setting tasks, group games, environmental exploration, problem-solving challenges, storytelling activities, independence training, and cooperative learning experiences designed to stimulate social-emotional interaction and experiential engagement. During implementation, researchers and trained observers continuously recorded children's behaviors using structured observational protocols. To minimize observer bias and the Hawthorne effect, children were allowed to interact naturally within familiar peer groups while observers maintained non-intrusive observation positions throughout activities. Following the intervention phase, posttest observations were conducted using the same instrument to measure developmental changes after participation in Camping Day activities. Semi-structured interviews with teachers were subsequently conducted to obtain reflective perspectives regarding children's socio-emotional development during the intervention process.

The quantitative data obtained from pretest and posttest observations were analyzed using descriptive and inferential statistical techniques. Descriptive analysis included the calculation of mean scores, standard deviations, percentages, and developmental category distributions for each dimension of children's social-emotional intelligence. Inferential statistical analysis was subsequently conducted using paired sample t-tests because the study involved repeated measurements obtained from the same participants before and after intervention. Prior to hypothesis testing, normality analysis was performed using the Shapiro-Wilk test to ensure that the data fulfilled parametric statistical assumptions. Statistical analyses were conducted using SPSS version 26 with a significance level of 0.05 as the criterion for determining statistical significance. Effect size analysis using Cohen's *d* was additionally calculated to examine the magnitude of developmental improvement resulting from Camping Day activities. Meanwhile, qualitative data obtained from interviews and field observations were analyzed thematically following the procedures proposed by Kogen, (2024), including data reduction, coding, categorization, thematic interpretation, and conclusion drawing. The integration of quantitative and qualitative findings was intended to strengthen analytical depth and provide a more comprehensive understanding of the pedagogical impact of experiential outdoor learning on children's social-emotional development.

This study adhered strictly to ethical principles governing educational research involving young children as participants. Ethical approval and institutional permission were obtained from participating kindergarten administrators prior to data collection. Informed consent was also secured from parents or guardians after detailed explanations regarding research objectives, procedures, participant involvement, and data confidentiality were provided. Children's identities were anonymized using coded participant identifiers to ensure privacy protection throughout the research process. Participation in the study was entirely voluntary, and participants retained the right to withdraw from the research at any stage without academic or institutional consequences. All observational and interview activities were conducted within safe, supportive, and child-friendly environments to minimize potential psychological discomfort or emotional pressure. Furthermore, all collected data were used exclusively for academic purposes and stored securely to maintain research integrity, confidentiality, and ethical accountability.

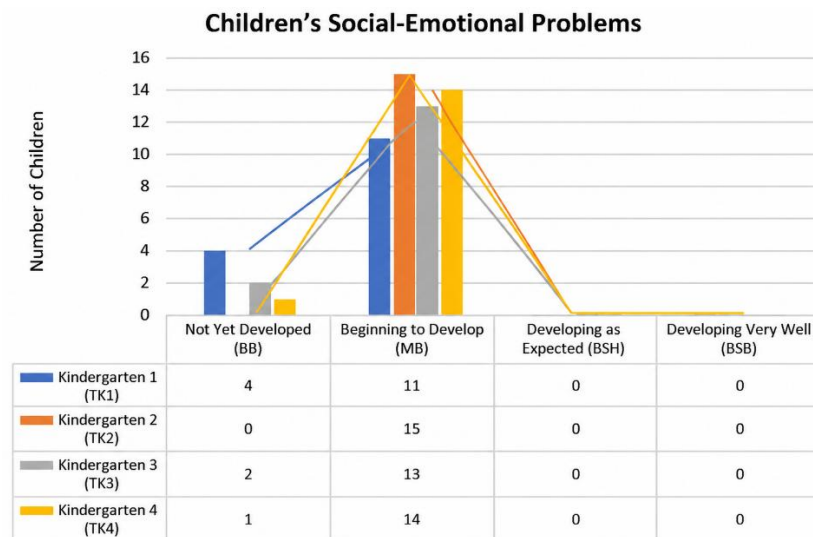
## RESULT AND DISCUSSION

### Result

The findings of this study indicate that Camping Day activities contributed significantly to the improvement of children's social-emotional intelligence across the four participating kindergarten groups. Based on pretest and posttest observational assessments, children demonstrated observable developmental progress in self-awareness, self-management, social awareness, responsibility, and social relationship skills following participation in structured experiential outdoor learning activities. The improvements were reflected in children's increased ability to cooperate during group tasks, regulate emotional responses in challenging situations, adapt to unfamiliar activities, communicate with peers more confidently, and participate actively in collaborative learning experiences. These findings suggest that experiential outdoor learning environments provide meaningful opportunities for children to strengthen emotional and interpersonal competencies

through authentic social interaction and direct engagement. Furthermore, teacher interviews revealed that children became more enthusiastic, independent, and socially responsive during both classroom and outdoor activities after the implementation of Camping Day programs. Such behavioral changes indicate that the intervention functioned not merely as a recreational activity but as a pedagogically meaningful experiential learning strategy capable of supporting holistic social-emotional development in early childhood education contexts.

Before the implementation of Camping Day activities, the majority of children were categorized within the Beginning to Develop (MB) level across all dimensions of social-emotional intelligence. Several children also remained within the Not Yet Developed (BB) category, particularly in emotional regulation, cooperative interaction, and adaptive social behavior. Importantly, no children reached the Developing as Expected (BSH) or Developing Very Well (BSB) categories during the initial observational stage. The distribution of children’s developmental categories during the pre-intervention phase is presented in Figure 1. The findings demonstrate that TK2 recorded the highest number of children within the MB category (15 children), followed by TK4 (14 children), TK3 (13 children), and TK1 (11 children). Meanwhile, the BB category remained evident in TK1, TK3, and TK4, indicating that several children continued to experience substantial difficulties in social interaction, emotional control, and collaborative participation. These results confirm that the existing classroom-centered instructional approaches had not yet optimally facilitated children’s social-emotional growth. In addition, the absence of children within the higher developmental categories suggests that previous learning environments provided limited opportunities for authentic experiential interaction capable of stimulating advanced socio-emotional competencies.



**Figure 1.** Pre-Intervention Distribution of Children’s Social-Emotional Development Categories

Figure 1 illustrates that children’s initial social-emotional development was predominantly concentrated within the Beginning to Develop (MB) category across all kindergarten groups. The findings indicate that most children had begun to demonstrate emerging emotional awareness and peer interaction skills; however, these competencies had not yet developed consistently or independently. Several children still exhibited emotional instability, passive participation, low adaptive behavior, and difficulties in collaborative interaction during group learning situations. The existence of children within the BB category further demonstrates that some participants experienced substantial challenges in emotional regulation, peer communication, and social adaptability. More importantly, no children achieved the BSH or BSB categories during the pre-intervention stage, indicating that existing learning practices had not yet effectively stimulated optimal social-emotional development. These findings therefore reinforce the urgency of implementing more interactive, experiential, and child-centered learning approaches capable of providing authentic social engagement opportunities in kindergarten education.

To support the assessment process, the study utilized a structured social-emotional intelligence instrument developed based on the Social and Emotional Learning (SEL) framework and

early childhood developmental indicators. The instrument consisted of five primary dimensions, namely self-awareness, self-management, responsibility, social awareness, and social relationship skills. Each dimension contained several observable behavioral indicators designed to measure children's emotional responses, social interaction patterns, adaptive behavior, and collaborative participation during learning activities. In addition to structured observations, semi-structured teacher interviews were conducted to strengthen contextual understanding regarding children's developmental changes before and after participation in Camping Day activities. The detailed structure of the research instrument is presented in Table 1.

**Table 1.** Indicators of Children's Social-Emotional Intelligence Assessment

No	Observed Aspect	Behavioral Indicator	Interview Focus
1	Self-Awareness	Ability to adapt to situations	Children's responses to unfamiliar situations
2	Self-Awareness	Recognition and expression of emotions	Emotional recognition and emotional expression
3	Self-Management	Motivation during group activities	Persistence and participation consistency
4	Responsibility	Compliance with classroom rules	Obedience toward group regulations
5	Responsibility	Completion of assigned tasks	Accountability during learning activities
6	Social Awareness	Tolerance toward peers	Respect for differences among peers
7	Social Awareness	Respect for others' opinions	Responses toward peers' ideas
8	Social Skills	Cooperation during joint activities	Collaborative interaction during tasks
9	Social Skills	Sharing behavior	Willingness to share opportunities and materials
10	Social Skills	Conflict resolution strategies	Strategies used in resolving peer conflicts

Table 1 demonstrates that the observational instrument comprehensively captured both intrapersonal and interpersonal dimensions of children's social-emotional intelligence. The indicators were specifically adapted to the developmental characteristics of kindergarten children and designed to assess observable behavioral changes during experiential learning activities. Intrapersonal competencies included emotional recognition, emotional control, and adaptive behavior, while interpersonal competencies focused on cooperation, empathy, communication, tolerance, and conflict resolution. The integration of observational indicators with teacher interview protocols strengthened the validity of the assessment process by enabling researchers to triangulate behavioral findings from multiple perspectives. Moreover, the use of structured developmental indicators allowed the researchers to systematically evaluate children's progress throughout the implementation of Camping Day activities. This comprehensive assessment structure therefore enhanced the reliability and interpretative depth of the study findings.

The quantitative analysis further revealed statistically significant improvements in children's social-emotional intelligence following participation in Camping Day activities. Descriptive statistical analysis showed that the mean score of children's overall social-emotional intelligence increased from 2.08 during the pretest phase to 3.41 during the posttest phase. The greatest improvement was identified within the dimensions of social relationship skills and responsibility, particularly in children's ability to cooperate, share, communicate, and participate actively in collaborative activities. Paired sample t-test analysis additionally demonstrated a statistically significant difference between pretest and posttest scores ( $t = 8.73, p < .001$ ), indicating that the implementation of Camping Day activities contributed meaningfully to children's social-emotional development. Effect size analysis using Cohen's  $d$  also showed a large effect size ( $d = 1.24$ ), suggesting that the intervention produced substantial developmental improvement among participants. These findings

indicate that experiential outdoor learning activities created meaningful social interaction opportunities capable of stimulating children's emotional engagement and interpersonal competence more effectively than routine classroom-centered instruction. The statistical findings therefore strengthen the argument that Camping Day activities functioned as effective experiential learning interventions within early childhood educational settings.

The qualitative findings obtained from teacher interviews strongly supported the quantitative results. Teachers consistently reported that children initially demonstrated emotional instability, low responsibility, passive classroom participation, and limited social interaction before participating in Camping Day activities. Several teachers explained that children frequently became frustrated during collaborative tasks, withdrew from peer interaction, or depended heavily on teachers when resolving interpersonal conflicts. In TK1, emotional control and adaptive behavior represented the most dominant challenges, whereas TK2 showed greater difficulties related to responsibility and task completion consistency. Meanwhile, children in TK3 experienced considerable problems in sharing behavior and cooperative interaction, while TK4 children demonstrated low confidence and limited classroom participation. However, after the implementation of Camping Day activities, teachers observed substantial behavioral improvements across all kindergarten groups. Children became more confident in expressing opinions, more cooperative during group activities, more emotionally stable when facing challenges, and more willing to communicate and interact positively with peers. These findings suggest that authentic experiential interaction within outdoor learning environments created psychologically safe and socially engaging situations that facilitated children's socio-emotional development more naturally and meaningfully.

The findings of this study align closely with experiential learning theory, which emphasizes that meaningful learning occurs through direct experience, active participation, and social interaction within authentic contexts (Kolb, 2015). Through Camping Day activities, children were exposed to real-life situations requiring emotional adaptation, communication, collaboration, responsibility, and problem-solving during group interaction. Such experiences enabled children to construct emotional understanding and social competence through concrete participation rather than through passive instructional processes alone. The findings are also consistent with previous studies reporting that outdoor experiential activities positively influence children's confidence, cooperation, and emotional engagement during learning activities (Handayani et al., 2021; Jirásek et al., 2025). From a social constructivist perspective, the collaborative structure of Camping Day activities further strengthened children's social learning because emotional and interpersonal competencies developed through interaction, negotiation, and shared experiences with peers. Activities such as group games, environmental exploration, and tent-setting tasks therefore functioned not only as recreational experiences but also as pedagogically meaningful social learning environments supporting children's holistic development.

In addition, the findings strongly support the Social and Emotional Learning (SEL) framework emphasizing self-awareness, self-management, social awareness, relationship skills, and responsible decision-making as essential competencies in early childhood development (Carpendale et al., 2025). The improvement observed in children's emotional regulation, responsibility, communication, and cooperative behavior indicates that experiential outdoor learning environments may facilitate social-emotional growth more effectively than conventional classroom-centered instruction. The dynamic and interactive nature of Camping Day activities encouraged children to engage emotionally and socially in ways that stimulated adaptive behavior and interpersonal competence simultaneously. Furthermore, the findings suggest that children became more motivated and actively involved in learning activities because the experiential setting created enjoyable and meaningful educational experiences. These results are also consistent with previous studies demonstrating that child-centered and experiential learning approaches increase children's participation, confidence, and emotional engagement during educational activities (Fuadia, 2022; Indriani et al., 2025). Therefore, Camping Day activities should be understood not merely as outdoor recreational programs but as structured pedagogical interventions capable of supporting comprehensive social-emotional intelligence development in early childhood education.

Despite the positive findings obtained in this study, several limitations should be acknowledged. First, the study involved participants from only four kindergarten institutions,

thereby limiting the broader generalizability of the findings across different educational and socio-cultural contexts. Second, although the study employed pretest and posttest observations, the absence of a control group limited the ability to establish stronger causal conclusions regarding the comparative effectiveness of Camping Day activities relative to other instructional approaches. Third, the intervention duration remained relatively short, making it difficult to evaluate the long-term sustainability of children's social-emotional development following participation in experiential outdoor learning programs. Future research is therefore recommended to employ larger participant samples, longitudinal designs, and controlled experimental approaches to strengthen empirical evidence regarding the effectiveness of structured experiential learning interventions in early childhood education. Nevertheless, the present study provides important theoretical and practical contributions by demonstrating that Camping Day activities can function as meaningful experiential learning strategies capable of supporting holistic social-emotional development among kindergarten children.

## Discussion

The findings of this study demonstrate that Camping Day activities functioned as a highly effective experiential learning intervention for strengthening children's social-emotional intelligence within kindergarten education. The significant improvement observed across self-awareness, emotional regulation, responsibility, social awareness, and relationship skills indicates that socio-emotional development in early childhood is more effectively stimulated through authentic experiential interaction than through conventional classroom-centered instruction alone. This finding reinforces the central assumption of Experiential Learning Theory that meaningful developmental transformation emerges when learners engage directly with concrete social situations requiring emotional adaptation, reflective participation, and collaborative problem-solving. In the context of this study, Camping Day activities exposed children to emotionally dynamic environments in which interpersonal negotiation, emotional expression, cooperation, and adaptive behavior became integral components of the learning process itself. Unlike passive instructional environments that frequently prioritize cognitive readiness and behavioral compliance, experiential outdoor learning created psychologically meaningful situations that required children to actively construct emotional understanding through interaction with peers and teachers. These findings support previous studies emphasizing the importance of experiential engagement in strengthening children's emotional resilience and interpersonal competence (Gimbert et al., 2023; Tan & Chua, 2024; Varman et al., 2023). However, the present study extends existing scholarship by demonstrating that structured outdoor experiential programs may operate not merely as complementary enrichment activities, but as pedagogically mediated socio-emotional learning ecosystems capable of producing measurable developmental transformation across multiple emotional and social domains simultaneously.

A particularly important finding concerns the substantial improvement in children's relationship skills and collaborative responsibility following participation in Camping Day activities. Children demonstrated greater willingness to cooperate, communicate, share responsibilities, and participate constructively in group interaction during post-intervention observations. Conceptually, this finding suggests that socio-emotional competence develops more effectively when children are immersed in interactional environments requiring real-time negotiation of social roles, emotional expectations, and collective responsibilities. From a social constructivist perspective, interpersonal competence cannot be separated from the social processes through which children internalize behavioral norms, empathy, and communicative understanding. Vygotskian theory argues that learning fundamentally emerges through social mediation, and the findings of this study strongly reinforce this argument by illustrating how collaborative experiential activities facilitated emotional and social growth through shared participation. These results align with previous studies reporting that outdoor collaborative learning strengthens children's interpersonal responsiveness and adaptive social behavior (Lin et al., 2025; Mann et al., 2022; Molyneux et al., 2023). Nevertheless, the present findings challenge the tendency of earlier research to conceptualize cooperation merely as behavioral participation rather than as a multidimensional socio-emotional process involving empathy, emotional regulation, accountability, and reciprocal interaction simultaneously. Consequently, this study contributes conceptually by repositioning collaborative outdoor learning as

an integrated developmental mechanism capable of strengthening relational intelligence in early childhood education contexts.

The improvement identified in children's self-management and emotional regulation further demonstrates the pedagogical significance of emotionally embedded experiential learning environments. Before the intervention, many participants exhibited emotional instability, frustration during collaborative tasks, withdrawal from peer interaction, and dependence on teachers when facing interpersonal difficulties. Following the implementation of Camping Day activities, however, children became more emotionally adaptive, persistent during challenging situations, and capable of regulating behavioral responses within group interaction. These findings indicate that emotional competence develops not through abstract emotional instruction alone, but through repeated engagement in emotionally demanding yet socially supportive learning situations. Within the framework of Social and Emotional Learning (SEL), self-management emerges through opportunities to practice emotional control, reflective behavior, and adaptive participation in authentic contexts. Camping Day activities operationalized these principles effectively because children encountered emotionally meaningful experiences requiring immediate behavioral adjustment, negotiation, and emotional interpretation. This finding supports previous research suggesting that child-centered experiential environments positively influence emotional maturity and adaptive social competence (Fuadia, 2022; Huang & Lajoie, 2023; Xie & Li, 2026). However, the present study goes beyond earlier scholarship by suggesting that emotional regulation in early childhood may be more effectively strengthened through socio-emotional immersion rather than through isolated behavioral training models frequently implemented in conventional kindergarten settings. This distinction is theoretically important because it reframes emotional regulation as a socially situated developmental competence rather than merely an individual psychological capacity.

Another critical finding relates to the significant enhancement of children's social awareness, particularly regarding empathy, tolerance, respect for peers' perspectives, and sensitivity toward collaborative interaction. This outcome suggests that experiential outdoor learning environments encourage children to develop emotional understanding through direct exposure to social diversity, interpersonal negotiation, and collective participation. In many classroom-centered learning environments, children's opportunities for authentic socio-emotional engagement remain constrained by rigid instructional structures and teacher-dominated interaction patterns. By contrast, Camping Day activities generated fluid and unpredictable interactional situations requiring children to interpret emotional cues, respond empathetically to peers, and adapt socially within collaborative tasks. These findings strongly support social constructivist assumptions that socio-emotional development is fundamentally shaped through social participation and negotiated interaction. Previous studies have similarly reported positive relationships between experiential collaborative learning and empathy development among young children (Garaigordobil et al., 2022; Kusumaningsih & Sun, 2025; Xiang et al., 2022). Nevertheless, this study contributes a more comprehensive perspective by demonstrating that social awareness is not merely an outcome of peer exposure, but rather the result of intentionally structured experiential interaction supported by pedagogical facilitation and emotionally responsive learning environments. Therefore, the effectiveness of Camping Day activities lies not solely in their outdoor characteristics, but in their capacity to integrate emotional engagement, collaborative participation, and reflective interaction within coherent developmental experiences.

Importantly, the findings of this study also challenge deterministic assumptions frequently embedded within experiential learning discourse. Existing educational literature often assumes that outdoor activities inherently produce positive developmental outcomes because of their interactive and participatory nature. However, the present findings suggest that experiential learning effectiveness depends heavily upon pedagogical intentionality, social facilitation, and the emotional quality of interactional environments. Camping Day activities produced meaningful developmental improvement not simply because children participated in outdoor experiences, but because those experiences were systematically designed to stimulate emotional engagement, collaborative interaction, responsibility, and reflective participation simultaneously. This interpretation extends Experiential Learning Theory by emphasizing that experiential exposure alone is insufficient to guarantee socio-emotional development unless mediated through structured pedagogical processes capable of transforming experience into meaningful emotional learning. Such findings are

particularly important because many previous studies continue to position outdoor learning as recreational enhancement rather than as theoretically grounded pedagogical intervention (Coştu & Karakuş, 2025; Ghani et al., 2025). In this sense, the present study contributes a conceptual refinement by proposing that effective experiential learning in early childhood education should be understood as pedagogically orchestrated socio-emotional immersion rather than merely activity-based participation. This conceptual repositioning strengthens the theoretical relevance of experiential learning within contemporary discussions concerning holistic child development.

From a broader global perspective, the findings also respond to increasing international concerns regarding the declining quality of children's socio-emotional interaction within academically dominated educational systems. Contemporary early childhood education increasingly prioritizes cognitive performance, school readiness, and academic achievement, often at the expense of emotionally meaningful interaction and social adaptation. The findings of this study suggest that such tendencies may inadvertently reduce opportunities for children to develop empathy, emotional resilience, interpersonal competence, and adaptive collaboration during critical developmental stages. In contrast, Camping Day activities created learning ecologies in which emotional engagement and social participation became central educational processes rather than peripheral developmental outcomes. This aligns with recent international discourse emphasizing the urgent need to rebalance early childhood education toward holistic developmental paradigms integrating emotional well-being, relational competence, and experiential participation (Hosokawa et al., 2024; Williams et al., 2022). At the same time, the study also contributes a culturally contextualized perspective from Indonesian kindergarten education, where collective interaction, social harmony, and collaborative participation remain strongly embedded within educational and socio-cultural values. This contextual dimension may explain why collaborative experiential learning produced particularly strong socio-emotional outcomes among participants, thereby illustrating how cultural orientation influences the effectiveness of socio-emotional pedagogical interventions.

Despite these important contributions, several limitations require critical consideration. The study employed a one-group quasi-experimental design without a control group, thereby limiting the ability to establish absolute causal claims regarding the superiority of Camping Day activities compared with other instructional approaches. Furthermore, the intervention duration remained relatively short, making it difficult to evaluate whether the observed developmental improvements represent stable long-term socio-emotional transformation or short-term adaptive behavioral responses. The study was also conducted within four kindergarten institutions located in a relatively similar socio-cultural environment, potentially limiting the broader transferability of findings across diverse educational contexts. Nevertheless, these limitations do not diminish the significance of the findings; rather, they highlight the complexity of socio-emotional development and the contextual nature of experiential learning effectiveness. Future research should therefore employ longitudinal designs, cross-cultural comparisons, and controlled experimental approaches to investigate the sustainability and contextual variability of experiential socio-emotional interventions in early childhood education. In addition, further studies may explore how teacher facilitation styles, parental involvement, and institutional culture interact with experiential learning environments in shaping children's socio-emotional development.

Overall, this study provides strong theoretical and practical evidence that Camping Day activities represent a meaningful pedagogical innovation capable of strengthening children's social-emotional intelligence through structured experiential interaction. The study contributes theoretically by integrating Experiential Learning Theory, Social Constructivism, and Social and Emotional Learning frameworks into a more comprehensive understanding of socio-emotional development within early childhood education. More importantly, the findings introduce a conceptual perspective positioning structured outdoor experiential learning as a socio-emotional immersion model capable of fostering emotional resilience, interpersonal competence, adaptive behavior, and collaborative responsibility simultaneously. Practically, the findings suggest that kindergarten institutions should reconsider the dominance of classroom-centered instructional practices and begin integrating structured experiential outdoor learning into early childhood curricula more systematically. In doing so, social-emotional intelligence can be positioned not as a secondary developmental outcome, but as a foundational educational objective essential for children's long-term psychological, interpersonal, and academic well-being. Consequently, this study

not only fills important gaps within existing experiential learning literature, but also contributes a globally relevant pedagogical perspective regarding the future direction of holistic early childhood education.

## CONCLUSION

This study concludes that Camping Day activities function as an effective experiential learning innovation capable of significantly improving children's social-emotional intelligence in kindergarten education. The findings demonstrate substantial developmental improvement in self-awareness, emotional regulation, responsibility, social awareness, cooperation, communication, and relationship skills following participation in structured outdoor experiential learning activities. The significant increase in post-intervention scores, supported by teacher observations and behavioral evidence, indicates that authentic collaborative experiences provide emotionally meaningful learning environments that stimulate adaptive behavior and interpersonal competence more effectively than conventional classroom-centered instruction. These findings reinforce the relevance of Experiential Learning Theory, Social Constructivism, and Social and Emotional Learning frameworks by demonstrating that socio-emotional competence develops most meaningfully through direct interaction, reflective participation, and emotionally embedded social engagement. More importantly, this study extends previous literature by positioning Camping Day not merely as a recreational outdoor activity, but as a structured socio-emotional immersion model capable of fostering holistic developmental transformation in early childhood education.

From a broader educational perspective, the study contributes both theoretically and practically to contemporary discussions regarding holistic child development in increasingly academic-oriented early childhood learning systems. The findings suggest that kindergarten institutions should systematically integrate structured experiential outdoor learning into educational practice in order to strengthen children's emotional resilience, collaborative responsibility, empathy, and adaptive social competence. This study also highlights that the effectiveness of experiential learning depends not only on outdoor participation itself, but on the pedagogical quality of emotionally supportive and collaboratively structured learning environments. Although the research was limited by the absence of a control group and the relatively short intervention duration, the findings provide strong empirical evidence that emotionally meaningful experiential learning can serve as a transformative educational strategy for supporting socio-emotional growth among young children. Therefore, this study offers an important conceptual and pedagogical contribution to global early childhood education discourse by emphasizing that social-emotional intelligence should be positioned as a central educational objective essential for children's long-term psychological, interpersonal, and academic well-being.

## AUTHOR CONTRIBUTION STATEMENT

Rislah Arini contributed to the conceptualization of the study, research design development, data collection, data analysis, interpretation of findings, and manuscript drafting. Nurhafizah contributed to the theoretical framework development, methodological supervision, validation of research instruments, and critical revision of the manuscript for important intellectual content. Farida Mayar contributed to data interpretation, literature review development, discussion refinement, and academic editing to strengthen the theoretical and pedagogical implications of the study. Serli Marlina contributed to field coordination, observational data validation, interview analysis, and manuscript proofreading. All authors reviewed, approved, and agreed to the final version of the manuscript for publication and take full responsibility for the integrity and accuracy of the research findings.

## REFERENCES

- Alaçam, N. (2026). Strategies to support social and emotional development of preschool children in Turkey and the United States. *International Journal of Early Childhood*, 58(1), 313–330. <https://doi.org/10.1007/s13158-025-00463-z>

- Ansari, A. N., & Rizvi, N. F. (2023). School-based interventions promoting social capabilities among students: A scoping review of literature. *Review of Education*, 11(2), e3404. <https://doi.org/10.1002/rev3.3404>
- Cham, H., Lee, H., & Migunov, I. (2024). Quasi-experimental designs for causal inference: An overview. *Asia Pacific Education Review*, 25(3), 611–627. <https://doi.org/10.1007/s12564-024-09981-2>
- Coştu, F., & Karakuş, N. (2025). Sustainability in education: Exploring teachers' confidence in establishing an out-of-school learning environment. *Sustainability*, 17(20). <https://doi.org/10.3390/su17209160>
- Garaigordobil, M., Berruoco, L., & Celume, M.-P. (2022). Developing children's creativity and social-emotional competencies through play: Summary of twenty years of findings of the evidence-based interventions "Game Program." *Journal of Intelligence*, 10(4). <https://doi.org/10.3390/jintelligence10040077>
- Ghani, R. B. A., Lau, P. W. C., Lu, N., Zhou, P., & Wang, J. J. (2025). Investigating the impact of adventure education on children's physical, cognitive and socio-emotional development: A mixed method systematic review. *PLOS ONE*, 20(6), e0327181. <https://doi.org/10.1371/journal.pone.0327181>
- Gimbert, B. G., Miller, D., Herman, E., Breedlove, M., & Molina, C. E. (2023). Social emotional learning in schools: The importance of educator competence. *Journal of Research on Leadership Education*, 18(1), 3–39. <https://doi.org/10.1177/19427751211014920>
- Herman, Herlina, Hasan, M., & Ahmar, A. S. (2025). Integrating social learning and experiential learning theories: A novel augmented reality approach to enhancing social skills in early childhood education. *Cogent Education*, 12(1), 2556889. <https://doi.org/10.1080/2331186X.2025.2556889>
- Herut, A. H., Muleta, H. D., & Lebeta, M. F. (2024). Emotional intelligence as a predictor for academic achievement of children: Evidence from primary schools of southern Ethiopia. *Social Sciences & Humanities Open*, 9, 100779. <https://doi.org/10.1016/j.ssaho.2023.100779>
- Hosokawa, R., Matsumoto, Y., Nishida, C., Funato, K., & Mitani, A. (2024). Enhancing social-emotional skills in early childhood: Intervention study on the effectiveness of social and emotional learning. *BMC Psychology*, 12(1), 761. <https://doi.org/10.1186/s40359-024-02280-w>
- Huang, X., & Lajoie, S. P. (2023). Social emotional interaction in collaborative learning: Why it matters and how can we measure it? *Social Sciences & Humanities Open*, 7(1), 100447. <https://doi.org/10.1016/j.ssaho.2023.100447>
- Kogen, L. (2024). Qualitative thematic analysis of transcripts in social change research: Reflections on common misconceptions and recommendations for reporting results. *International Journal of Qualitative Methods*, 23, 16094069231225919. <https://doi.org/10.1177/16094069231225919>
- Kusumaningsih, S., & Sun, J. (2025). Promoting children's social-emotional skills in classrooms: Exploring the role of collaborative learning and teacher scaffolding. *Learning, Culture and Social Interaction*, 54, 100920. <https://doi.org/10.1016/j.lcsi.2025.100920>
- Lin, H.-M., Chu, S.-Y., Chang, W.-H., Lo, I.-H., & Peng, H.-T. (2025). Promoting peer interaction and acceptance among students with special needs through an experiential learning program. *Children*, 12(5). <https://doi.org/10.3390/children12050543>
- Makhlouf, E., Alenezi, A., & Shokr, E. A. (2024). Effectiveness of designing a knowledge-based artificial intelligence chatbot system into a nursing training program: A quasi-experimental design. *Nurse Education Today*, 137, 106159. <https://doi.org/10.1016/j.nedt.2024.106159>
- Mann, J., Gray, T., Truong, S., Brymer, E., Passy, R., Ho, S., Sahlberg, P., Ward, K., Bentsen, P., Curry, C., & Cowper, R. (2022). Getting out of the classroom and into nature: A systematic review of nature-specific outdoor learning on school children's learning and development. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.877058>
- McCrea, E. A., & Mirchandani, D. (2025). Experiential learning for societal impact. *Organization Management Journal*, 22(1), 61–71. <https://doi.org/10.1108/OMJ-02-2025-2439>
- Mirza, M. A., Khurshid, K., Shah, Z., Ullah, I., Binbusayyis, A., & Mahdavi, M. (2022). ILS validity analysis for secondary grade through factor analysis and internal consistency reliability. *Sustainability*, 14(13). <https://doi.org/10.3390/su14137950>

- Molyneux, T. M., Zeni, M., & Oberle, E. (2023). Choose your own adventure: Promoting social and emotional development through outdoor learning. *Early Childhood Education Journal*, 51(8), 1525–1539. <https://doi.org/10.1007/s10643-022-01394-3>
- Naseem, S., Naseer, D. N., & Rahim, M. (2024). Testing the CASEL model: Exploring relationship between social emotional competencies and academic performance of distance learners. *The Critical Review of Social Sciences Studies*, 2(2), 370–383. <https://doi.org/10.59075/3am7tr30>
- Oğuz, S. N., & Pınar, Y. (2025). A qualitative research on emotion regulation processes and expressive language skills in kindergarten: A case study. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1611554>
- Özdemir Cihan, M., & Dilekmen, M. (2024). Emotional intelligence training for pre-service primary school teachers: A mixed methods research. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1326082>
- Pamungkas, T. W., & Handayani, S. S. D. (2022). The correlation of interest in playing outbound with confidence children aged 5–6 years. *BELIA: Early Childhood Education Papers*, 11(1), 73–78. <https://doi.org/10.15294/belia.v11i1.50593>
- Skrefsrud, T.-A. (2022). A proposal to incorporate experiential education in non-confessional, intercultural religious education: Reflections from and on the Norwegian context. *Religions*, 13(8). <https://doi.org/10.3390/rel13080727>
- Sriarun, A., Srikao, S., & Jantharajit, N. (2025). An experiential learning management model (ELMM) for early childhood based on the Reggio Emilia approach and constructivist theory. *Journal of Education and Learning*, 14(4), 298–306.
- Tan, O. S., & Chua, J. J. E. (2024). Social-emotional learning (SEL) and well-being in child development. In O. S. Tan, E. L. Low, I. S. Caleon, & E. L. Ng (Eds.), *Enhancing holistic well-being of children and youth: Insights from Singapore for research, policy and practice in education* (pp. 195–207). Springer Nature. [https://doi.org/10.1007/978-981-97-3515-0\\_14](https://doi.org/10.1007/978-981-97-3515-0_14)
- Varman, S. D., Jones, R. A., Kelly, B., Hammersley, M. L., Parrish, A.-M., Stanley, R., & Cliff, D. P. (2023). The effect of experiential learning interventions on physical activity outcomes in children: A systematic review. *PLOS ONE*, 18(11), e0294987. <https://doi.org/10.1371/journal.pone.0294987>
- Williams, K. E., Berthelsen, D., & Laurens, K. R. (2022). Academic resilience from school entry to third grade: Child, parenting, and school factors associated with closing competency gaps. *PLOS ONE*, 17(11), e0277551. <https://doi.org/10.1371/journal.pone.0277551>
- Xiang, D., Qin, G., & Zheng, X. (2022). The influence of student-teacher relationship on school-age children's empathy: The mediating role of emotional intelligence. *Psychology Research and Behavior Management*, 15, 2735–2744. <https://doi.org/10.2147/PRBM.S380689>
- Xie, S., & Li, J. (2026). Developing and initially validating a framework: Evaluating child-centered conversational competence in AI-driven robots. *International Journal of Human-Computer Interaction*, 0(0), 1–24. <https://doi.org/10.1080/10447318.2026.2639094>
- Xu, X., Wang, Z., Zhang, W., Guo, J., Wei, W., Zhang, M., Ding, X., Liu, X., Yang, Q., Wang, K., Zhu, Y., Sun, J., Song, H., Shen, Z., Chen, L., Shi, F., Wang, Q., Li, Y., Zhang, H., & Li, D. (2024). Behavioral observation and assessment protocol for language and social-emotional development study in children aged 0–6: The Chinese baby connectome project. *BMC Psychology*, 12(1), 533. <https://doi.org/10.1186/s40359-024-02031-x>
- Zhong, L., Wang, X., Yang, W., & Feng, X. (2023). Reliability and validity assessment of the Chinese version of the online learning readiness scale (OLRS) for nursing students. *Nurse Education Today*, 128, 105884. <https://doi.org/10.1016/j.nedt.2023.105884>