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Early Childhood Development Status of Kindergarten Learners, Effectiveness of Teaching Strategies, and Parental Involvement

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ABSTRACT

This study examined the early childhood development status of kindergarten learners, the effectiveness of teaching strategies, and parental involvement in Loay District, Bohol, during School Year 2025–2026. Anchored in the developmental perspectives of Piaget, Vygotsky, Chomsky, and Bronfenbrenner, the study employed a convergent parallel mixed-methods design involving 168 kindergarten learners' developmental assessment records and 103 respondents comprising 12 kindergarten teachers, 12 school heads, and 79 parents from 12 public elementary schools. Data were collected using the Early Childhood Development (ECD) Checklist, validated questionnaires on teaching strategies and parental involvement, and qualitative interviews. Descriptive statistics, Pearson correlation, and thematic analysis were employed. Findings revealed an average overall developmental status (M = 14.36), with highly advanced cognitive, social-emotional, and self-help skills, while motor and language development remained at average levels. Teaching strategies were rated highly effective (M = 3.72), particularly play-based learning and hands-on activities, while parental involvement was very high (M = 3.41). However, no significant relationships were found between developmental status and teaching strategies ($r = 0.068$, $p = .382$) or parental involvement ($r = 0.004$, $p = .958$). Teachers encountered classroom management difficulties, limited instructional resources, and diverse learner needs, while parents experienced time constraints and challenges sustaining home-based learning. The study recommends targeted developmental interventions, sustained learner-centered instruction, stronger school-home collaboration, and further investigation of other developmental factors. The research supports Sustainable Development Goal (SDG) 4 (Quality Education) and SDG 3 (Good Health and Well-Being) by promoting inclusive early childhood education and holistic development. Its sustainability contribution lies in providing evidence to strengthen educational practices, institutional planning, and community participation in supporting children's long-term learning and development.

Keywords: *Early Childhood Development, Kindergarten Learners, Mixed-Methods Research, Parental Involvement, Play-Based Learning, School Readiness, Teaching Strategies*

1. INTRODUCTION

Early childhood education provides a foundation for children's holistic development, school readiness, and lifelong learning. Quality early childhood care and education supports cognitive, physical, language, and social-emotional development through developmentally appropriate learning experiences and supportive relationships among teachers, families, and communities (UNICEF & UNESCO, 2024). The Organisation for Economic Co-operation and Development (OECD, 2025) likewise emphasized that accessible and high-quality early childhood education can help reduce developmental inequalities and strengthen children's opportunities for educational success. In the Philippines, early childhood care and development remains a national educational priority. Ulep et al. (2025) identified continuing challenges involving equitable access, educational quality, resources, and the coordination of services for young children. Republic Act No. 12199, or the Early Childhood Care and Development System Act of 2025, strengthened the country's commitment to holistic child development, developmentally appropriate experiences, and parental participation. Furthermore, Department of Education (DepEd) Order No. 015, s. 2025, recognized the use of the Early Childhood Development (ECD) Checklist in specified kindergarten enrollment and assessment circumstances. The effectiveness of early childhood education depends not only on developmental assessment but also on instructional quality and the learning support provided at home. Skene et al. (2022) established that guided play can improve selected early learning outcomes, while Zheng et al. (2023) found positive associations between teacher-child interactions and children's developmental outcomes. Similarly, Nag et al. (2024) emphasized the relationship between the home learning environment and children's language and literacy development. Despite these developments, localized evidence integrating developmental assessment, teaching strategies, and parental involvement remains necessary. Accordingly, this study examined the early childhood development status of kindergarten learners, effectiveness of teaching strategies, and parental involvement in Loay District, Bohol, during School Year 2025–2026. The findings served as a basis for an action plan intended to strengthen instructional practices, school-home collaboration, and holistic learner development.

Research Problem

Assessing kindergarten learners' developmental status is essential for identifying individual learning needs and informing developmentally appropriate instruction. The ECD Checklist examines gross motor, fine motor, self-help, receptive language, expressive language, cognitive, and social-emotional development. However, developmental assessment becomes more useful when its findings are interpreted alongside classroom practices and the support children receive from their families. The OECD (2025) highlighted the importance of responsive educational practices, inclusive learning environments, and coordinated services in supporting children's varied developmental needs. Teaching strategies contribute to creating meaningful learning experiences. Skene et al. (2022) found that guided play produced benefits for selected cognitive and early mathematical outcomes, while Vaisarova and Reynolds (2022) demonstrated that the relationship between child-initiated instruction and school readiness may vary according to children's characteristics. Furthermore, Zheng et al. (2023) identified associations between teacher-child interactions and outcomes involving language, mathematics, literacy, social development, and self-regulation. These findings emphasize the importance of selecting strategies appropriate to children's developmental characteristics. Parental involvement represents another dimension of early childhood development. Nag et al. (2024) synthesized evidence connecting home learning environments with language and literacy skills, while Volodina et al. (2024) examined the contribution of early home learning experiences and preschool quality to later language proficiency. Nevertheless, parental involvement may differ in frequency, quality, and form depending on family circumstances and available resources.

Although existing research provides evidence concerning instructional practices and family learning environments, the relationship of these factors to the assessed developmental status of kindergarten learners requires investigation within specific educational settings. In Loay District, the study addressed the need for localized evidence examining developmental status, teaching strategies, and parental involvement together. It also explored the challenges experienced by teachers and parents and the implications of these findings for instructional planning and school-home collaboration.

Assumptions of the Study

The study was guided by the assumption that kindergarten learners demonstrate varying developmental characteristics across physical, language, cognitive, self-help, and social-emotional domains. These developmental differences may be associated with the learning experiences and interactions available to children in school and at home. Research has shown that instructional approaches and teacher-child interactions are associated with early learning outcomes, although these relationships may vary according to children's characteristics and learning contexts (Vaisarova & Reynolds, 2022; Zheng et al., 2023). The study further assumed that teaching strategies and parental involvement could be assessed systematically and examined in relation to learners' developmental status. This assumption was supported by research identifying relationships between home learning experiences and children's emerging competencies (Nag et al., 2024). However, these expected relationships were subject to empirical testing rather than being treated as established causal effects. Accordingly, the study tested the null hypotheses that there was no significant relationship between kindergarten learners' developmental status and the effectiveness of teaching strategies, and that there was no significant relationship between developmental status and parental involvement.

Objectives of the Study

This study aimed to determine the early childhood development status of kindergarten learners, the effectiveness of teaching strategies, and the level of parental involvement in Loay District during School Year 2025–2026. Specifically, it assessed learners' development using the ECD Checklist across seven domains: gross motor, fine motor, self-help, receptive language, expressive language, cognitive, and social-emotional development. It evaluated the effectiveness of play-based learning, hands-on activities, group discussions, storytelling and creative projects, inquiry-based learning, differentiated instruction, reflective teaching, and collaborative learning. It also determined the level of parental involvement through home-based and school-based activities and examined the significant relationships between developmental status and teaching strategies, as well as between developmental status and parental involvement. Furthermore, the study explored the challenges experienced by teachers in implementing instructional strategies and by parents in supporting children's learning, identified points of convergence and divergence between quantitative and qualitative findings, and developed a proposed action plan based on the integrated results.

Theoretical or Conceptual Basis

The study was anchored in complementary developmental and educational perspectives explaining how children's learning is shaped by individual development, instructional experiences, and social environments. Piaget's Cognitive Development Theory emphasizes children's active construction of knowledge through exploration and interaction with their surroundings. Contemporary research on child-initiated instruction and guided play supports the relevance of active learning while recognizing that instructional effectiveness depends on learners' developmental characteristics and the nature of adult guidance (Skene et al., 2022; Vaisarova & Reynolds, 2022). Vygotsky's Sociocultural Theory emphasizes learning through

social interaction, guidance, and scaffolding. This perspective supports the role of teachers, parents, and peers in facilitating children's developing competencies. Zheng et al. (2023) identified meaningful associations between teacher-child interactions and early developmental outcomes, highlighting the educational relevance of supportive classroom relationships. Chomsky's Language Acquisition Theory provides a perspective on children's developing linguistic capacities. Contemporary evidence additionally emphasizes the importance of language-rich interactions and meaningful communication. Mustonen et al. (2024) found associations between parental reading, storytelling, singing, and children's language skills, while Sundqvist et al. (2024) identified positive relationships between supportive home literacy practices and preschool children's vocabulary development. Bronfenbrenner's Ecological Systems Theory explains child development in relation to interconnected family, school, and community environments. This perspective supports examining parental involvement alongside classroom instruction. Recent evidence highlights the contributions of home learning environments and preschool quality to children's language and educational development (Nag et al., 2024; Volodina et al., 2024). In addition, the OECD (2025) emphasized the importance of coordinated educational and family support systems. Conceptually, the study examined kindergarten learners' developmental status as the principal outcome variable, with teaching strategies and parental involvement as the variables investigated for their relationships with developmental status. Qualitative accounts of teachers', school heads', and parents' experiences provided contextual understanding of instructional and family-related challenges. Integrating these findings established the basis for a proposed action plan to strengthen developmentally appropriate instruction, parental engagement, and kindergarten learning support.

The study supports Sustainable Development Goal 4 (Quality Education), particularly Target 4.2, by promoting quality early childhood education, school readiness, and developmentally appropriate instruction (UNICEF & UNESCO, 2024). It also contributes to SDG 3 (Good Health and Well-Being) by emphasizing children's physical and social-emotional development (Ulep et al., 2025). In terms of sustainability, the study strengthens educational, institutional, and community sustainability through evidence-based instructional planning, continuous improvement of teaching practices, and enhanced school-home collaboration (OECD, 2025).

2. METHODOLOGY

Research Design

This study employed a convergent parallel mixed-methods approach to examine the early childhood development status of kindergarten learners, the effectiveness of teaching strategies, and parental involvement in Loay District, Bohol, during School Year 2025–2026. Quantitative data were obtained from developmental assessment records and survey questionnaires, while qualitative data were gathered through interviews. Both forms of evidence were integrated to provide a comprehensive understanding of the research variables and inform a proposed action plan.

Research Design

The study utilized a convergent parallel mixed-methods research design, in which quantitative and qualitative data were collected simultaneously, analyzed separately, and integrated during interpretation. The quantitative component assessed kindergarten learners' developmental status, teaching strategy effectiveness, and parental involvement through standardized instruments and statistical analysis. The qualitative component explored the experiences and challenges of teachers, school heads, and parents in supporting children's learning and development. Integrating the findings enabled the identification of convergences and

divergences between statistical results and participants' experiences, providing a comprehensive basis for instructional recommendations.

Research Locale or Study Setting

The study was conducted in 12 public elementary schools offering kindergarten education in Loay District, Bohol, Philippines, during School Year 2025–2026. Loay is a coastal municipality comprising 24 barangays, with 12 public elementary schools and two public high schools. The participating schools provided actual classroom environments for assessing children's developmental status and examining teaching practices and parental involvement. The setting enabled the collection of context-specific evidence reflecting the district's educational and sociocultural conditions.

Participants or Data Sources

The quantitative component involved 12 kindergarten teachers, 12 school heads, and 79 parents from the participating schools, totaling 103 respondents. Kindergarten learners' developmental status was assessed using existing ECD Checklist records. The qualitative component involved three kindergarten teachers selected according to their length of service, three school heads directly supervising these teachers, and four parents of enrolled kindergarten learners. Purposive sampling was employed to select participants with direct experience and knowledge of kindergarten education. Eligible participants included teachers assigned to kindergarten classes, school heads supervising kindergarten programs, parents of enrolled learners, and officially registered kindergarten learners. Teachers, school heads, and parents who did not meet these criteria, as well as learners with incomplete enrollment or attendance records, were excluded. The selection process ensured that the participants could provide relevant information on teaching practices, developmental needs, and home-based and school-based learning support.

Research Instruments or Materials

The study utilized the Early Childhood Development (ECD) Checklist, developed by the ECD Council in 2015, to assess learners' developmental status across seven domains: gross motor, fine motor, self-help, receptive language, expressive language, cognitive, and social-emotional development. The checklist provided observable developmental indicators, with raw scores converted into scaled scores and corresponding developmental classifications. Assessment information was obtained through classroom observations, structured developmental tasks, and parental or caregiver validation when necessary. Teaching strategy effectiveness was measured using the validated questionnaire developed by Magadan (2023), covering developmentally appropriate instructional approaches, including play-based and interactive learning. The instrument had a reported Cronbach's alpha coefficient of 0.89 and established content validity through expert review. Parental involvement was assessed using the Parental Involvement Survey in Their Children's Elementary Studies (PISCES), developed by Gugiu, Gugiu, Barnes, Gimbert, and Sanders (2019). Based on the Hoover-Dempsey and Sandler Revised Model of Parent Involvement, the instrument had a reported Cronbach's alpha coefficient of 0.92 and established construct validity through factor analysis. Additionally, the qualitative questionnaire adapted from Bartolome, M. T., Mamat, N., and Masnan, A. H. (2020) was used to explore challenges encountered by teachers and parents in supporting children's learning and development.

Data Gathering Procedure

Data collection commenced after obtaining approval from the University President through the Dean of the School of Advanced Studies and the Campus Director, followed by authorization

from the Schools Division Superintendent of Bohol, the Public Schools District Supervisor of Loay, and the participating school heads. Following approval, ECD Checklist records were obtained to determine learners' developmental status. Kindergarten teachers and their respective school heads accomplished the teaching strategy questionnaires, while parents completed the parental involvement questionnaires. Interviews were conducted with selected teachers, school heads, and parents to gather information on instructional challenges and difficulties in supporting children's learning at home and in school. The completed questionnaires were collected and organized for statistical analysis, while interview responses were transcribed and examined for recurring themes.

Data Analysis

Quantitative data were analyzed using descriptive and correlational statistics. Frequencies and percentages described learners' developmental status across the seven ECD domains. Scaled scores were interpreted as significant developmental delay (1–3), slight delay (4–6), average development (7–14), slightly advanced development (15–16), and highly advanced development (17–19). Weighted means and standard deviations determined the effectiveness of teaching strategies and the level of parental involvement. Using a four-point Likert scale, mean scores of 3.25–4.00 represented highly effective teaching strategies or very high parental involvement; 2.50–3.24 indicated effective strategies or moderate involvement; 1.75–2.49 indicated moderately effective strategies or low involvement; and 1.00–1.74 indicated ineffective strategies or very low involvement. The Pearson Product-Moment Correlation Coefficient (r) was employed to determine the strength, direction, and statistical significance of the relationships between learners' developmental status and teaching strategy effectiveness, and between developmental status and parental involvement. Qualitative responses were examined using the six phases of thematic analysis proposed by Braun and Clarke (2006), involving familiarization, initial coding, theme identification, theme review, theme definition, and report preparation. Transcribed interviews were reviewed to identify recurring challenges experienced by teachers, observations from school heads, and difficulties encountered by parents. The qualitative findings were subsequently integrated with the quantitative results to identify convergence and divergence, strengthen contextual interpretation, and provide an empirical basis for the proposed action plan.

Ethical Consideration

The study observed ethical standards throughout data collection and analysis. Necessary institutional and educational permissions were secured before conducting the research. Informed consent was obtained from participants after explaining the study's objectives, procedures, voluntary nature, and right to withdraw without penalty. Confidentiality and anonymity were maintained, and collected information was used exclusively for academic purposes. The researcher also respected participants' time, experiences, and perspectives while ensuring that data collection did not unnecessarily disrupt regular school and community activities.

3. RESULTS AND DISCUSSION

3.1 Teachers' Expenditure Patterns Early Childhood Development, Teaching Strategies, and Parental Involvement

3.1.1 Early Childhood Development Status of Kindergarten Learners

The assessment of 168 kindergarten learners revealed an overall developmental mean of 14.36, reported as Average Development. Cognitive and social-emotional development obtained the highest mean scores (M = 18.70 each), followed by self-help skills (M = 18.60), all classified as

Highly Advanced Development. Fine motor development (M = 11.70), gross motor development (M = 11.00), receptive language (M = 10.90), and expressive language (M = 10.90) were classified as Average Development. These findings indicated stronger developmental performance in cognitive, social-emotional, and self-help domains, while language and motor skills demonstrated comparatively lower attainment. The findings emphasize the importance of supporting children's development across interrelated domains rather than focusing exclusively on academic readiness. UNICEF and UNESCO (2024) highlighted the importance of holistic early childhood education in strengthening children's physical, cognitive, language, and social-emotional competencies. Similarly, OECD (2025) emphasized that quality early childhood education should address individual developmental differences through inclusive and responsive learning experiences. The comparatively lower language and motor scores suggest the need for continued developmental monitoring and targeted learning activities that support balanced developmental progress.

3.1.2 Effectiveness of Teaching Strategies

Teaching strategies obtained an overall weighted mean of 3.72, interpreted as Highly Effective. Play-based learning received the highest rating (M = 3.81), followed by hands-on activities (M = 3.80), storytelling and creative projects (M = 3.76), group discussions (M = 3.72), collaborative learning (M = 3.71), differentiated instruction (M = 3.69), inquiry-based learning (M = 3.67), and reflective teaching (M = 3.57). All eight strategies were rated Highly Effective, reflecting favorable evaluations of their implementation in supporting learner engagement, social interaction, cognitive development, creativity, and emotional regulation. The favorable ratings for play-based learning and hands-on activities are consistent with Skene et al. (2022), whose systematic review and meta-analysis identified benefits of guided play for selected early learning outcomes, including mathematical skills, spatial vocabulary, and cognitive flexibility. Zheng et al. (2023) likewise established positive associations between teacher-child interactions and several developmental outcomes, emphasizing the importance of responsive and supportive classroom practices. These studies provide support for maintaining developmentally appropriate, interactive, and learner-centered instructional approaches, although the present effectiveness ratings do not independently establish causal effects on children's development.

3.1.3 Level of Parental Involvement

Parental involvement obtained an overall mean of 3.41, interpreted as Very High. Home-based involvement (M = 3.46) was higher than school-based involvement (M = 3.37), with both classified as Highly Involved. The highest home-based ratings were recorded for encouraging children to practice letters, numbers, and drawing (M = 3.68) and discussing school learning experiences with children (M = 3.68). Reading books or stories at home received the lowest rating (M = 2.94). In school-based involvement, attending parent-teacher meetings or orientations obtained the highest mean (M = 3.55), whereas regular communication with teachers received the lowest mean (M = 3.10). These results indicated active parental participation, with opportunities for improvement in shared reading and school-home communication. The findings reflect the relevance of home learning experiences to children's early education. Nag et al. (2024) identified associations between home learning environments and children's language and literacy skills in low- and middle-income countries. Similarly, Sundqvist et al. (2024) found that supportive home literacy practices, including meaningful conversations and interactive reading, were positively associated with preschool children's vocabulary development. These studies highlight the importance of strengthening the quality of parent-child learning interactions, particularly shared reading and communication, alongside participation in school activities.

3.2 Relationships Between Developmental Status, Teaching Strategies, and Parental Involvement

The detailed results narrative reported very weak and statistically nonsignificant relationships between learners' developmental status and the effectiveness of teaching strategies ($r = 0.068$, $p = .382$), and between developmental status and parental involvement ($r = 0.004$, $p = .958$). Both p-values exceeded the 0.05 significance level, indicating insufficient evidence to reject the corresponding null hypotheses. Thus, neither teaching strategy effectiveness nor parental involvement demonstrated a statistically significant linear relationship with developmental status in the reported analysis. These findings suggest that the assessed variables did not statistically explain variations in learners' developmental status within the study's analysis. However, the absence of significant correlations does not establish that teaching strategies and parental involvement are unimportant or have no developmental effects. Volodina et al. (2024) found that home learning experiences and preschool quality were associated with later language proficiency, while Zheng et al. (2023) identified associations between teacher-child interactions and multiple learning outcomes. OECD (2025) further emphasized that early childhood development is shaped by interconnected educational, family, and socioeconomic conditions. Accordingly, the nonsignificant findings warrant careful interpretation and further investigation of other potentially relevant factors rather than conclusions about causal influence.

3.3 Challenges Encountered by Teachers and Parents

3.3.1 Challenges in Implementing Teaching Strategies

The qualitative findings identified classroom management, limited instructional resources, and diverse learner needs as the primary challenges encountered by kindergarten teachers. Teachers reported difficulties managing highly active learners, maintaining attention during classroom activities, preparing sufficient instructional materials, and adapting learning tasks to differences in children's abilities. These concerns reflected practical limitations in delivering individualized and developmentally appropriate instruction. The findings highlight the importance of instructional resources, teacher preparation, and inclusive classroom support. OECD (2025) emphasized the need for adequate resources, professional development, and responsive educational practices to address developmental differences among young learners. Similarly, Ulep et al. (2025) identified resource availability, infrastructure, workforce capacity, and educational quality as important considerations in strengthening early childhood care and development in the Philippines. These perspectives support the need for improved instructional support, classroom management, and differentiated learning opportunities.

3.3.2 Challenges in Parental Involvement

Parents identified limited time, work and household responsibilities, children's fatigue, and reluctance to engage in learning activities as challenges in supporting kindergarten education. Competing responsibilities affected the consistency of home-based learning assistance, while children's preference for play and reduced motivation after school sometimes made structured learning activities difficult. These experiences revealed practical barriers to sustaining parental participation despite the generally high involvement ratings. The findings indicate the importance of considering family circumstances when strengthening parental engagement. OECD (2025) recognized that differences in family resources, socioeconomic conditions, and access to educational support influence opportunities for early learning. Nag et al. (2024) likewise highlighted the relationship between home learning conditions and children's language and literacy development. These findings support the value of flexible, accessible, and developmentally appropriate home-learning activities that accommodate parents' responsibilities and children's learning needs.

3.4 Integration of Quantitative and Qualitative Findings

The integration of findings revealed convergence in the generally favorable developmental status of kindergarten learners, highly rated teaching strategies, and strong parental involvement. However, qualitative evidence revealed challenges involving limited instructional resources, differences in learners' developmental needs, time constraints, and difficulties maintaining home-based learning activities. These challenges were not directly represented by the quantitative ratings. Furthermore, the absence of statistically significant relationships between developmental status and the two explanatory variables contrasted with participants' descriptions of their educational roles and experiences. The integrated findings emphasize the complexity of early childhood development and the importance of examining quantitative outcomes alongside contextual experiences. UNICEF and UNESCO (2024) emphasized that children's development depends on coordinated support from families, educators, communities, and educational systems. Similarly, Ulep et al. (2025) highlighted the interconnected roles of educational quality, resources, governance, and access to essential services in Philippine early childhood development. Consequently, the findings provide a basis for strengthening developmental monitoring, instructional support, and school-home collaboration while examining other potentially relevant developmental factors through future research.

4. CONCLUSIONS AND RECOMMENDATIONS

The study revealed that kindergarten learners in Loay District demonstrated average overall developmental status, with highly advanced cognitive, social-emotional, and self-help skills, while motor and language development remained at average levels. Teaching strategies were rated highly effective, particularly play-based learning and hands-on activities, while parental involvement was consistently high in both home-based and school-based activities. However, no statistically significant relationships were found between learners' developmental status and teaching strategy effectiveness or parental involvement. Teachers encountered challenges involving classroom management, limited instructional resources, and diverse learner needs, while parents experienced time constraints and children's fatigue or reluctance to study. These findings indicate the need to sustain effective educational practices while investigating other factors potentially associated with children's developmental outcomes.

Kindergarten teachers are encouraged to sustain learner-centered instructional strategies and implement targeted interventions to strengthen children's language and motor development. Parents should maintain active participation in their children's education, particularly through home-based literacy activities and consistent communication with teachers. School administrators should strengthen parental engagement initiatives, provide adequate instructional resources, and support professional development focused on developmentally appropriate teaching practices. Future researchers are encouraged to examine other potential factors associated with early childhood development, including socioeconomic conditions, nutrition, home learning environments, and school resources, using larger samples and diverse educational settings to provide a broader understanding of learners' developmental outcomes.

The study was limited to 12 public elementary schools in Loay District, Bohol, during School Year 2025–2026, with developmental assessment records from 168 kindergarten learners and data from teachers, school heads, and parents. Its correlational analysis focused on teaching strategies and parental involvement, while other potentially relevant developmental factors were not directly examined. Consequently, the findings should be interpreted within the study's specific educational context and cannot establish causal relationships or be automatically generalized to other kindergarten populations.

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