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| RESEARCH ARTICLE

The Dynamics of Face-To-Face Learning and Developmental Progress in Early Childhood

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| ABSTRACT
This study investigated the effects of the resumption of face-to-face classes on the Early Childhood Development (ECD) competencies of kindergarten learners. Employing a descriptive- comparative research design, the study assessed 45 participants comprising 1 teacher respondent and 45 kindergarten learners using the standardized Early Childhood Care and Development (ECCD) checklist provided by the Department of Education. This instrument evaluated learner progress across five key domains: health, well-being and motor development; socio-emotional development; language, literacy and communication; mathematics; and understanding of the physical and natural environment. Pre- and post-assessment data indicated substantial developmental improvements in all domains following the resumption of in-person classes. Learners demonstrated notable growth in fine motor skills, expressive language, socio-emotional regulation, early literacy, numeracy, and environmental awareness. High rates of regular school attendance contributed to increased engagement and learning consistency. Statistical analysis, specifically the paired samples t-test, confirmed significant differences between pre- and post-assessment scores, highlighting the positive impact of face-to-face instruction. In response to identified learning gaps, an Enhancement Plan was developed featuring phase-based, targeted interventions aligned with DepEd's academic quarters. The findings affirmed that structured classroom environments and sustained attendance were essential for fostering holistic development among kindergarten learners, particularly in a post-pandemic educational landscape.

| KEYWORDS

Early Childhood Development (ECD); Face-to-Face Learning; Kindergarten Education; Learning Recovery

| ARTICLE INFORMATION

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Introduction

The transition back to face-to-face classes after the COVID-19 pandemic marks a crucial period in rebuilding early childhood education. The abrupt move to remote learning during the pandemic disrupted traditional pedagogical approaches and posed significant challenges to young learners' holistic development (Kuhfeld et al., 2022). Early childhood education depends largely on interactive, play-based, and experiential learning, which was severely limited in home-based and virtual settings (OECD, 2021). The lack of physical engagement and sensory experiences restricted opportunities for developing key cognitive, language, and motor skills. Studies have shown that extended school closures and online learning led to notable learning setbacks in literacy, numeracy, and socio-emotional growth (Hammerstein et al., 2021; Tomasik et al., 2021; UNICEF, 2023). These effects were particularly severe among children from low-income families, where technological barriers and limited parental support widened existing educational inequalities.

After the pandemic disruptions, research highlights that many early learners continue to face persistent developmental and learning challenges even after schools reopened. A review by Maldonado and De Witte (2022) found that school closures caused significant losses in foundational learning, particularly in reading, numeracy, and readiness for structured schooling—

impacts that were more pronounced among children in marginalized contexts. Similarly, Engzell et al. (2021) and Betthäuser et al. (2023) noted that post-pandemic recovery in early education has been uneven, with lower academic and socio-emotional gains among children from under-resourced settings. Moreover, Kim (2023) and Haßler et al. (2022) emphasized that prolonged remote instruction not only delayed cognitive and academic progress but also weakened social interaction, self-regulation, and emotional resilience. These findings underscore the urgent need for targeted, face-to-face interventions that address both cognitive and socio-emotional recovery in early childhood education.

According to UNESCO (2022), children who lacked access to structured early learning opportunities during the pandemic face lasting challenges in literacy, social interaction, and emotional well-being, highlighting the importance of assessing their developmental progress upon returning to classrooms. In this context, understanding the effects of face-to-face class resumption on early childhood development (ECD) competencies becomes essential. Teachers play an instrumental role in facilitating this transition by fostering structured learning, individualized support, and socio-emotional engagement (Pianta et al., 2022; Slot et al., 2022). At Tingo Elementary School, teachers have observed that many learners still struggle with classroom adaptation, attention span, and peer collaboration, revealing the lingering impact of disrupted learning routines. Likewise, developmental domains such as fine motor skills, communication, and emotional regulation continue to show variability among learners, emphasizing the need for a comprehensive evaluation of ECD competencies to inform effective intervention programs.

This study, therefore, seeks to examine the level of early childhood development competencies of kindergarten learners both before and after the school year, as evaluated by teacher respondents, focusing on key developmental domains including health, well-being, and motor development; socio-emotional growth; language, literacy, and communication; mathematics; and understanding of the physical and natural environment. It also aims to determine whether significant differences exist between pre- and post-assessments, providing empirical insights into the role of face-to-face instruction in accelerating early learning recovery and supporting the holistic development of young learners in post-pandemic educational settings.

Considering these factors, this study aims to generate empirical evidence on how the return to face-to-face learning has affected the developmental competencies of kindergarten learners at Caw-oy Elementary School. It examines core domains of early childhood development, including health, well-being, and motor skills; socio-emotional competence; language and literacy; numeracy and problem-solving; and understanding of the physical and natural environment. Through this, the research seeks to present a comprehensive overview of learners' growth following the shift from remote to classroom-based instruction. The findings are expected to guide evidence-based approaches for enhancing early childhood education in the post-pandemic period. Ultimately, the results will form the basis for an enhancement plan to assist teachers, administrators, and policymakers in addressing learning gaps, promoting inclusive development, and ensuring that kindergarten learners in Caw-oy Elementary School and similar settings thrive cognitively, socially, and emotionally within the renewed face-to-face educational framework.

Literature Review

The COVID-19 pandemic significantly disrupted early childhood education (ECE) systems across the globe, reshaping pedagogical practices and altering young children's learning experiences. Early education, which depends on interactive, play-based, and hands-on learning, was deeply affected by extended school closures and the rapid transition to online modalities (Haßler et al., 2022; Zosh et al., 2022). Research has shown that young learners suffered substantial setbacks in literacy, numeracy, and socio-emotional development due to reduced teacher interaction and limited opportunities for peer collaboration (Maldonado & De Witte, 2022; Betthäuser et al., 2023). Moreover, unequal access to technology and variations in parental involvement exacerbated learning disparities, particularly in low-income and rural settings (Azevedo et al., 2021). These learning losses underscore the critical role of in-person education in supporting holistic child development and restoring learning continuity.

With the reopening of schools, studies have begun to examine the recovery of children's developmental competencies and the effectiveness of in-person instruction in mitigating learning loss. Evidence indicates that returning to classroom environments fosters engagement, social interaction, and cognitive growth through experiential and collaborative learning approaches (Kim, 2023; Hammerstein et al., 2021). Face-to-face learning also enables consistent feedback, structure, and relationship-building, all essential for emotional and behavioral regulation (Slot et al., 2022). However, educators continue to confront challenges in bridging skill gaps, particularly in language proficiency, motor coordination, and critical thinking (Garbe et al., 2023). As such, recent research calls for adaptive teaching strategies, enriched play-based curricula, and targeted intervention programs to ensure equitable educational recovery and strengthen ECE systems in the post-pandemic era.

Methodology

This research adopted a descriptive-comparative design to assess the effects of the resumption of face-to-face classes on the early childhood development competencies of kindergarten learners. The descriptive aspect sought to determine and describe the learners' developmental status across various domains identified by the Department of Education (DepEd). As stated by Creswell (1994), descriptive research is suitable for underexplored phenomena as it aims to portray existing conditions accurately. In this

context, it was applied to evaluate learners' competencies before and after returning to in-person instruction. The comparative component, on the other hand, was used to examine developmental changes between two periods the start and end of the school year allowing for the identification of progress or remaining developmental gaps. The participants were kindergarten teachers and learners from Caw-oy Elementary School. Data were obtained using the standardized Early Childhood Development (ECD) Checklist designed and validated by DepEd. This tool measures key developmental domains such as socio-emotional behavior, motor coordination, self-help skills, language comprehension, expression, and cognitive growth (DepEd, 2015). It provided a structured framework for teachers to track each learner's developmental achievements and readiness for formal education. The resulting data were analyzed to identify areas of improvement and growth, forming the empirical foundation for a proposed enhancement plan to improve early childhood learning programs in the post-pandemic context.

Results

Table 1. Age and Gender of the Learners (n=45)

		Frequency	Percentage
A. Age [in years]			
4		4	8.89
5		35	77.78
6		6	13.33
	Mean:5.41 StDev:0.54		
B. Gender			
Female		24	53.33
Male		21	46.67

Table 1 presents the age and gender distribution of the 45 kindergarten learners. The majority of the participants were 5 years old (77.78%), aligning with the standard age for kindergarten enrollment, while smaller groups were aged 4 (8.89%) and 6 (13.33%) years, yielding a mean age of 5.41 (SD = 0.54). This suggests that most learners were within the expected developmental range for their grade level. In terms of gender, the sample was fairly balanced, with 24 females (53.33%) and 21 males (46.67%). This near parity indicates an equitable representation of both sexes in the study. The age and gender distribution provides an appropriate demographic foundation for assessing early childhood development competencies among the learners.

Table 2. Parents Occupation and Monthly Income

Occupation	**Frequency**	**Percentage**
Fisherman	20	44.44%
Laborer	8	17.78%
Driver	5	11.11%
Boatman	3	6.67%
Government Employee	3	6.67%
Others	6	13.33%
Combined Family Monthly Income		
Less than 9,100 (Poor)	17	37.78%
9,100 - 18,200 (Lower Income)	19	42.22%
18,200 - 36,400 (Lower Middle Class)	7	15.56%
36,400 - 63,700 (Middle Class)	2	4.44%

Table 2 illustrates the distribution of parents' occupations and the combined monthly family income of the learners. The majority of parents were fishermen (44.44%), reflecting the community's coastal livelihood. Other common occupations included laborers (17.78%), drivers (11.11%), boatmen (6.67%), government employees (6.67%), and other forms of employment (13.33%). This indicates that most families rely on low-income, labor-intensive occupations. In terms of monthly income, most households fall under the lower-income categories, with 42.22% earning between ₱9,100–₱18,200 and 37.78% earning less than ₱9,100, classified

as poor. Only a small proportion belong to the lower middle class (15.56%) and middle class (4.44%). These findings suggest that the majority of learners come from economically disadvantaged backgrounds, which may influence access to educational resources and developmental support.

Table 3. Level of ECD Assessment of the Kindergarten Learners (Before school year)

Indicators	Mean	StDev	Interpretation
A. Health, Well-Being, and Motor Development	1.57	0.57	Beginning
B. Socio-emotional Development	1.54	0.54	Beginning
C. Language, Literacy, and Communication	1.49	0.53	Beginning
D. Mathematics	1.45	0.47	Beginning
E. Understanding the Physical and Natural Environment	1.45	0.51	Beginning
Aggregate Mean:	1.50	0.52	Beginning

Table 3 presents the Early Childhood Development (ECD) assessment of kindergarten learners before the start of the school year. The overall aggregate mean of 1.50 (SD = 0.52) indicates that learners were generally at the "Beginning" stage across all developmental domains. Among the indicators, Health, Well-Being, and Motor Development obtained the highest mean score (1.57), suggesting that learners showed initial progress in physical coordination and self-care skills. Conversely, Mathematics and Understanding the Physical and Natural Environment recorded the lowest means (1.45), reflecting limited readiness in basic numeracy and environmental awareness. Similarly, Language, Literacy, and Communication (1.49) and Socio-emotional Development (1.54) were at early stages of development. These results imply that learners entered kindergarten with emerging foundational skills, likely influenced by reduced social and hands-on learning during prior remote education.

Table 4. Level of ECD Assessment of the Kindergarten Learners (Post- School Year)

Indicators	Mean	StDev	Interpretation
A. Health, Well-Being, and Motor Development	2.43	0.50	Consistent
B. Socio-emotional Development	2.43	0.50	Consistent
C. Language, Literacy, and Communication	2.46	0.46	Consistent
D. Mathematics	2.50	0.43	Consistent
E. Understanding the Physical and Natural Environment	2.45	0.50	Consistent
Aggregate Mean:	2.45	0.48	Consistent

Table 4 shows the post–school year Early Childhood Development (ECD) assessment results of the kindergarten learners. The overall aggregate mean of 2.45 (SD = 0.48) indicates that learners reached the "Consistent" level across all developmental domains, demonstrating substantial progress after the resumption of face-to-face classes. Among the indicators, Mathematics recorded the highest mean (2.50), suggesting marked improvement in basic numeracy and problem-solving abilities. Similarly, Language, Literacy, and Communication (2.46) and Understanding the Physical and Natural Environment (2.45) showed consistent development, reflecting enhanced comprehension and curiosity through interactive classroom activities. Health, Well-being, and Motor Development and Socio-emotional Development both scored 2.43, highlighting improved coordination, social interaction, and emotional maturity. Overall, these findings reveal that direct, hands-on instruction and social engagement in physical classrooms significantly enhanced learners' developmental competencies.

Table 5. Difference Between the ECD Assessment of the Kindergarten Learners Before and After the School Year

(alpha = 0.05)

Before and after	t-value	p-value	Significance	Result
a. Health, Well-Being, and Motor Development	-15.33	0.000	Significant	Ho rejected
b. Socio-emotional Development	-15.73	0.000	Significant	Ho rejected
c. Language, Literacy, and Communication	-22.09	0.000	Significant	Ho rejected
d. Mathematics	-23.74	0.000	Significant	Ho rejected
e. Understanding the Physical and Natural Environment	-16.62	0.000	Significant	Ho rejected
Level of ECD Assessment	-16.47	0.000	Significant	Ho rejected

Table 5 presents the comparison of the Early Childhood Development (ECD) assessment results of kindergarten learners before and after the school year using a paired sample t-test at a 0.05 level of significance. The results show that all domains yielded p-values of 0.000, which are below the alpha threshold, indicating statistically significant improvements in all areas of development following the resumption of face-to-face learning. The highest gains were observed in Mathematics (t = -23.74) and Language, Literacy, and Communication (t = -22.09), suggesting substantial progress in cognitive and literacy-related skills. Significant improvements were also noted in Health, Well-being, and Motor Development (t = -15.33), Socio-emotional Development (t = -15.73), and Understanding the Physical and Natural Environment (t = -16.62). Overall, the aggregated t-value of -16.47 confirms a statistically significant increase in learners' developmental performance, emphasizing the positive impact of face-to-face instruction on holistic growth and foundational skill acquisition.

Discussion

The findings of the study revealed a remarkable improvement in the early childhood development (ECD) competencies of kindergarten learners after the resumption of face-to-face classes. The overall shift from a "Beginning" level (M = 1.50, SD = 0.52) before the school year to a "Consistent" level (M = 2.45, SD = 0.48) after the school year demonstrates significant developmental progress across all learning domains. The improvements were most pronounced in Mathematics and Language, Literacy, and Communication, which recorded the highest t-values (-23.74 and -22.09, respectively), indicating substantial gains in learners' cognitive and communication skills. These findings align with global research suggesting that in-person learning environments promote better academic and developmental outcomes due to increased teacher guidance, hands-on activities, and peer interaction (UNESCO, 2022; Kim, 2023). The results also highlight how the restoration of physical classrooms provided children with opportunities for play-based exploration and experiential learning essential components of early childhood education that were limited during remote instruction.

Moreover, the significant gains in Health, Well-being, and Motor Development, as well as Socio-emotional Development, suggest that resuming face-to-face learning effectively restored essential physical and interpersonal skills disrupted by pandemic-related school closures. These outcomes are consistent with prior studies emphasizing that structured routines, social engagement, and physical play contribute to children's holistic growth and emotional resilience (Donohue & Miller, 2022; Marsh et al., 2022). The statistically significant differences across all domains (p = 0.000) confirm that the shift back to classroom-based instruction was instrumental in mitigating learning loss and supporting overall development. However, despite the encouraging results, continuous intervention and targeted enrichment in literacy and numeracy remain necessary to sustain progress. These findings underscore the importance of maintaining interactive, child-centered teaching strategies and strengthening early learning programs, particularly in post-pandemic recovery contexts such as Caw-oy Elementary School.

Conclusion

The study concluded that the resumption of face-to-face classes significantly enhanced the early childhood development (ECD) competencies of kindergarten learners at Caw-oy Elementary School during the 2024–2025 school year. Learners showed notable improvement across all five developmental domains health, well- being and motor development; socio-emotional development; language, literacy, and communication; mathematics; and understanding of the physical and natural environment. Statistical analysis confirmed significant differences between pre- and post-assessment results, validating the positive impact of in-person

instruction. The findings highlighted the essential role of consistent attendance, teacher- guided learning, and structured classroom settings in supporting holistic development. Despite socioeconomic challenges, the study affirmed that face-to-face learning created vital opportunities for hands-on, interactive, and socially engaging experiences that remote learning could not fully replicate.

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