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Article

Improving Early Childhood Education: An Investigation into the Application of Blended Instruction Strategies by Kindergarten Educators in Cebu

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Abstract: This study examines public and private school kindergarten teachers' comprehension, training, and effectiveness with blended instruction. The majority of teacher-respondents understand blended instruction and have been trained to easily integrate it into their teaching. Blended instruction boosts student motivation, optimizes learning activities, and improves material comprehension. These findings support the idea that blended learning can improve education. The report also provides useful insights from public and private school parents on home use of digital devices, mostly cellphones and tablets. Some parents worry about monitoring their kids' technology use, but they also realize its educational benefits. Private school parents have more Internet access than public school parents. Teacher-respondents agree on blended education implementation, with numerous indicators showing good answers. Early childhood education (ECE) schools use blended instruction successfully. Importantly, blended instruction is accepted regardless of school type or teacher-respondent profile. In conclusion, blended instruction in kindergarten classrooms is well-received and implemented. Blended instruction in ECE may improve student motivation, learning results, and engagement. These insights can improve teaching techniques and technological integration, enriching young learners' educational experiences and achievements.

Keywords: Blended instruction, Kindergarten teachers, educational experiences, Parent perspectives

Introduction

Blended instruction has emerged as a promising pedagogical approach that combines traditional face-to-face teaching with digital technology to enhance the learning experience for students of all ages. Aithal and Aithal (2023) emphasized that as educational institutions

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strive to adapt to the digital age and leverage technology for improved learning outcomes, blended instruction has gained attraction as an effective method to meet diverse student needs. According to Bowden (2022) blended instruction has become a significant and transformative approach in modern education. Nunez et al. (2022) suggested that as technology continues to evolve, it has become increasingly essential for educational institutions to adapt and integrate digital tools effectively into the learning process. Empirical findings of Bello et al. (2019) noted that blended instruction offers a unique opportunity to combine the strengths of traditional face-to-face teaching with the benefits of technology-mediated learning. For instance, blended instruction strategies allow for personalized and differentiated instruction, catering to the diverse learning styles and needs of students (Li et al., 2023), incorporate multimedia resources, interactive activities, and online platforms, blended instruction can create dynamic and engaging learning environments that promote student engagement and motivation (Eslit, 2023), and provides flexibility in how educational content is delivered and accessed, enabling students to learn at their own pace and in various settings (Krishnan & Nagaratman, 2023).

Kindergarten teachers play a crucial role in shaping the academic and socio-emotional development of young learners (Puccioni et al., 2020). As young children enter formal schooling, their first educational experiences can significantly influence their lifelong learning journey. Blended instruction strategies employed by kindergarten teachers hold immense importance as they impact the quality of early childhood education (Garzon et al., 2020). Adopting appropriate and effective blended instruction strategies, kindergarten teachers can create enriching and developmentally appropriate learning experiences for their students (Baltzaki & Chlapana, 2023). These strategies can encompass a wide range of approaches, including the integration of educational apps, interactive learning activities, virtual field trips, and collaborative online projects (Jiangm 2023).

Moreover, blended instruction is a powerful educational approach that ensures quality education by catering to learners' diverse needs and maximizing their understanding and academic performance (Batool et al., 2023). Combining the best aspects of traditional teaching with digital technology, blended instruction offers a comprehensive and engaging learning experience for students in kindergarten (Huang, 2023). As educators continue to explore innovative ways to enhance early childhood education, the implementation of effective blended instruction strategies stands as a promising avenue to achieve

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educational excellence and equip young learners with the skills they need to thrive in the modern world (Rajaram, 2021).

While blended instruction has shown promise in improving educational outcomes, there are several gaps in the international context and in the Philippines concerning the variables of socio-demographic profile of teachers, student profile in terms of learners' exposure to technology, type of blended instruction employed by teacher respondents, and the level of implementation of blended instruction in schools. Internationally, research on the socio-demographic profile of teachers in relation to blended instruction remains limited. Understanding how factors such as age, gender, years of teaching experience, and digital literacy skills influence teachers' readiness and willingness to adopt blended instruction is crucial in designing effective training and support programs tailored to their specific needs.

Similarly, in the context of the Philippines, there is a dearth of information regarding the student profile concerning their exposure to technology. As the country faces disparities in digital access and connectivity across regions, exploring how students' access to technology outside the classroom impacts their engagement and learning outcomes in blended instruction can help identify strategies to bridge the digital divide and ensure equitable learning opportunities (Barrot & Fernando, 2023). Furthermore, the specific types of blended instruction employed by teacher respondents in both international and Philippine contexts require further investigation. Different teachers may use various combinations of face-to-face and online activities, making it essential to examine the effectiveness and suitability of these approaches for different subject areas and student age groups. Additionally, the level of implementation of blended instruction in schools remains an important area of exploration. Assessing the extent to which schools have embraced blended instruction, the support provided to teachers in its implementation, and the challenges encountered in integrating technology into the curriculum can provide valuable insights into the overall readiness of educational institutions to adopt this pedagogical approach effectively.

Addressing these gaps in the international and Philippine contexts will contribute to a more comprehensive understanding of the factors influencing the successful implementation of blended instruction. This knowledge can inform the development of evidence-based policies and strategies to promote the effective use of blended instruction in early childhood education and beyond, ultimately

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advancing the quality of education and preparing students for the digital age.

Blended Instruction Strategies

Blended instruction, also known as blended learning or hybrid learning, has gained significant attention in the educational landscape as a promising approach to combine traditional face-to-face teaching with digital technology to enhance the learning experience. This literature review explores various studies that have examined blended instruction strategies, focusing on their impact on student learning outcomes, engagement, and overall educational experiences. A meta-analysis conducted by Means, Toyama, Murphy, and Bakia (2013) examined 45 studies on blended learning in higher education. The findings revealed that blended instruction resulted in stronger learning outcomes compared to traditional face-to-face instruction. The study highlighted the importance of combining online and in-person components to achieve better academic results. Vygotsky's sociocultural theory emphasizes the importance of social interaction in learning. A study by Hurshman (2020) explored how blended instruction facilitated personalized and differentiated learning experiences, allowing students to work at their own pace and receive individualized support from teachers and peers. Blended instruction has been recognized for its ability to enhance student engagement. A study by Hew and Cheung (2014) examined the use of multimedia and interactive elements in blended instruction, finding that these strategies increased students' interest and motivation, leading to higher levels of engagement. Blended instruction has also shown promise in K-12 settings. A study by Staker and Horn (2012) examined the implementation of blended learning in various K-12 schools. The research highlighted the flexibility and adaptability of blended instruction, enabling teachers to differentiate instruction and address the diverse needs of their students. Faculty attitudes and perceptions play a crucial role in the successful implementation of blended instruction. A study by Garrison and Vaughan (2008) explored faculty perceptions of blended learning, revealing that instructors valued the flexibility and opportunities for interactive learning that blended instruction offered. comprehensive review by Singh et al. (2022) examined best practices in blended instruction, emphasizing the importance of clear learning objectives, effective use of technology, and a thoughtful balance between online and in-person activities to

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promote deep and meaningful learning experiences. A study by Hew and Cheung (2014) investigated the relationship between blended instruction and student achievement. The results indicated that blended learning positively impacted student academic performance, particularly when students actively engaged with online resources and activities. the literature on blended instruction strategies demonstrates the potential of this approach to enhance student learning outcomes, engagement, and overall educational experiences. Blended instruction offers a flexible and adaptive framework that empowers teachers to personalize instruction and leverage digital technology to create engaging and interactive learning environments. However, while the evidence is promising, further research is needed to explore the long-term effects of blended instruction, examine best practices in various educational contexts, and address potential challenges to successful implementation.

Methodology

This study applied a mixed-method research design incorporating quantitative and qualitative methodologies. This approach aimed to comprehensively understand the technology-related instruction strategies employed by kindergarten teachers. The strength of this design lies in its ability to complement the limitations of a single method, thus offering a more holistic perspective on the research problem. In the quantitative part of the study, a research survey questionnaire was the primary tool. This instrument was adapted and modified from previous research studies by Faraj et al., (2016), Birbal et al. (2018), and Bakeer (2018). The purpose of the survey was to systematically collect and measure data to identify patterns and categorize and rank findings. These findings were then statistically analyzed and generalized. Simultaneously, the qualitative component was conducted through interviews, detailed observations, and individual discussions. This approach was designed to capture nuanced insights that the survey might need to render fully. Therefore, it complemented the numerical data, providing a more contextual understanding of the technology-related instruction strategies employed. The mixed-method design facilitated a broad understanding of the research problem through the analysis of quantitative data and in-depth exploration of specific phenomena. This approach prepared the researcher to gain a well-rounded perspective, instrumental for designing a blended instruction module for the Early Years.

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This study was conducted in select public and private schools in the province of Cebu, specifically those offering kindergarten programs. Several factors led to the selection of these particular educational establishments. First, these schools employ a substantial number of kindergarten instructors, thereby providing a sufficient population for the study. Secondly, the demographic composition of the kindergarten students in these schools provided an appropriate context for investigating the research variables. Finally, the geographical convenience and personal connections played a role in the selection. Most of the kindergarten teachers and administrators in these schools were former teachers or colleagues of the researcher, facilitating access and cooperation.

The primary respondents for this study were kindergarten teachers from both private and public schools in Cebu. They were selected for their demonstrated commitment to adopting blended instruction, an effective pedagogical approach believed to enhance the learning process for 21st-century preschool learners within their respective institutions. For the purposes of this study, a convenience sample comprising 30% of the total kindergarten teacher population was deemed representative. Additionally, school heads from these institutions were also incorporated as respondents, contributing a strategic and administrative perspective to the study.

The data collection process involved a modified and adapted questionnaire inspired by several previously conducted studies. Dr. Spyridon Varthis's article "Students' Perceptions of Blended Learning and Its Effectiveness as a Component of the Second-Year Dental Curriculum" was among the selected sources; Mahmoud Abou Naaj, Mirna Nachouki and Ahmed Ankit from Ajman University of Science & Technology, United Arab Emirates on 'Evaluating Student Satisfaction with Blended Learning in a Gender-Segregated Environment'; and research from Dr. Roland Birbal, Dr. Mala Ramdass, and Mr. Students on 'Attitudes Toward Implementing Blended Learning in English Teaching at Higher Education Institutions in Palestine: The Case of Al-Quds Open University.' The questionnaire aimed to gather information on learner profiles, particularly their exposure to technology at home and school, the type of blended instruction employed by the teacher respondents, the perceived impact of technology use in the classroom, and the extent of blended instruction implementation. The gathered data contributed to developing a comprehensive picture of the state of technology-related instruction within the selected institutions

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Results and Discussion

Table 1. Age and Gender of the Teacher Respondents

	Public Schools				Private Schools				Total			
	Male		Female		Male		Female		Male		Female	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
More than 45	-	-	2	11.76	-	-	-	-	-	-	2	5.71
41-45	-	-	4	23.53	-	-	-	-	-	-	4	11.43
36-40	-	-	6	35.29	-	-	-	-	-	-	6	17.14
31-35	-	-	3	17.65	-	-	8	44.44	-	-	11	31.43
26-30	-	-	-	-	-	-	5	27.78	-	-	5	14.29
Less than 26	1	100	2	11.76	-	-	5	27.78	1	-	7	20.00
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

Table 1 presented that all the kindergarten teacher-respondents from the private schools were females in the early stage of their careers, mostly falling within the age bracket of 25 to 35 years old. The teacher-respondents from private schools were noticeably younger. However, public school kindergarten teacher-respondents indicated a different age distribution, with some teachers already beyond 40 years of age. Notably, 11.76 percent of them were 46 years old and above, with three teachers (16.67 percent) being younger, falling into the age bracket of 25 years old and below. Most of them were between 31 to 40 years old. Furthermore, there was only one male teacher-respondent from the public schools, with the rest being females. These findings carried substantial implications. The dominance of female teachers was a reflection of the broader societal trend, with school teaching becoming an increasingly female profession, possibly due to existing societal norms and expectations (Johnson et al., 2019). The age of the teachers is relevant to this study as it may have a direct impact on the adoption and effectiveness of blended learning. The common belief that enthusiasm dwindles as teachers age and get promoted might have implications for their willingness to adopt new teaching methodologies like blended instruction (Lawson & Peterson, 2019). Students' perception of teacher authority also affected the learning process, with students often favoring senior teachers as they believed their grades and marks were managed by them (Baxter & Davis, 2020). However, the desire of young teachers to emulate experienced ones and improve their teaching skills using technology may contribute positively to the

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effectiveness of blended learning. The findings in Table 1 echoed the study by Knight & Robertson (2020), which stated that "Learners' performance by age and gender in e-learning and blended learning showed no significant differences between male and female learners and various age groups." This implies that the effectiveness of blended learning is not significantly influenced by the teacher's age and gender.

Table 2. Marital Status of the Teacher Respondents

	Public Schools				**Private Schools**				**Total**			
	Male		**Female**		**Male**		**Female**		**Male**		**Female**	
	***f*%**		***f***	**%**	***f*%**		***f***	**%**	***f*%**		***f***	**%**
Single	1	100	6	35.30	-	-	12	66.67	1	100	18	51.43
Married	-	-	10	58.82	-	-	5	27.78	-	-	15	42.86
Widowed	-	-	-	-	-	-	1	5.55	-	-	1	2.86
Separated	-	-	1	5.88	-	-	-	-	-	-	1	2.86
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

Table 2 presented the marital status of the teachers' respondents' group. Given their early entry into the teaching world after graduation from college, it was noted in the table that a great number of teacher-respondents were still "Single" in both public and private schools. There were 12 or 66.67 percent teacher-respondents from private schools still "Single," five (5) or 27.78 percent were "Married," and one (1) or 5.55 percent was "Widowed." On the other hand, in public schools, ten (10) or 58.82 percent were "Married," seven (7) or 41.18 percent were still "Single," and one (1) or 5.88 percent was "Separated." The findings in Table 2 gave rise to different perceptions, implications, and assessments regarding marital status. Personal variables such as marital status and contextual factors such as teaching profession, as well as behavioral qualities such as self-efficacy, have a triadic interaction, according to Bandura's (2005) triadic reciprocal causation model (Bandura, 2005). These results align with the findings of Harris and Jones (2019), who found that marital status had a significant impact on teachers' self-efficacy, with married teachers generally demonstrating higher self-efficacy. However, they contrast with the findings of McGregor and Doshi (2020), who found no significant relationship between marital status and teachers' self-efficacy. Based on the primary research, male and married teachers were more likely to strive harder in school, exert more effort in their jobs, endure longer in their responsibilities, and recover faster when they fail to meet stated targets. Consequently, as male and married teachers exhibited more

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self-efficacy than female and unmarried teachers, they were expected to work more and for longer hours to fulfill set targets.

Table 3. Highest Educational Attainment of the Teachers Respondents

	Public Schools				Private Schools				Total			
	Male		Female		Male		Female		Male		Female	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
with Ph.D./Ed.D advanced units	-	-	4	23.53	-	-	1	5.55	-	-	5	14.29
MS/MA degree holder	-	-	5	29.41	-	-	3	16.67	-	-	8	22.85
with MS/MA advanced units	-	-	4	23.53	-	-	1	5.55	-	-	5	14.29
Baccalaureate degree holder	1	100	4	23.53	-	-	13	72.22	1	100	17	48.57
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

Table 3 revealed that four or 23.53 percent of the teacher-respondents from public schools were already earning advanced units in their doctoral programs; five or 29.41 percent already held a master's degree; another four or 23.53 percent were gaining advanced units in their master's program, while the remaining 27.78 percent were still at the baccalaureate stage. The same Table indicated that the teacher-respondents from the private school were following a similar track. One (1) or 5.55 percent of them was also earning advanced units in their doctoral programs; three (3) or 16.67 percent had graduated with a master's degree; and one (1) or 5.55 percent was obtaining units in a master's program. However, a significant portion, 72.22 percent, remained in their baccalaureate program. The findings in Table 3 supported the notion that professional development activities improve a teacher's skills, knowledge, expertise, and other characteristics (OECD, 2009). This is viewed as a deliberate and systematic step to ensure teachers' continuous self-improvement (Allen & Sims, 2020). Professional development was critical for the retention and improvement of any teacher in the classroom (Bryk & Schneider, 2019). As noted by Smith & Ingersoll (2020), professional development enhanced and improved teachers' teaching skills, fostering continuous professional development to improve education quality effectively. Consequently, teachers' continuous professional development was highly relevant to improving educational performance and effectiveness and enhancing teachers' commitment, identity, and job satisfaction. Teacher self-efficacy was linked to teachers' credentials, as found by Zee and Koomen (2019), who discovered a positive association between teachers' self-efficacy and both teachers' years of

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experience and pedagogical success. Teachers' self-efficacy varied greatly depending on their degrees. Teachers' effectiveness was associated with their qualifications because content knowledge and pedagogical skill were indicators for measuring qualifications (Sutcher, Darling-Hammond, & Carver-Thomas, 2019). Researchers have confirmed the effectiveness of teachers in Finland due to their excellent qualifications, stating that starting a teaching career with a master's degree and solid content and pedagogical knowledge makes these teachers effective (Sutcher, Darling-Hammond, & Carver-Thomas, 2019). In the context of this study, this suggests that continuing education and qualifications are relevant factors in influencing teachers' self-efficacy. Hence, the enhancement of these aspects could potentially improve their performance and, consequently, the overall educational outcome.

Table 4. Field of Specialization of the Teacher Respondents

Field of Specialization	Public Schools				Private Schools				Total			
	Male		Female		Male		Female		Male		Female	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
General Education	-	-	8	47.06	-	-	5	27.78	-	-	13	37.14
Special Education	-	-	2	11.76	-	-	6	33.33	-	-	8	22.86
Early Childhood Education	1	100	4	23.53	-	-	7	38.89	1	100	11	31.43
English	-	-	2	11.76	-	-	-	-	-	-	2	5.71
Filipino	-	-	1	5.88	-	-	-	-	-	-	1	2.86
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

The data presented in Table 4 showed that the teacher-respondents' specializations aligned well with the diverse curricular programs mandated by the Commission on Higher Education (CHED). Most teachers were specialized in General Education, Special Education, and Early Childhood Education, while others had additional expertise in English and Filipino. This highlights the crucial role of teachers in shaping students' lives, as evidenced by studies like Hanushek & Rivkin's (2020) and Darling-Hammond et al.'s (2020), which emphasize the direct impact of teachers on student success. National organizations such as NCTAF and the Education Trust also stressed the importance of well-qualified teachers and high-quality instruction in narrowing the achievement gap among students from different socioeconomic backgrounds. The data and literature emphasize the need to document and understand the unique characteristics of effective teachers and the educational environments that contribute to positive student outcomes.

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This information can be leveraged to enhance training and support for teachers and argue against reducing requirements for teacher education and certification. Overall, the study supports the importance of highly qualified teachers and continuous professional development in fostering student achievement and underscores the need to maintain rigorous standards for teacher qualifications.

Table 5. Designation or Position of the Teachers Respondents

Designation	Public Schools				Private Schools				Total			
	Male		Female		Male		Female		Male		Female	
or Position	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Teacher III	-	-	4	23.53	-	-	-	-	-	-	4	11.43
Teacher II	-	-	7	41.17	-	-	-	-	-	-	7	20.00
Teacher I	1	100	6	35.29	-	-	-	-	1	100	6	17.14
Kindergarten Teacher	-	-	-	-	-	-	18	100	-	-	18	51.43
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

Table 5 demonstrates that the majority of 'Kindergarten Teacher' designations were assigned to teachers from private schools. In contrast, educators in public schools were given distinct job titles based on a comprehensive review of their educational qualifications and competence (Hardy et al., 2020). According to CSC MC No.10, s. 2012, and CSC MC No.17, s. 2013, these educators were assigned to faculty ranks and sub-ranks such as Teacher I, Teacher II, and Teacher III based on their educational credentials. These designations suggested that a teacher's qualification was a particular skill, type of experience, or level of knowledge that rendered them suitable for teaching. Consequently, teachers' qualifications could encompass all skills necessary for effective teaching. Formal education for teachers had been deemed necessary, as attested by numerous studies (Stewart et al., 2020). Teachers with superior training produced students with higher achievement. Thus, it was vital to ensure that every teacher was academically and professionally qualified, as the qualifications of teachers significantly impacted students' academic progress. The findings of Table 5 were pertinent to this study as they highlighted the importance of teacher qualifications in raising student achievement. They also underscored the disparity between qualifications for research and teaching roles in academia, reflecting the study's focus on the necessity of robust teacher development programs. Furthermore, the designation system in public schools underlined the value of educational qualifications and teaching competence, reinforcing the

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study's emphasis on maintaining rigorous standards for teacher qualifications. The data also highlighted the positive influence of formal education and quality training on student achievement, as well as the connection between teacher effectiveness and student achievement, reiterating the study's emphasis on the importance of personal qualities in teaching qualifications.

Table 6. Length of Service of the Teacher Respondents

Length of Service	Public Schools				Private Schools				Total			
	Male		Female		Male		Female		Male		Female	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
10 yrs. and above	-	-	4	23.53	-	-	1	5.55	-	-	5	14.29
8 – 9	-	-	7	41.18	-	-	4	22.22	-	-	11	31.43
6 – 7	-	-	3	17.65	-	-	3	16.67	-	-	6	17.14
4 – 5	-	-	2	11.76	-	-	4	22.22	-	-	6	17.14
2 - 3	1	100	1	5.88	-	-	6	33.33	1	100	7	20.00
1 yr. and below	-	-	-	-	-	-	-	-	-	-	-	-
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

Table 6 shows teachers' school tenure. Public and private school teachers had similar tenures: some had served for over ten years, while most had served for five or more. Eight had been at their schools for more than three years. Teacher leadership reforms schools based on teacher tenure. Using each teacher's knowledge, abilities, and talents as a leader has limitless possibilities. Teacher leaders' success relies on their motivation and their school principal's ability to support them and encourage teacher leadership. Outcomes determined teaching quality from the delivery perspective. great learning was the ultimate goal of great instruction. Professional development affected student motivation, instructional strategies, communication skills, material management, and lesson planning. Thus, class engagement, instructor confidence, and subject matter comprehension increased. If teachers can't give good content, education suffers. Staff development in higher education is crucial. The quality of instruction and learning and whether parents thought it was worth the time and money likely determined whether parents sent their children to school.

Competent teachers knew what and how to teach. They recognized that students might build on basic concepts in subsequent lessons. Competent teachers constantly tested new, more successful strategies. To successfully integrate a new curriculum, teachers needed subject-matter expertise, teaching skills, excitement for teaching, and openness to new ideas. An initial study showed that teacher credentials affected student education.

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Table 7. Type of Schools of the Teacher Respondents

Type of Schools	Public Schools				Private Schools				Total			
	Male		Female		Male		Female		Male		Female	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Private Schools	-	-	-	-	-	-	18	100	-	-	18	51.43
Public Schools	1	100	17	100	-	-	-	-	1	100	17	48.57
Total	**1**	**100**	**17**	**100**	**0**	**0**	**18**	**100**	**1**	**100**	**35**	**100**

Table 7 displayed the distribution of teacher-respondents from the two types of schools under study: private and public schools. According to the table, there were 18 female teachers who were respondents from the private schools. Meanwhile, in the public schools, there was one male and 17 female teachers who served as the primary respondents in the study. The data in Table 7 implied that both types of schools were regulated and supervised by the Department of Education (DepEd). This body oversaw various aspects of the education system in the Philippines, including curriculum design, fund allocation, school construction, facilities management, and the recruitment of teachers and staff. DepEd was also responsible for mandating the newly adopted K-12 program, a curriculum that both public and private schools were required to implement.

Relevant In-Service Training and Seminars Attended by the Teacher Respondents. Among the private school teachers, the seminar "Emerging Trends and Technologies in the Virtual K-12 Classrooms" had the highest participation with 15 teachers (15.31%). For public school teachers, the seminars "Advance Instructional Strategies in the Virtual Classroom" and "Intensive Training Seminar in Blended Teaching and Learning" attracted the most attendees, each having 6 teachers (12.00%). When considering the overall sample, "Emerging Trends and Technologies in the Virtual K-12 Classrooms" had the highest participation with 22 teachers (14.86%). On the other end of the spectrum, "Go Beyond Traditional Classroom Learning" and "Learning to Teach Online" had the lowest overall participation with just 4 teachers (2.70%) attending each seminar. The findings demonstrated the commitment of teachers to participate in professional development opportunities. The emphasis on seminars related to virtual classrooms and blended learning reflected the shift in teaching strategies to

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accommodate digital advancements and the contemporary needs of students.

Blended Instruction in Kindergarten Classrooms

This section examined how traditional teaching and digital resources were combined in kindergarten settings, the effectiveness of such methods, the challenges faced, and the resulting impacts. The effectiveness of such methods, the challenges encountered, and the subsequent impacts were examined. 33 parents, including 18 from private schools and 15 from public schools, were interviewed by the researcher about blended teaching methods modified by their children's schools. These parents provided insights into their research backgrounds, their associations within their research networks, and the digital tools their children used both at home and school. Additionally, their Internet search strategies, including the tools they utilized to gather information, the terms used, and the types of entities they searched for, were explored. The parents were given an online survey that explored their knowledge, attitudes, and concerns regarding blended learning and the use of technology at school and at home. The survey concluded with an optional section on demographics. This questionnaire was distributed via the learning accelerator's social networks, resulting in a total of 35 responses. Parents were asked about their children's access to electronic gadgets at home. As revealed by the responses, most parents confirmed the usage of cellphones and tablets at home.

As one parent from Sto. Niño Preparatory School put it, "*Ana ani syay technical nga aparato sama sa cellphone unya computer,*" indicating that technologies like cellphones and computers were used at home.

Similarly, a parent from Academia de San Pedro Calungsod replied, "*Yes Ma'am, cellphone ug laptop Ma'am pero mas ipagamit namo ang cellphone kay gamay nya mas safe gamiton kumpara sa laptop kuyaw pod mayab-an ug tubig or any liquid,*" reflecting that cellphones were commonly used at home due to their portability and safety compared to laptops.

As one parent from Calajoan Elementary School expressed, "*Wala mi gadgets Ma'am, naa mi gadget kanang cellphone ra nga keypad unya dili pod na niya magamit kay dala dalahon man sa iyang Papa sa trabahoan.*" This indicates that while they didn't have many gadgets, a cellphone was used, primarily by the father for work. Most parents who answered the survey said they let their kids use any kind of technology at home

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if they were closely supervised, especially when the kids were doing schoolwork. Parents acknowledge the need to guard children against potential risks associated with technology use and to promote healthy usage habits conducive to child development. However, they also recognized that technology offers various learning and social opportunities for children, and that digital literacy will be a crucial skill for future generations. Parents from private schools reported that their children had access to a variety of devices, including televisions, cell phones, laptops, tablets, and desktop computers. On the other hand, respondents from public schools indicated that their children only had access to televisions and cell phones.

The question of Internet access at home was also addressed. According to one parent from USJ-R, "*Yes, Ma'am. We have PLDT WiFi connection at home and ako rapod e connect daan iyahang gadget aron maka-access rapod akong anak*," indicating that they had a PLDT WiFi connection at home, which they used to connect their child's gadget.

Meanwhile, a parent from St. Cecilia's College mentioned, "*Mobile data raman mi Ma'am uy kay naa naman gud wi-fi sa workplace namo maka save save rami kung mobile data ra, pero mka gamit ra gihapon among anak,*" highlighting the usage of mobile data due to the availability of WiFi at their workplace, allowing for savings, yet their child could still access it. The study revealed that most parents did not have Internet access at home, a sentiment particularly prevalent among public school parents. However, many private school parents indicated that their homes had either Globe or

PLDT Internet connections. Most parents from public schools mentioned that their children used the Internet cafes in their neighborhoods or downloaded mobile data. Finally, parents were questioned about their allowance of device usage at home.

A parent from Nancy Berame School noted, "Limited lang sad Ma'am, Friday night until Sunday morning one (1) hour a day nya putol-putol pa gyud," indicating that usage was limited to certain days and hours.

Another parent from Cebu South Hills shared, "*Yes, Ma'am. Malingaw mani siya anang Nursery rhymes ug action songs sa Youtube like Chuchu Tv, Kids Tv, Loco Nuts, maayo na gani kaayo ni mag pili pili sa gusto niyang tan-awon, pero naa ragud mi sa kilid ga monitor pod kay bata pasad biya Ma'am, limit rapod mga isa ka oras malipay rapod mi kay musabay raman pod ug kanta kanta sa iyang tan-awon*," emphasizing the child's enjoyment of nursery rhymes and action songs on YouTube and the parents' monitoring and time limits set on usage.

Table 8 presents the respondents' agreement on the level of implementation of blended instruction, with an overall mean score of 2.85, indicating general agreement

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Table 8. Level of Implementation of Blended Instruction

Indicators	$\bar{x}$	StDev	Verbal Description
The term "blended instruction" is commonly understood by all educators.	2.75	1.29	Agree (A)
School administrators and teachers have been trained to incorporate blended instruction approach within the classroom.	2.75	1.38	Agree (A)
Blended instruction strategy can increase student's motivation.	3.06	1.46	Agree (A)
Blended instruction strategy can optimize learning activity.	2.81	1.33	Agree (A)
Blended instruction strategy can increase understanding of learning materials.	2.81	1.33	Agree (A)
Blended instruction strategy can encourage students to think critically.	2.83	1.38	Agree (A)
Student can learn anywhere and anytime through blended instruction.	2.89	1.37	Agree (A)
Blended instruction strategy supports face-to-face learning.	2.88	1.26	Agree (A)
Students can easily interact with teachers in online instruction.	2.77	1.23	Agree (A)
Students can access diverse resources in blended instruction.	2.77	1.40	Agree (A)
Learning materials was presented with a clear organization using blended instruction.	2.81	1.33	Agree (A)
Learning activities was carried out with a clear sequence.	3.13	1.44	Agree (A)
Evaluation was conducted in face-to-face and online settings.	2.77	1.33	Agree (A)
E-learning system was used in blended instruction.	2.79	1.35	Agree (A)
Blended instruction is an approach that could be implemented at ECE schools.	2.90	1.40	Agree (A)

Educators widely understood the term "blended instruction" (M = 2.75, SD = 1.29), and both school administrators and teachers had received training to incorporate blended instruction in the classroom (M = 2.75, SD = 1.38). Respondents recognized several benefits of blended instruction, including increased student motivation (M = 3.06, SD = 1.46), optimization of learning activities (M = 2.81, SD = 1.33), improved understanding of learning materials (M = 2.81, SD = 1.33), and the ability to encourage critical thinking (M = 2.83, SD = 1.38). These findings are consistent with previous research by Al-Zahrani (2018), who highlighted the potential of blended instruction to enhance motivation, engagement, and understanding. The respondents acknowledged that blended instruction allows learning anywhere and

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anytime (M = 2.89, SD = 1.37) and supports face-to-face learning (M = 2.88, SD = 1.26), aligning with the observations of Geng et al. (2020). They also appreciated the ease of student-teacher interaction in online instruction (M = 2.77, SD = 1.23) and the diverse resources accessible through blended instruction (M = 2.77, SD = 1.40), as noted by Kintu et al. (2020). Overall, the respondents demonstrated a positive attitude towards the adoption and implementation of blended instruction in early childhood education (M = 2.90, SD = 1.40), in line with the observations made by Bonk et al. (2020). This reflects their understanding of the significance and applicability of blended instruction as a valid pedagogical approach in an early childhood education setting.

Table 9. Significant Difference on the Implementation of Blended Instruction

Grouped by	F-value	P-value	Significance	Result
I. Type of Blended Instruction				
A. Type of School	0.55	0.788	Not significant	Ho accepted
B. Respondents' Profile				
Age	0.88	0.540	Not significant	Ho accepted
Gender	0.56	0.783	Not significant	Ho accepted
Marital Status	1.27	0.306	Not significant	Ho accepted
Highest Educational Attainment	0.69	0.677	Not significant	Ho accepted
Field of Expertise	0.35	0.923	Not significant	Ho accepted
Length of Service	0.86	0.552	Not significant	Ho accepted
II. Effects on the Use of Technology in the Classroom				
A. Type of School	1.57	0.185	Not significant	Ho accepted
B. Respondents' Profile				
Age	1.13	0.384	Not significant	Ho accepted
Gender	0.71	0.692	Not significant	Ho accepted
Marital Status	1.18	0.355	Not significant	Ho accepted
Highest Educational Attainment	1.12	0.390	Not significant	Ho accepted
Field of Expertise	0.71	0.692	Not significant	Ho accepted
Length of Service	0.76	0.650	Not significant	Ho accepted

The data presented in Table 9 indicated no significant differences in the application of blended instruction based on the type of school and the profiles of the respondents (all p-values > .05). This finding suggested that the blended instruction approach was adopted consistently across various school types and regardless of the educators' age, gender, marital status, highest educational attainment, field of expertise, and length of service (Gikas & Grant, 2018). In particular, the lack of significant discrepancies in the use of blended instruction between different school types demonstrated that the same strategies were employed in both private and public schools. This result

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aligned with the findings of Al-Fraihat et al. (2020), which proposed that these demographic factors did not significantly influence the implementation of blended instruction. Additionally, the use of technology in the classroom, an integral component of the blended instruction approach, did not show significant variations across the different variables. This finding was consistent with the study conducted by Tarhini et al. (2019), suggesting that the impact of technology utilization in classrooms was generally uniform, irrespective of the educators' profiles or the type of institution.

Conclusion

The findings indicated that the majority of teacher-respondents had a clear understanding of blended instruction, and they had been trained to incorporate this approach in their classrooms. Moreover, they recognized the benefits of blended instruction, such as increased student motivation, optimization of learning activities, and improved understanding of learning materials. These results are consistent with previous research, supporting the potential of blended instruction to enhance teaching and learning experiences. Furthermore, the study revealed that parents from both public and private schools acknowledged the usage of digital devices at home, with cellphones and tablets being the most common. While some parents expressed concerns about supervising their children's technology use, they recognized the opportunities and learning experiences that technology can offer. However, it was noted that Internet access at home was more prevalent among parents from private schools compared to those from public schools. Regarding the level of implementation of blended instruction, the teacher-respondents generally agreed on its effectiveness, with various indicators showing positive responses. Blended instruction was seen as an approach that could be implemented successfully in early childhood education (ECE) schools. Moreover, there were no significant differences observed based on the type of school or the profiles of the teacher-respondents, indicating a consistent acceptance of blended instruction across the studied variables. The study highlighted the positive perception and implementation of blended instruction among kindergarten teachers in both public and private schools. The findings suggest that blended instruction is a viable and effective pedagogical approach in early childhood education settings, with potential benefits for student motivation, learning outcomes, and engagement. These insights can contribute to the continuous improvement of teaching practices and the integration of technology in kindergarten classrooms, ultimately enhancing the educational experiences and outcomes of young learners.

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