ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Kindergarten Teachers' Perceptions of Technology Integration and the Extent of Availability of Technology and Media Resources in Kindergarten Classrooms

Mary Joyce C. Labrador[1*], Sam Dheniel C. Olis[1,2], Caryl Ann A. Omandac[13], Jonah Mavel M. Velez[2,4], Carmelito D. Sojor IV[2,5]
[1]Graduate School, Negros Oriental State University–Main Campus I, Dumaguete City, Philippines
[2]Negros Oriental State University–Main Campus I, Dumaguete City, Philippines
[*]labradormaryjoyce06@gmail.com; [2]samdhenielcolis@gmail.com; [3]carylann.omandac@deped.gov.ph; [4]jonah.velez@norsu.edu.ph; [5]carmelito.sojor@norsu.edu.ph

Date Submitted:
September 16, 2026

Date Accepted:
October 25, 2026

Date Published:
November 03, 2026

DOI:
10.5281/zenodo.23902889

ABSTRACT

Technology integration has become an important component of early childhood education, yet its success depends on teachers' perceptions and on the technological resources available to them. This study determined kindergarten teachers' perceptions of technology integration and the extent of availability of technology and media resources in kindergarten classrooms in selected public elementary schools of the Schools Division of Guihulngan City, Negros Oriental, Philippines, during School Year 2025–2026. It described the respondents' profile, assessed their perceptions in terms of beliefs, knowledge, and attitudes, determined the extent of availability of technology and media resources, and examined the relationship between perceptions and resource availability. A descriptive-correlational design was employed using a survey questionnaire adapted from Gilay and Anga (2025), administered to seven (7) kindergarten teachers selected through total enumeration. Data were analyzed using frequency, percentage, weighted mean, and the Pearson product-moment correlation coefficient. All respondents were female; most held master's units, had four to ten years of kindergarten teaching experience, and had attended at least one technology-related training in the past two years. The respondents strongly agreed with statements on their beliefs (WM = 4.62) and attitudes (WM = 4.95) toward technology integration and agreed with statements on their knowledge (WM = 4.48). Technology and media resources were often available (WM = 3.72), although their sufficiency for different learning styles and their maintenance and updating were rated only sometimes available. A strong, significant positive relationship was found between teachers' perceptions and the extent of availability of technology and media resources ($r = 0.76$, $p = 0.048$). The study concludes that kindergarten teachers hold positive perceptions of technology integration and that the availability of technology and media resources is significantly associated with these perceptions. Schools may strengthen technology integration by enhancing technological resources, providing continuous professional development, and improving maintenance and technical support systems.

Keywords: *Technology Integration, Kindergarten Teachers, Teachers' Perceptions, Technology and Media Resources, Early Childhood Education, Educational Technology*

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

INTRODUCTION

Technology integration has become an important component of modern education, particularly in early childhood education, where meaningful, interactive, and engaging learning experiences are essential for young learners. Educational technologies and media resources help improve instructional delivery, enhance learner engagement, and develop 21st-century skills. According to UNESCO (2023), technology-supported learning contributes to children's cognitive, social, emotional, and communication development when appropriately utilized in educational settings.

Teachers play a vital role in the successful integration of technology because they are responsible for aligning technological tools with instructional objectives. The Organisation for Economic Co-operation and Development (OECD, 2025) emphasized that teachers' technological competence, readiness, and positive attitudes toward technology significantly influence effective classroom integration, and Holincheck et al. (2024) found that teachers generally demonstrate willingness to integrate technology despite challenges related to technological support and access to devices. In the Philippines, the Department of Education continues to promote technology-enhanced instruction through digital education initiatives; however, schools still face limited technological resources, unstable internet connectivity, and insufficient training opportunities. Mane (2025) highlighted that teachers' technological readiness positively affects technology integration practices, while Casilao et al. (2025) noted that professional development programs improve teachers' competence and confidence in using technology for instruction.

Studies in early childhood education have shown that technology integration enhances learner participation, engagement, and classroom interaction. Pangilinan et al. (2025) reported that technology-supported activities improve the learning experiences of kindergarten learners, and Sibug et al. (2024) found that teachers generally hold positive perceptions of educational technologies despite challenges in infrastructure and support systems. Gilay and Anga (2025) likewise found that preschool teachers have positive perceptions of technology integration in terms of beliefs, knowledge, and attitudes, and that the availability of technology and media resources significantly influences successful technology integration in preschool classrooms.

Despite the growing emphasis on educational technology, limited studies have been conducted among kindergarten teachers in the Schools Division of Guihulngan City. This study therefore determined kindergarten teachers' perceptions of technology integration and the extent of availability of technology and media resources in kindergarten classrooms. Specifically, it sought to (1) describe the profile of kindergarten teachers in terms of age, sex, highest educational attainment, years of teaching experience, attendance in technology-related training in the past two years, and availability of technology in the classroom; (2) determine their perceptions of technology integration in classroom instruction in terms of beliefs, knowledge, and attitudes; (3) determine the extent of availability of technology and media resources in kindergarten classrooms; (4) examine whether a significant relationship exists between teachers' perceptions of technology integration and the extent of availability of technology and media resources; and (5) propose an action plan based on the findings. The null hypothesis that there is no significant relationship between teachers' perceptions and the extent of availability of technology and media resources was tested at the 0.05 level of significance.

The findings may help kindergarten teachers recognize the importance of technology integration in enhancing instruction and developing their technological competencies; guide school administrators in planning programs and procuring technological resources; serve as a basis for the Department of Education in strengthening policies and programs on technology integration in early childhood education; benefit kindergarten pupils through improved instructional practices; and provide a reference for future researchers studying technology integration, teacher perceptions, and educational resources.

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Literature Review

Theoretical Foundations of Technology Integration

This study is anchored on the Technology Acceptance Model (TAM) of Davis (1989), the Technological Pedagogical Content Knowledge (TPACK) framework of Mishra and Koehler (2006), and the Diffusion of Innovations Theory of Rogers (2003). TAM explains that technology adoption is influenced primarily by perceived usefulness, the degree to which a person believes that using a technology enhances job performance, and perceived ease of use, the degree to which a technology is perceived as easy to understand and operate. These beliefs shape attitudes toward technology use, behavioral intention, and actual use. In early childhood education, teachers' perceptions of usefulness and ease of use affect their willingness to integrate digital technologies into classroom instruction, making TAM a lens for examining how kindergarten teachers' beliefs may influence their classroom technology practices.

Complementing TAM, the TPACK framework extends Shulman's (1986) concept of pedagogical content knowledge by incorporating technology knowledge as an essential component of effective teaching. It identifies seven interrelated domains of teacher knowledge: technological, pedagogical, and content knowledge, and their intersections in pedagogical content, technological content, technological pedagogical, and technological pedagogical content knowledge (Mishra & Koehler, 2006). Meaningful technology integration occurs when teachers combine these forms of knowledge in instruction; kindergarten teachers are therefore expected not only to possess technical skills but also to understand how technology supports developmentally appropriate teaching strategies and learning objectives.

The Diffusion of Innovations Theory further explains that the adoption of an innovation is influenced by its relative advantage, compatibility, complexity, trialability, and observability, as well as by communication processes, social influences, and environmental conditions (Rogers, 2003). In the context of this study, the theory provides a basis for understanding how the availability of technology and media resources and teachers' perceptions of innovation characteristics influence technology integration in kindergarten classrooms. Together, the three perspectives explain how teachers' perceptions, professional knowledge, and contextual conditions shape the integration and utilization of technology and media resources.

Teacher Profile and Technology Integration

Teachers' demographic characteristics are considered important factors influencing instructional practices and classroom technology integration. UNESCO (2023) noted that teachers' educational attainment, years of teaching experience, and technological exposure contribute to the successful implementation of technology-enhanced instruction, while OECD (2025) emphasized that teachers' age, educational attainment, and teaching experience influence their competence and confidence in using educational technologies, with younger teachers and those with higher qualifications demonstrating greater confidence with digital instructional tools. Adam and Nasri (2025) further explained that participation in technology-related seminars and professional development strengthens teachers' technological literacy and instructional competence.

In the Philippine context, Mane (2025) emphasized that teachers who regularly attend seminars and workshops on educational technology demonstrate greater confidence and competence in using digital instructional tools, and that educational attainment and teaching experience influence teachers' readiness. Casilao et al. (2025) likewise found that teachers who regularly participate in technology-related training show higher technological competence and better classroom integration practices. Holincheck et al. (2024) similarly reported that teachers with extensive technological exposure and professional development opportunities are more willing to integrate emerging technologies into instruction.

Among preschool teachers, Gilay and Anga (2025) found that educational attainment and attendance in technology-related training influence teachers' perceptions and technology integration practices, with teachers who have higher qualifications and adequate technological exposure demonstrating greater competence and

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

confidence in integrating technology into preschool classrooms. These studies suggest that teachers' professional preparation and training exposure are relevant to understanding their perceptions of technology integration.

Teachers' Perceptions of Technology Integration

Teachers' perceptions of technology integration significantly influence their willingness and readiness to use educational technologies. UNESCO (2023) emphasized that teachers who perceive technology as meaningful and beneficial are more likely to integrate digital tools effectively and to implement learner-centered, interactive strategies that promote creativity, collaboration, communication, and critical thinking. In terms of beliefs, Holincheck et al. (2024) found that teachers who believe technology improves learner engagement and instructional effectiveness are more willing to integrate digital tools, and OECD (2025) observed that teachers who strongly believe in the effectiveness of educational technologies are more willing to adopt innovative instructional strategies. Consistent with this, Duan et al. (2024) found that preservice teachers' positive beliefs about technology were associated with high intentions to integrate technology into their future teaching.

In terms of knowledge, Maksimova (2022) emphasized that teachers with sufficient technological knowledge demonstrate greater competence and confidence in using digital learning tools, while Mane (2025) found that teachers' technological knowledge significantly influences their readiness to use educational technologies. In terms of attitudes, OECD (2025) stated that teachers with positive attitudes toward technology are more likely to adopt innovative practices and maximize digital learning tools, and Maksimova (2022) revealed that teachers with favorable attitudes demonstrate greater motivation and enthusiasm in integrating technology into teaching and learning.

Philippine studies report similarly favorable perceptions. Pangilinan et al. (2025) found that kindergarten teachers believe technology enhances learner participation, creativity, and classroom interaction, and Sibug et al. (2024) revealed that Filipino teachers view educational technologies and artificial intelligence tools as contributing positively to instructional delivery and learner engagement despite challenges related to infrastructure and support systems. Gilay and Anga (2025) found that preschool teachers hold positive beliefs, adequate knowledge, and favorable attitudes toward technology integration, expressing enthusiasm for digital learning tools despite limitations in resources and support.

Availability of Technology and Media Resources

The availability of technology and media resources significantly affects classroom technology integration. UNESCO (2023) emphasized that access to technological devices, internet connectivity, and instructional media enables teachers to implement learner-centered and interactive strategies and contributes to equitable and inclusive learning opportunities. OECD (2025) found that schools with adequate technological infrastructure, internet connectivity, and updated media resources implement technology-enhanced instruction more effectively, while Adam and Nasri (2025) noted that the availability of technological devices and instructional media promotes innovative classroom practices. Holincheck et al. (2024), however, revealed that insufficient technological support and limited access to digital devices remain common barriers to classroom technology integration.

In the Philippine setting, Pangilinan et al. (2025) found that insufficient technological resources, unstable internet connectivity, and inadequate technical support negatively affect technology integration in kindergarten classrooms, and Casilao et al. (2025) observed that schools with adequate technological devices and instructional media demonstrate more effective classroom technology integration and improved learner engagement. Gilay and Anga (2025) revealed that teachers with access to laptops, projectors, internet connectivity, and digital learning materials demonstrate greater competence and confidence in using educational technologies effectively.

Teachers' Perceptions and the Availability of Technology and Media Resources

Teachers' perceptions of technology integration are closely associated with the availability of technological resources and support systems. UNESCO (2023) emphasized that teachers with sufficient access to technological resources tend to develop more positive perceptions and greater confidence in using digital tools, and OECD (2025) found that such teachers demonstrate more positive beliefs, greater technological competence,

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

and favorable attitudes toward classroom technology integration. Mane (2025) similarly reported that teachers' readiness and perceptions are significantly associated with the availability of technological resources and professional development opportunities, while Holincheck et al. (2024) noted that the availability of resources and support systems positively influences teachers' willingness to integrate emerging technologies.

Pangilinan et al. (2025) concluded that successful technology integration in kindergarten classrooms depends on both teachers' positive perceptions and adequate technology and media resources, and Gilay and Anga (2025) established a significant relationship between preschool teachers' perceptions of technology integration and the availability of technology and media resources. Although these studies consistently link perceptions and resources, little is known about this relationship among kindergarten teachers in the Schools Division of Guihulngan City, a gap that the present study addresses.

Conceptual Framework

The conceptual framework of the study, presented in Figure 1, illustrates the relationships among the variables under investigation. It proposes that kindergarten teachers' profile (age, educational attainment, years of teaching experience, and relevant training), the extent of availability of technology and media resources (hardware, software, internet connectivity, and instructional media), and teachers' perceptions of technology integration (perceived usefulness, perceived ease of use, and attitude toward technology) influence the extent of technology integration in kindergarten classrooms in terms of planning, implementation, and assessment.

The study also recognizes administrative support, professional development, and technical support as possible moderating factors that may strengthen or weaken these relationships. The findings, in turn, serve as the basis for an action plan of proposed strategies and interventions to enhance technology integration in kindergarten classrooms.

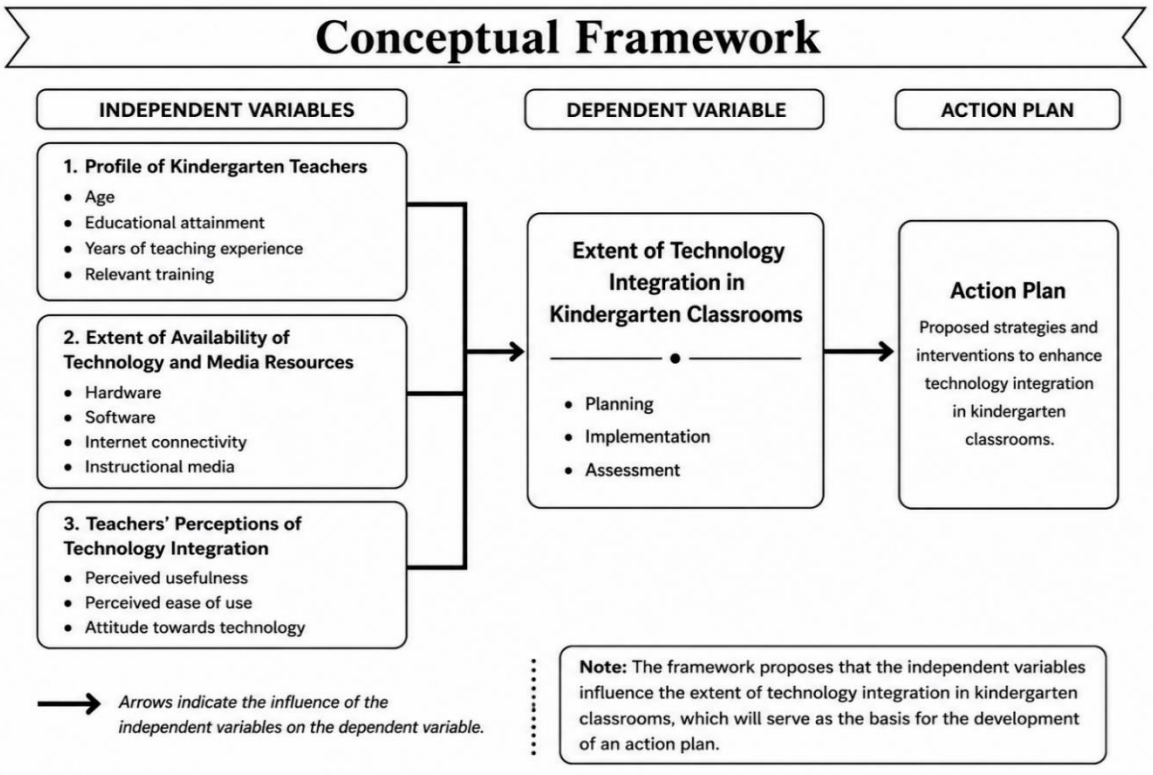


Figure 1. *Conceptual Framework of the Study*

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

METHODS

Research Design

The study employed a quantitative descriptive-correlational research design using the survey method. The descriptive component described the respondents' profile, their perceptions of technology integration in terms of beliefs, knowledge, and attitudes, and the extent of availability of technology and media resources in kindergarten classrooms, while the correlational component determined the relationship between teachers' perceptions and the availability of technology and media resources. The quantitative approach was deemed appropriate because it allowed the researchers to collect numerical data, quantify responses, and systematically describe the variables under investigation.

Research Locale

The study was conducted in seven public elementary schools under Cluster 8 of the Schools Division of Guihulngan City, Department of Education, during School Year 2025–2026: Benil-iwan, Bongao, Budlasan, Calabaclabacan, Calupa-an, Panagtugas, and Trinidad Elementary Schools. Guihulngan is a component city in the northern part of Negros Oriental, Philippines, composed of 33 barangays. The Schools Division of Guihulngan City comprises 104 public elementary and secondary schools organized into ten clusters for administrative and supervisory purposes. The cluster was selected because it provided accessible and relevant kindergarten classroom settings for examining teachers' perceptions of technology integration and the availability of technology and media resources.

Participants and Sampling Technique

The respondents were seven (7) kindergarten teachers, one from each of the seven selected schools, chosen through total enumeration sampling. All identified kindergarten teachers in the selected schools were included because the population was small and manageable. To qualify, respondents had to be currently employed as kindergarten teachers in the Schools Division of Guihulngan City, actively teaching kindergarten learners during the conduct of the study, and willing to participate voluntarily, as evidenced by their informed consent. Because the findings are limited to the responses of the participating teachers, their accuracy depends on the honesty and sincerity of the respondents.

Research Instrument

The study used a survey questionnaire fully adapted from Gilay and Anga (2025). Part I gathered the respondents' profile: age, sex, highest educational attainment, years of teaching experience in kindergarten, number of technology-related trainings attended in the past two years, and availability of technology in the classroom. Part II measured teachers' perceptions of technology integration in terms of beliefs, knowledge, and attitudes (six items each) on a five-point Likert scale from 5 (Strongly Agree) to 1 (Strongly Disagree). Part III determined the extent of availability of technology and media resources through six indicators on accessibility, adequacy, usability, maintenance, and support, rated from 5 (Always Available) to 1 (Never Available). Weighted means were interpreted using the ranges in Table 1. Because the questionnaire was fully adapted from a previous study, pilot testing was not conducted; however, the instrument was validated by research experts and education professionals for clarity, relevance, and appropriateness, and their suggestions were incorporated before administration.

Table 1. *Scales for Interpreting Teachers' Perceptions and the Extent of Availability of Technology and Media Resources*

Scale	Range	Perceptions	Availability
5	4.50–5.00	Strongly Agree	Always Available
4	3.50–4.49	Agree	Often Available
3	2.50–3.49	Neither Agree nor Disagree	Sometimes Available
2	1.50–2.49	Disagree	Rarely Available

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Scale	Range	Perceptions	Availability
1	1.00–1.49	Strongly Disagree	Never Available

Data Gathering Procedure

Before data collection, the researchers secured permission from the Schools Division Superintendent of the Schools Division of Guihulngan City and the principals of the participating schools through a letter of request. Upon approval, the researchers personally administered the questionnaires to the respondents after orienting them on the objectives, purpose, and significance of the study. The respondents were assured of confidentiality, informed that participation was voluntary, and given adequate time to answer honestly and completely. The accomplished questionnaires were retrieved and checked for completeness and accuracy, and the data were organized, tabulated, analyzed, and interpreted.

Data Analysis

Frequency and percentage were used to describe the respondents' profile. The weighted mean was used to determine teachers' perceptions of technology integration in terms of beliefs, knowledge, and attitudes and the extent of availability of technology and media resources, interpreted using the scales in Table 1. The Pearson product-moment correlation coefficient (Pearson's *r*) was used to determine the relationship between teachers' perceptions and the extent of availability of technology and media resources, with the strength of the relationship interpreted as very weak (±0.00–0.19), weak (±0.20–0.39), moderate (±0.40–0.59), strong (±0.60–0.79), or very strong (±0.80–1.00). The null hypothesis was tested at the 0.05 level of significance.

Ethical Consideration

The study observed ethical standards and research protocols throughout its conduct. Formal permission was obtained from the Schools Division Superintendent and the school principals before data gathering. Participation was entirely voluntary, and informed consent was secured after the respondents were informed of the study's objectives, purpose, and significance. The identities, personal information, and responses of the respondents were treated with strict confidentiality and anonymity, kept secure from unauthorized access, and used solely for academic and research purposes. The researchers observed honesty, integrity, respect, and transparency in the collection, analysis, interpretation, and presentation of data, and safeguarded the rights, welfare, privacy, and dignity of the respondents throughout the research process.

RESULTS AND DISCUSSION

Profile of the Teacher-Respondents

Table 2 presents the profile of the respondents. Six (85.71%) respondents were 31–35 years old and one (14.29%) was 36–40 years old, indicating that the respondents were in their early to middle adult years with adequate teaching experience and professional maturity. This supports Mane (2025), who emphasized that teachers in this age group are generally adaptable to educational innovations and likely to participate in technology-related professional development, and Casilao et al. (2025), who found that teachers in early and middle adulthood tend to show greater readiness to use technology. All seven respondents (100%) were female, reflecting the common trend in early childhood education noted by UNESCO (2023), Pangilinan et al. (2025), and Gilay and Anga (2025), who reported that the early childhood workforce is predominantly female.

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Table 2. *Profile of the Teacher-Respondents (n = 7)*

Profile Variable	Frequency	Percentage (%)
Age		
31–35 years old	6	85.71
36–40 years old	1	14.29
Sex		
Female	7	100.00
Highest Educational Attainment		
With master's units	6	85.71
Master's degree holder	1	14.29
Years of Teaching Experience in Kindergarten		
1–3 years	1	14.29
4–6 years	3	42.86
7–10 years	3	42.86
Technology-Related Trainings Attended (Past Two Years)		
1 training	3	42.86
2 trainings	2	28.57
3 trainings	2	28.57
Total (per variable)	7	100.00

Six (85.71%) respondents had earned master's units and one (14.29%) held a master's degree, indicating the respondents' commitment to professional growth and continuous learning. This supports Casilao et al. (2025), who emphasized that teachers pursuing graduate studies are more likely to adopt innovative practices; Mane (2025), who found that higher educational attainment contributes to technological readiness and confidence; and OECD (2025), which highlighted that teachers engaged in advanced education are better equipped to respond to changing educational demands. In terms of kindergarten teaching experience, three (42.86%) respondents each had four to six years and seven to ten years, and one (14.29%) had one to three years, suggesting that most had developed adequate instructional competence and classroom management skills. This is consistent with Mane (2025) and OECD (2025), who linked teaching experience to teachers' confidence and readiness in using technology, and with Gilay and Anga (2025), who found that experienced preschool teachers held more positive perceptions of technology integration.

In the past two years, three (42.86%) respondents had attended one technology-related training, while two (28.57%) each had attended two and three trainings, showing that all respondents had participated in professional development related to educational technology. Such participation may contribute to teachers' confidence, readiness, and effectiveness in using digital instructional tools, consistent with Casilao et al. (2025), Mane (2025), and OECD (2025), who emphasized that technology-related training strengthens teachers' competence and their ability to adapt to technological advancements.

As shown in Table 3, all respondents (100%) reported having a laptop or computer in their classrooms, six (85.71%) each reported a projector or smart TV, internet access, and a printer, and two (28.57%) reported other resources such as Bluetooth speakers; none reported having tablets. These results indicate that most kindergarten classrooms have the basic technological resources needed for technology-enhanced instruction, although the absence of tablets and limited additional resources suggest constraints in diversified instructional technology. This is consistent with UNESCO (2023) and OECD (2025), which emphasized that access to devices, internet connectivity, and multimedia equipment supports technology integration, and with Pangilinan et al. (2025) and Gilay and Anga (2025), who found that the availability of technological resources promotes learner engagement and positively influences teachers' readiness for technology integration.

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Table 3. *Availability of Technology in Kindergarten Classrooms (n = 7)*

Technology Resource	Frequency	Percentage (%)
Laptop/computer	7	100.00
Projector/smart TV	6	85.71
Internet access	6	85.71
Printer	6	85.71
Others (Bluetooth speaker)	2	28.57
Tablet	0	0.00

Respondents could indicate more than one resource; percentages are based on the seven respondents.

Teachers' Perceptions of Technology Integration

Table 4 presents the respondents' perceptions of technology integration. In terms of beliefs, the respondents strongly agreed (composite mean = 4.62). They gave the highest rating to the statement that using technology in the classroom enhances student engagement (WM = 5.00), followed by statements that technology provides valuable individualized learning opportunities, promotes collaboration and communication among children, and helps children engage more effectively with their materials (WM = 4.71 each). The statement that technology presents challenges that must be addressed received the lowest rating (WM = 4.00, Agree). These results indicate highly favorable beliefs about technology as a tool for engagement, collaboration, and individualized learning, while also recognizing its challenges. This is consistent with UNESCO (2023), Pangilinan et al. (2025), and Holincheck et al. (2024), who reported that teachers value technology for improving engagement and instructional effectiveness, and with Gilay and Anga (2025), whose preschool teacher-respondents strongly agreed that technology supports teaching and learning.

Table 4. *Teachers' Perceptions of Technology Integration in Terms of Beliefs, Knowledge, and Attitudes*

Indicators	WM	Descriptive Equivalent
Beliefs		
Using technology in the classroom enhances student engagement.	5.00	Strongly Agree
Technology provides valuable individualized learning opportunities for children.	4.71	Strongly Agree
Technology promotes collaboration and communication among children in the classroom.	4.71	Strongly Agree
Technology supports and supplements traditional teaching methods such as lectures and textbooks.	4.57	Strongly Agree
Using technology in the classroom presents challenges that must be addressed.	4.00	Agree
Digital educational aids are focused on helping children learn and engage more effectively with their materials.	4.71	Strongly Agree
Composite Mean	4.62	Strongly Agree
Knowledge		
I feel confident in my ability to use technology effectively in the classroom.	4.43	Agree
I have received adequate training to effectively use technology in the classroom.	4.29	Agree
I feel comfortable troubleshooting technology issues that arise in the classroom.	4.14	Agree
I have a good understanding of how to integrate technology into lesson plans.	4.86	Strongly Agree
I stay up to date with the latest technology trends and advancements to enhance my teaching practices.	4.43	Agree
I believe that an increased knowledge of technology would positively impact my teaching practices.	4.71	Strongly Agree

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Indicators	WM	Descriptive Equivalent
Composite Mean	4.48	Agree
Attitudes		
I believe that using technology in the classroom can help prepare children for a future career.	5.00	Strongly Agree
I feel confident in my ability to integrate technology into my teaching practices in a meaningful way.	4.71	Strongly Agree
I believe that technology can help to better engage children in the learning process.	5.00	Strongly Agree
I feel that using technology in the classroom is an important aspect of modern education.	5.00	Strongly Agree
I feel excited about incorporating new technology tools into my teaching practices.	5.00	Strongly Agree
I believe that using technology in the classroom can enhance student learning outcomes.	5.00	Strongly Agree
Composite Mean	4.95	Strongly Agree

WM = weighted mean; n = 7.

In terms of knowledge, the respondents agreed (composite mean = 4.48). They strongly agreed that they have a good understanding of how to integrate technology into lesson plans (WM = 4.86) and that increased technological knowledge would positively impact their teaching (WM = 4.71). They agreed that they feel confident using technology effectively and stay up to date with technology trends (WM = 4.43 each) and that they have received adequate training (WM = 4.29), while comfort in troubleshooting technology issues received the lowest rating (WM = 4.14). These results suggest that the respondents possess adequate technological knowledge and value continuous learning, although troubleshooting remains a relative area of difficulty. This supports Mane (2025), who emphasized that technological knowledge influences teachers' ability to integrate technology; Casilao et al. (2025), who found that training enhances teachers' confidence with digital tools; OECD (2025), which highlighted the importance of continuously updating technological knowledge; and Gilay and Anga (2025), who reported that preschool teachers possess adequate knowledge of educational technologies.

In terms of attitudes, the respondents strongly agreed (composite mean = 4.95). Five statements received the highest possible rating (WM = 5.00): that technology can help prepare children for future careers, better engage children in learning, serve as an important aspect of modern education, generate excitement about new tools, and enhance student learning outcomes. Confidence in integrating technology meaningfully received a WM of 4.71, still interpreted as Strongly Agree. These results indicate that the respondents are highly motivated and willing to integrate educational technologies. This is consistent with UNESCO (2023) and OECD (2025), which associated positive teacher attitudes with effective technology integration and innovative instruction; Holincheck et al. (2024), who found that teachers show enthusiasm for emerging technologies; and Gilay and Anga (2025), whose preschool teacher-respondents strongly agreed with statements reflecting positive attitudes toward technology integration.

Extent of Availability of Technology and Media Resources

As shown in Table 5, technology and media resources in kindergarten classrooms were often available (composite mean = 3.72). The indicators stating that classroom technology and media resources are up to date and reliable and that the school provides ongoing support and training for teachers both obtained the highest weighted mean (WM = 4.00, Often Available), followed by the sufficiency of resources to meet the needs of all children and their ease of access and use (WM = 3.86 each). However, the sufficiency of resources to support all types of learning styles and their maintenance and updating received the lowest ratings (WM = 3.29 each), interpreted as Sometimes Available.

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

Table 5. *Extent of Availability of Technology and Media Resources in Kindergarten Classrooms*

Indicators	WM	Descriptive Equivalent
The technology and media resources available in my classroom are up-to-date and reliable.	4.00	Often Available
My classroom has sufficient technology and media resources to meet the needs of all children.	3.86	Often Available
The technology and media resources in my classroom are easy to access and use.	3.86	Often Available
My school provides ongoing support and training for teachers to effectively use technology and media resources in the classroom.	4.00	Often Available
The available technology and media resources in my classroom are sufficient to support all types of student learning styles.	3.29	Sometimes Available
The technology and media resources in my classroom are well-maintained and updated.	3.29	Sometimes Available
Composite Mean	3.72	Often Available

WM = weighted mean; n = 7.

These findings imply that kindergarten classrooms generally have access to the technological devices and media resources needed for instruction, supported by ongoing school training. Limitations remain, however, in the sufficiency of resources for different learning styles and in the maintenance and updating of classroom technologies, indicating a need for continuous improvement in technological support systems. This is consistent with UNESCO (2023), which emphasized that available technological resources and support systems are essential for effective technology integration; OECD (2025), which reported that schools with adequate infrastructure and continuous technical support implement technology-enhanced instruction more successfully; Pangilinan et al. (2025), who linked resource availability to learner engagement and participation; and Gilay and Anga (2025), who found that technology and media resources were generally available in preschool classrooms and influenced teachers' readiness to integrate technology.

Relationship between Teachers' Perceptions and the Availability of Technology and Media Resources

Table 6 shows a strong positive relationship between teachers' perceptions of technology integration and the extent of availability of technology and media resources ($r = 0.76$). Because the p-value of 0.048 was lower than the 0.05 level of significance, the null hypothesis was rejected, indicating a significant relationship: teachers who reported greater availability of technology and media resources tended to hold more favorable perceptions of technology integration.

Table 6. *Relationship between Teachers' Perceptions of Technology Integration and the Extent of Availability of Technology and Media Resources*

Variables Correlated	Pearson's *r*	*p*-value	Decision on Ho	Interpretation
Teachers' perceptions of technology integration and extent of availability of technology and media resources	0.76	0.048	Reject Ho	Strong positive; significant

n = 7; significant at $p < 0.05$.

These findings imply that greater access to technological devices, instructional media, internet connectivity, and technological support is associated with more positive perceptions and greater confidence, readiness, and willingness among teachers to integrate educational technologies, so that improving the availability and accessibility of these resources may strengthen technology integration practices. This result is consistent with UNESCO (2023), which emphasized that access to adequate technological resources enhances teachers' confidence and willingness to use educational technologies; OECD (2025), which reported that schools with sufficient infrastructure and support foster positive teacher perceptions; Mane (2025), who found that teachers'

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 11 (November 2026)

readiness and perceptions are influenced by resource availability and professional development; and Gilay and Anga (2025), who likewise found a significant relationship between preschool teachers' perceptions of technology integration and the availability of technology and media resources.

CONCLUSION

The kindergarten teacher-respondents in the selected schools of the Schools Division of Guihulngan City were all female, professionally experienced, and academically prepared, as reflected in their years of teaching and their pursuit of graduate education, and all had attended technology-related training in the past two years. They held highly favorable perceptions of technology integration, particularly in their beliefs and attitudes, and demonstrated adequate technological knowledge, indicating their capability to integrate technology and instructional media into teaching and learning.

Technology and media resources were generally available in kindergarten classrooms, but limitations existed in their adequacy for diverse learning styles and in their maintenance and updating. The significant positive relationship between teachers' perceptions and the extent of availability of technology and media resources implies that greater access to technological resources is associated with more positive perceptions, stronger readiness, and increased confidence among kindergarten teachers in integrating technology. These findings contribute evidence from a kindergarten context that technology integration is shaped not only by teachers' dispositions but also by the resources and support available to them.

Recommendation

In light of the findings and conclusions, school administrators may continue strengthening technology integration programs by providing updated technological devices, instructional media, and stable internet connectivity in kindergarten classrooms, and by establishing regular maintenance and technical support systems to ensure the accessibility, functionality, and sustainability of these resources. The Department of Education may intensify its support for educational technology initiatives through additional seminars, workshops, and training programs that enhance teachers' technological competence and instructional preparedness.

Kindergarten teachers may continue improving their technological knowledge and skills, particularly in troubleshooting, through active participation in professional development activities, and may maximize the use of available technological resources and digital tools to improve learner engagement, participation, and meaningful learning experiences. Future researchers may conduct similar studies involving larger populations, different educational settings, and additional variables related to technology integration in early childhood education to validate and extend the present findings.

Based on the knowledge dimension (composite mean = 4.48) and the resources rated only sometimes available, the study proposes an action plan to enhance teachers' technological knowledge and improve the availability of technology and media resources. It includes quarterly training-workshops on technology integration, digital tools, and educational applications; first-semester hands-on sessions on basic troubleshooting and equipment maintenance led by the ICT coordinator; encouragement of participation in webinars, seminars, and online courses throughout the school year; procurement of additional devices and instructional media such as tablets, projectors, speakers, and internet resources with support from the parent-teacher association, stakeholders, and the local government unit; a monthly monitoring and maintenance schedule for technological equipment; a school-based technical support team; and quarterly classroom observations to monitor and evaluate technology use. Success may be gauged through improved technological skills and confidence among teachers, independent resolution of basic technology concerns, increased participation in technology-related professional development, greater availability of functional and updated resources, and increased and effective use of technology in kindergarten instruction.

References

Adam, N. A., & Nasri, N. M. (2025). Technology integration and digital literacy among teachers in modern education. *International Journal of Educational Technology and Innovation, 12*(1), 45–58. Could not be verified online — please confirm author names, title, and source details against the original publication.

Casilao, M. A., Satojito, J. P., & Martir, R. L. (2025). Professional development and technology integration practices among elementary teachers in the Philippines. *Philippine Journal of Educational Research, 18*(2), 67–81. Could not be verified online — please confirm author names, title, and source details against the original publication.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Duan, S., Exter, M., & Li, Q. (2024). In their ideal future, are preservice teachers willing to integrate technology in their teaching and why? *TechTrends, 68*(4), 734–748. https://doi.org/10.1007/s11528-024-00978-7

Gilay, A. T., & Anga, A. S. (2025). Teachers' perception on technology integration and its availability in preschool learning environment. *European Journal of Education Studies, 12*(12). https://doi.org/10.46827/ejes.v12i12.6450

Holincheck et al. (2024). Complete reference needed — cited in the thesis but missing from its reference list.

Maksimova, O. A. (2022). Teachers' technological competence and attitudes toward educational technology integration. *International Journal of Emerging Technologies in Learning, 17*(4), 112–126. Could not be verified online — please confirm author names, title, and source details against the original publication.

Mane, E. B. (2025). Teachers' readiness and technology integration practices in Philippine basic education. *Philippine Social Science and Education Review, 10*(1), 88–102. Could not be verified online — please confirm author names, title, and source details against the original publication.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Organisation for Economic Co-operation and Development. (2025). *Digital education outlook 2025: Technology integration and educational innovation*. OECD Publishing. Could not be verified — OECD's Digital Education Outlook was published in 2023 and 2026, not 2025. Please confirm the exact OECD source.

Pangilinan, J. R., Cruz, M. T., & Santos, P. L. (2025). Technology integration in kindergarten classrooms in the Philippines. *Journal of Early Childhood and Basic Education, 14*(2), 54–70. Could not be verified online — please confirm author names, title, and source details against the original publication.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4–14. https://doi.org/10.3102/0013189X015002004

Sibug, V. B., Vital, V. P., Miranda, J. P. P., Fernando, E. Q., Gamboa, A. B., Hernandez, H. E., Bansil, J. A., Penecilla, E. M., & Gonzales, D. D. (2024). Teachers' perspectives on integrating AI tools in classrooms: Insights from the Philippines. In *Proceedings of the 32nd International Conference on Computers in Education*. Asia-Pacific Society for Computers in Education. https://doi.org/10.58459/icce.2024.4964

UNESCO. (2023). *Global education monitoring report 2023: Technology in education: A tool on whose terms?* https://doi.org/10.54676/UZQV8501