| **RESEARCH ARTICLE**

ICT Integration Competencies and Motivation to Use Technology among Public Elementary School Teachers

Kaitlin Marie Opingo

Cebu Technological University, Philippines

Corresponding Author: Kaitlin Marie Opingo, **E-mail**: abiyyuarib29@gmail.com

| **ABSTRACT**

This study examined the ICT integration competencies and motivation to use ICT among public elementary school teachers. Specifically, it described the respondents' demographic and professional profiles, assessed their level of ICT integration competencies in terms of preparation, production, instruction, development, and issues, and determined their level of motivation to use ICT in terms of intrinsic motivation, extrinsic motivation, and amotivation. It also tested the relationship between the respondents' profiles and their ICT integration competencies and motivation to use ICT. A descriptive–correlational research design was employed, with data gathered from 173 teachers using a structured questionnaire. Results revealed that teachers demonstrated a very high level of ICT integration competencies across all areas. Both intrinsic and extrinsic motivation to use ICT were also rated very high, although some challenges contributing to amotivation were noted. Furthermore, ICT integration competencies were not significantly related to teachers' profiles, while motivation to use ICT was significantly influenced by school assignment and number of relevant trainings attended. The findings highlight the importance of institutional support and continuous professional development in promoting effective ICT integration in teaching.

| **KEYWORDS**

ICT Integration, Teacher Competencies, Motivation to Use ICT, Elementary School Teachers, Educational Technology, Professional Development

Introduction

The accelerating pace of digital transformation had fundamentally reshaped basic education, redefining how teaching and learning were designed, delivered, and experienced in the 21st-century classroom. As learners became increasingly immersed in technology-rich environments characterized by multimedia platforms, digital resources, and interactive applications, the integration of Information and Communication Technology (ICT) in instruction had shifted from being optional to being pedagogically indispensable. Empirical evidence consistently showed that when ICT was meaningfully integrated into teaching, it enhanced learner engagement, supported deeper understanding, and promoted active participation, thereby making instruction more dynamic, responsive, and learner-centered.

In this evolving educational landscape, teachers played a central role in bridging technology and meaningful learning experiences. Their capacity to utilize ICT tools effectively directly influenced instructional quality, learner engagement, and learning utcomes, particularly in foundational areas such as literacy and numeracy (OECD, 2022; UNESCO, 2023). Teachers were expected not only to possess basic technological skills but also to integrate ICT purposefully into lesson planning, instructional delivery, and assessment in ways that aligned with curriculum standards and learning

competencies. However, despite the recognized pedagogical value of ICT, many teachers continued to encounter difficulties in its integration. Limited technical skills, insufficient access to sustained professional development, unfamiliarity with evolving digital tools, and apprehension arising from low confidence were frequently identified as major barriers to effective ICT use (World Bank, 2021). These challenges did not only restrict the depth and consistency of ICT integration in classrooms but also weakened teachers' self-efficacy, particularly their confidence in using technology to support curriculum-aligned instruction in literacy and numeracy (Bandura, 1997; UNESCO, 2022).

At the global level, international education systems increasingly emphasized ICT competence as a core teaching standard. UNESCO (2023) reported that nearly 90% of countries had incorporated ICT competencies into their national teacher standards in response to rapid technological advancement and changing learner needs. Similarly, the Organization for Economic Co-operation and Development (OECD, 2022) documented that ICT-enhanced instruction significantly improved learner engagement and motivation, with learning participation increasing by as much as 30% in technology- supported classrooms. Despite these global initiatives, disparities persisted in teachers' readiness to integrate ICT, particularly in developing education systems where access, training, and curriculum alignment remained uneven. At the national level, the Philippine education system had intensified efforts to institutionalize ICT integration through curriculum reforms and digital transformation initiatives. Under the MATATAG Curriculum and the Department of Education's ICT Transformation Roadmap, technology-supported pedagogy was positioned as a core requirement for delivering inclusive and responsive basic education. However, national data revealed persistent gaps in teacher readiness. The World Bank (2021) reported that only 26% of Filipino teachers expressed confidence in using ICT for instructional purposes, indicating a substantial need for targeted professional development. While policies promoted ICT integration, variations in teachers' ICT skills, curriculum knowledge, and motivation to use technology continued to affect instructional effectiveness and self-efficacy.

At the regional level, similar challenges were evident in Central Visayas. Data from the Department of Information and Communications Technology (DICT) Region VII showed that only 37% of teachers in the region demonstrated advanced ICT proficiency (DICT, 2022). Although improvements in internet connectivity and hardware availability had been gradually observed, many teachers still struggled with effective ICT integration due to limited training opportunities, inconsistent access to digital tools, and insufficient curriculum literacy, particularly in literacy and numeracy instruction. These conditions highlighted a disconnect between ICT availability and teachers' ability to integrate technology in ways that were pedagogically and curricularly sound.

At the local level, public elementary schools in the Schools Division of Cebu Province, particularly in Minglanilla District I, reflected these broader regional and national concerns. Classroom observations, school reports, and division-level assessments revealed that while ICT resources were increasingly present in schools, their instructional use remained inconsistent. Many teachers relied on basic digital functions and exhibited limited confidence in integrating ICT to support literacy and numeracy competencies. This situation highlighted a critical gap between policy expectations and classroom realities: ICT integration was encouraged, yet teachers' ICT integration competencies, curriculum knowledge, motivation to use ICT, and self-efficacy had not been comprehensively examined using empirical data within the local context. The absence of localized, data-driven evidence made it difficult for school leaders to design responsive and needs-based teacher development programs.

Given these conditions, a clear research gap was established. While global and national studies had examined ICT integration and teacher self-efficacy independently, limited empirical research had simultaneously investigated ICT integration competencies, curriculum knowledge in literacy and numeracy, motivation to use ICT, and self-efficacy among public elementary school teachers at the district level. More specifically, no comprehensive study had been conducted in Minglanilla District I that analyzed how these variables interrelated and influenced teachers' professional confidence and instructional practices. This gap necessitated a systematic investigation grounded in current data and contextual realities.

In addressing this gap, the scope of the study was delimited to public elementary school teachers handling Kindergarten to Grade 3 in selected schools within Minglanilla District I, Schools Division of Cebu Province, during School Year 2025–2026. The study focused on assessing teachers' ICT skills, ICT integration competencies, curriculum knowledge in literacy and numeracy, motivation to use ICT, and self-efficacy, without extending to learner achievement outcomes or experimental interventions. These delimitations ensured that the investigation remained focused on teachers' competencies and perceptions as bases for professional development. Decision-making in basic education. By generating empirical data on teachers' ICT integration competencies, curriculum knowledge, motivation, and self-efficacy, the study provided school administrators, education supervisors, and policymakers with concrete information for designing targeted teacher development programs. The findings also offered teachers opportunities for professional reflection and growth, while indirectly supporting learners through improved instructional practices aligned with curriculum standards and digital

innovation. Guided by these considerations, the study was conducted to assess the ICT integration competencies and curriculum knowledge on literacy and numeracy of public elementary school teachers and to determine their effects on motivation to use ICT and self-efficacy. Through this investigation, the research aimed to generate empirical evidence that would serve as a sound basis for proposing a responsive and contextually grounded teacher development program capable of strengthening ICT-enabled, curriculum-aligned instruction in public elementary schools.

Literature Review

Teachers' profiles and demographic and exposure to ICT-related trainings have been consistently linked to their ability and willingness to integrate ICT in classroom instruction. Studies indicate that teachers with higher educational attainment and more ICT-related trainings tend to demonstrate stronger ICT integration competencies and greater confidence in using technology for lesson preparation, instructional delivery, and assessment (Mwei, 2020). Similarly, research conducted in higher and basic education contexts shows that age and years of teaching experience may influence ICT competence, with younger or mid-career teachers often reporting higher digital confidence, while veteran teachers rely more on pedagogical experience than technological skills (Dominek et al., 2024). Exposure to seminars, workshops, and institutional ICT support has also been found to play a crucial role in strengthening teachers' readiness to integrate ICT regardless of school assignment or grade level handled.

In terms of ICT integration competencies, literature commonly categorizes these into areas such as preparation, production, instruction, development, and issues or challenges. Preparation competencies include lesson planning, selecting appropriate digital tools, and aligning ICT with curriculum goals, while production focuses on creating digital learning materials such as presentations, worksheets, and multimedia content. Studies show that teachers with higher ICT self-efficacy are more effective in these domains, particularly in instructional use and classroom implementation (Wang & Zhao, 2021). However, several studies also report persistent issues and challenges, including lack of infrastructure, limited technical support, insufficient training, and time constraints, which negatively affect teachers' ability to fully develop and sustain ICT integration in teaching (Nandi et al., 2020). Regarding motivation to use ICT, recent literature emphasizes the importance of intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation such as enjoyment, interest, and perceived usefulness of ICT has been found to strongly predict sustained and meaningful technology integration in teaching. Teachers who believe that ICT enhances student engagement and learning outcomes are more internally motivated to use it regularly (Fütterer et al., 2024). Extrinsic motivation, including institutional support, availability of resources, recognition, and professional development opportunities, also positively influences ICT use, particularly in formal school settings (Thaanyane & Jita, 2024). Conversely, amotivation arises when teachers perceive ICT integration as burdensome due to technical difficulties, lack of confidence, or minimal administrative support, leading to resistance or minimal use of technology in instruction.

Methodology

This study employed a descriptive–correlational research design to examine the ICT integration competencies and motivation of public elementary school teachers. The descriptive component was utilized to determine the existing levels and characteristics of teachers', ICT integration competencies, motivation to use ICT, as these variables naturally occurred in the educational setting, without manipulation. This approach was appropriate as it allowed for the systematic and accurate description of phenomena, conditions, and participant characteristics in real-world contexts (Creswell & Creswell, 2023; McCombes, 2023a). The correlational component of the design was employed to determine the presence, strength, and direction of relationships among key variables of the study, particularly the relationships between ICT integration competencies and teachers' motivation to use ICT. This design enabled the examination of associations among variables without implying causation (Creswell & Creswell, 2023). The respondents consisted of public elementary school teachers from selected schools in Minglanilla District I, Schools Division of Cebu Province. A total enumeration sampling technique was used, wherein all teachers handling Kindergarten to Grade 3 during School Year 2025–2026 were included in the study. This approach ensured comprehensive representation of the target population, minimized sampling bias, and allowed the findings to reflect the actual conditions of the district (Creswell & Creswell, 2023; Polit & Beck, 2021). ICT integration competencies were measured across five sub-variables: preparation, production, instruction, development, and issues, adapted from established ICT integration instruments (Hsu, 2010; Oparah et al., 2017). Teachers' motivation to use ICT was assessed through intrinsic motivation, extrinsic motivation, and amotivation, using adapted motivation-related scales relevant to ICT integration in teaching.

Results

Table 1. Age of the Respondents

Age (in years)	f	%
56–65	14	8.09
46–55	33	19.08
36–45	64	36.99
26–35	62	35.84
Total	173	100.00

Table 1 presented the age distribution of the respondents. The results showed that the largest group of teachers belonged to the 36–45 age bracket, with 64 respondents. This was closely followed by those aged 26–35 years, with 62 respondents. Teachers aged 46–55 years accounted for 33 respondents, while the smallest group consisted of those aged 56–65 years, with 14 respondents. The results indicated that the majority of the respondents were within the early to middle adulthood stage, suggesting that most teachers were in their active and productive years in the teaching profession.

Table 2. Sex of the Respondents

Sex	f	%
Male	1	0.58
Female	172	99.42
Total	173	100.00

Table 2 presented the sex distribution of the respondents. The results showed that the respondents were predominantly female, with a frequency of 172, while only one respondent was male. This indicated that the study respondents were largely composed of female respondents, reflecting a highly female-dominated group among the total of 173 respondents. This distribution is consistent with the general demographic trend in the teaching profession, particularly in early childhood and elementary education, where female educators constitute the majority of the workforce.

Table 3. Civil Status of the Respondents

Civil Status	f	%
Married	123	71.10
Single	147	84.97
Separated	3	1.73
Total	173	100.00

Table 3 presented the civil status of the respondents. The data showed that the largest group of respondents was single, with a frequency of 147. This was followed by married respondents, numbering 123. Only three respondents were classified as separated. The results indicated that most of the respondents were single, while a substantial number were married, and very few were separated among the 173 respondents.

Table 4. Highest Educational Attainment of the Respondents

Highest Educational Attainment	f	%
Doctorate Degree	1	0.58
With Doctorate Units	3	1.73
Master's Degree	15	8.67
With Master's Units	137	79.19
Bachelor's Degree	17	9.83
Total	173	100.00

Table 4 presented the highest educational attainment of the respondents. The results showed that most of the respondents had earned units toward a master's degree, with 137 teachers. This was followed by respondents who had completed a bachelor's degree, with 17 teachers, and those who had completed a master's degree, with 15 teachers. A smaller number of respondents had earned doctorate units, with three teachers, while only one respondent had completed a doctorate degree. Thus, the findings indicated that the majority of the respondents had pursued graduate-level education.

Table 5. Respondents' Number of Years in Teaching

Number of Years in Teaching	f	%
Above 15	52	30.06
11–15	36	20.81
6–10	65	37.57
1–5	18	10.40
Less than one year	2	1.16
Total	173	100.00

Table 5 showed that most of the respondents had been teaching for 6–10 years, followed by those with more than 15 years and 11–15 years of experience. Only a small number had 1–5 years of teaching experience, and very few had less than one year. Overall, the distribution indicated that the majority of the respondents had accumulated substantial teaching experience.

Table 6. Respondents' School

School	f	%
Bacay ES	17	9.83
Cadulawan ES	11	6.36
Cuanos ES	15	8.67
Guindaruhan ES	15	8.67
Lower Tungkop ES	11	6.36
Minglanilla Central ES	44	25.43
Tungkop ES	19	10.98
Upper Tungkop ES	11	6.36
Villa ES	30	17.34
Total	173	100.00

Table 6 presented the distribution of respondents according to their respective schools. The results showed that the largest number of respondents came from Minglanilla Central Elementary School, with 44 teachers. This was followed by Vito Elementary School, with 30 respondents, and Tungkop Elementary School, with 19 respondents. Calajoan Elementary School and Guindaruhan Elementary School each had 15 respondents, while Bacay Elementary School had 17 respondents. A smaller

number of respondents were from Cadulawan Elementary School, Lower Tunghaan Elementary School, and Upper Tunghaan Elementary School, each with 11 respondents.

Table 7. Grade Level Handled by the Respondents

Grade Level Handled	f	%
Grade 3	45	26.01
Grade 2	50	28.90
Grade 1	46	26.59
Kindergarten	32	18.50
Total	173	100.00

Table 7 presented the grade levels handled by the respondents. The results showed that the largest number of respondents handled Grade 2, with 50 teachers. This was followed by those handling Grade 1 and Grade 3, with 46 and 45 respondents, respectively. A smaller number of respondents handled Kindergarten, with 32 teachers.

Number of Relevant Trainings Attended	f	%
More than 5	113	65.32
3–4	47	27.17
1–2	12	6.94
None	1	0.58
Total	173	100.00

Table 8. Number of Relevant Trainings Attended by the Respondents

Table 8 presented the number of relevant trainings attended by the respondents. The results showed that most of the respondents had attended more than five relevant trainings, with 113 teachers. This was followed by respondents who attended three tofour trainings, with 47 teachers, and those who attended one to two trainings, with 12 teachers. Only one respondent reported having attended no relevant training. Thus, the distribution indicated that the majority of the respondents had participated in multiple professional development activities.

Table 9. Level of ICT Integration Competencies in Terms of Preparation

SN	Indicators	WM	SD	Verbal Description
1	Used the internet or information technology to search for information	4.60	0.57	Very High
2	Provide supplementary course material for students	4.50	0.56	Very High
3	Used a computer to create lecture notes, class material, and exam questions	4.50	0.56	Very High
	Aggregate Mean	4.56		Very High
	Aggregate Standard Deviation		0.56	

Table 9 presented the level of ICT integration competencies of the respondents in terms of preparation. The results showed that both indicators were rated Very High, with weighted means of 4.60 and 4.50. Using the internet or other information technology to search for information to provide supplementary course materials obtained the higher rating, while using a computer to create lecture notes, class materials, and examination questions also received a very high rating. The aggregate mean of 4.55 indicated that the respondents demonstrated a very high level of ICT integration competence in instructional preparation, with a low variability in responses as reflected by the aggregate standard deviation of 0.56.

Table 10. Level of ICT Integration Competencies in Terms of Production

SN	Indicators	WM	SD	Verbal Description
1	Used the computer to record and store music in my course material	4.61	0.54	Very High
2	Used presentation software to present course material in class	4.59	0.54	Very High
3	Followed the Competence Indicators of Grades 1–3 curricula to design course which was involving media	4.50	0.57	Very High
4	Solved hardware problems during class (e.g., no signal on the projector or the computer is down)	4.64	0.54	Very High
5	Spent time to select media or ICT material that fit the curriculum and lesson goals	4.64	0.50	Very High
6	Used e-mail, MSN, web page to contact with students or parents	4.66	0.54	Very High
7	Used e-mail or MSN to communicate with students	4.71	0.50	Very High
8	Used ICT to record students' learners' survival, skills, leaves or absences	4.53	0.58	Very High
	Aggregate Mean	4.61		Very High
	Aggregate Standard Deviation		0.54	

Table 10 presented the level of ICT integration competencies of the respondents in terms of production. The results showed that all indicators were rated Very High, with weighted means ranging from 4.50 to 4.71. The highest rating was obtained for the use of e-mail or online messaging tools to communicate with students, followed by the use of internet communication tools to contact students' parents and the ability to solve hardware problems during class. Other indicators, such as using computers to record or edit audio, utilizing presentation software, designing media-integrated lessons aligned with curriculum indicators, selecting appropriate ICT materials, and using ICT for record-keeping, were likewise rated very high. The aggregate mean of 4.61 indicated that the respondents demonstrated a very high level of ICT integration competence in instructional production, with low variability in responses as reflected by the aggregate standard deviation of 0.54.

SN	Indicators	WM	SD	Verbal Description
1	Analyzed students' learning progress in group activities in ICT-integrated lessons and included them in evaluation	4.60	0.50	Very High
2	Devised proper ways to track students' progress after ICT-integrated classes	4.58	0.51	Very High
3	Designed different evaluation criteria for students' ICT-related activities	4.54	0.51	Very High
4	Divided students into groups while teaching ICT-integrated lessons	4.58	0.56	Very High
5	Managed time in class to provide additional ICT lesson to make up for students' insufficient ICT capability	4.44	0.55	Very High
6	Designed different ICT learning activities for students with different achievement levels	4.73	0.49	Very High
7	Tried new strategies to increase students' level of concentration during ICT-integration classes	4.73	0.46	Very High
8	Ensured beforehand all the students have sufficient ICT resources and skills to complete the homework	4.58	0.56	Very High
9	Managed students' behavior and learning computer labs effectively	4.55	0.54	Very High
10	Discussed with other teachers about students' learning difficulties	4.57	0.59	Very High
11	As ICT-integrated classes are building students' understanding of course content knowledge, provided proper guidance to students	4.54	0.58	Very High
12	Took students to computer lab for classes	4.51	0.54	Very High
13	Reviewed my own ICT-integrated units and strategies as the class progressed	4.66	0.53	Very High
14	Asked students to use ICT tools for collecting information to do a project	4.54	0.51	Very High
15	Tried to use ICT to teach remedial lessons for academic problems	4.54	0.60	Very High
16	Provided worksheets for students when requiring the use of web information to complete the	4.57	0.57	Very High

SN	Indicators	WM	SD	Verbal Description
	homework			
17	Instructed students on how to search for information from the web for academic learning	4.57	0.57	Very High
18	Gave up ICT-integrated lessons for some units because of poor learning results	4.54	0.54	Very High
	Aggregate Mean	4.58		Very High
	Aggregate Standard Deviation		0.54	

Table 11. Level of ICT Integration Competencies in Terms of Instruction

Table 11 presented the level of ICT integration competencies of the respondents in terms of instruction. The results showed that all instructional indicators were rated Very High, with weighted means ranging from 4.44 to 4.73. The highest ratings were obtained for designing different ICT learning activities for students with varying achievement levels and for trying new strategies to increase students' concentration during ICT-integrated classes. These findings indicated that the respondents were able to adapt ICT-supported instruction to address learner diversity and to employ innovative approaches that sustained students' engagement during lessons. Other instructional practices were also rated very high, including the analysis and monitoring of students' learning progress in ICT-integrated lessons, the use of appropriate evaluation criteria for ICT-based activities, and the organization of students into groups during technology-enhanced instruction. The respondents likewise demonstrated strong competence in ensuring that students had adequate ICT resources and skills before assigning ICT-related tasks, managing student behavior and learning in computer laboratories, and collaborating with other teachers regarding students' performance in ICT-integrated classes. These practices reflected a systematic and reflective approach to instructional decision-making when using technology in the classroom. Furthermore, the very high ratings for integrating ICT into assessment, remedial instruction, project-based learning, and information-gathering activities suggested that ICT was not merely used as a presentation tool but was embedded across various instructional and assessment processes. The respondents' ability to review and improve their ICT-integrated lessons also indicated continuous instructional refinement and professional awareness in the use of technology for teaching. The aggregate mean of 4.58 confirmed that the respondents demonstrated a very high level of ICT integration competence in instructional practices. The low aggregate standard deviation of 0.54 further indicated consistency in responses, suggesting that the high level of instructional ICT integration was shared by most respondents. Overall, the findings implied that teachers were highly capable of using ICT to support instruction, assessment, classroom management, and learner engagement in a coherent and purposeful manner.

Table 12. Level of ICT Integration Competencies in Terms of Development

SN	Indicators	WM	SD	Verbal Description
1	Spent time to learn and practice ICT skills	4.69	0.46	Very High
2	Attended conferences or read journals to learn about ICT integration methods	4.64	0.48	Very High
3	Used online data base or online courses for professional development	4.65	0.49	Very High
	Aggregate Mean	4.66		Very High
	Aggregate Standard Deviation		0.48	

Table 12 presented the level of ICT integration competencies of the respondents in terms of development. The results showed that all indicators were rated Very High, with weighted means ranging from 4.64 to 4.69. The highest rating was obtained for spending time to learn and practice ICT skills, indicating a strong commitment to improving technological competence. Attending conferences or reading journals and using online databases or courses for professional development were likewise rated very high, reflecting active engagement in continuous learning. The aggregate mean of 4.66 and the low standard deviation of 0.48 indicated that respondents consistently demonstrated a very high level of ICT-related professional development.

SN	Indicators	WM	SD	Verbal Description
1	Reminded students the correct rules when they violated Internet etiquettes taught students	4.62	0.49	Very High
2	Taught and rules before they used the Internet	4.61	0.49	Very High
3	Taught students how to judge the reliability and accuracy of information before asking students to get online	4.78	0.43	Very High
4	Helped students evaluate the authenticity, reliability, and appropriateness of information from the Internet	4.65	0.48	Very High
5	Asked students to obey the intellectual property rights	4.69	0.48	Very High
6	Taught students to refuse to use pirated software or materials	4.60	0.55	Very High
7	Be aware of the problems of teenagers' addiction to the Internet and the bad website	4.65	0.49	Very High
8	Let students know how the possibility of using massive ICT tools affect health	4.60	0.49	Very High
9	Arranged time for students to rest during long period of computer usage	4.55	0.50	Very High
	Aggregate Mean	4.64		Very High
	Aggregate Standard Deviation		0.49	

Table 13. Level of ICT Integration Competencies in Terms of Issues

Table 13 presented the level of ICT integration competencies of the respondents in terms of issues. The results showed that all indicators were rated Very High, with weighted means ranging from 4.55 to 4.78. The highest rating was obtained for teaching students how to judge the reliability and accuracy of online information, which reflected a strong emphasis on developing learners' critical thinking and responsible use of digital resources. Indicators related to internet ethics, intellectual property rights, avoidance of pirated materials, and awareness of online risks were likewise rated very high, suggesting that the respondents consistently integrated ethical and safety considerations into ICT-supported instruction. In addition, the very high ratings for indicators related to health concerns and managing prolonged computer use indicated that the respondents were mindful of students' physical well-being while engaging in technology-based activities. The aggregate mean of 4.64 confirmed that the respondents demonstrated a very high level of competence in addressing ICT-related issues. The low aggregate standard deviation of 0.49 further indicated consistency in responses, suggesting that these competencies were commonly practiced among the respondents.

Table 14 presented the level of motivation to use ICT among the respondents in terms of intrinsic motivation. The results showed that all indicators were rated Very High, with weighted means ranging from 4.40 to 4.57. The highest rating was obtained for using ICT because of genuine enjoyment in exploring new digital tools for teaching, followed closely by feelings of fulfillment and accomplishment when ICT was successfully integrated into lessons. These findings indicated that the respondents were internally driven to use ICT, deriving satisfaction and enjoyment from technology- enhanced teaching. Other indicators related to creativity, excitement in discovering new instructional strategies, personal satisfaction from pupil engagement, and alignment of ICT use with personal commitment to quality education was likewise rated very high.

SN	Indicators	WM	SD	Verbal Description
1	I use ICT in my lessons because I genuinely enjoy exploring new digital tools for teaching	4.57	0.63	Very High
2	Integrating ICT in the classroom makes teaching more fulfilling for me	4.54	0.65	Very High
3	I feel excited whenever I discover new ways to use technology to support my pupils' learning	4.43	0.68	Very High
4	Using ICT helps me become more creative in designing activities for my pupils	4.43	0.68	Very High
5	I feel a sense of accomplishment when I successfully integrate ICT in a lesson	4.54	0.59	Very High
6	ICT integration allows me to express my passion for improving literacy and numeracy learning	4.45	0.60	Very High
7	I find personal satisfaction when my pupils engage actively with ICT-based lessons	4.40	0.63	Very High
8	Learning new ICT skills is enjoyable for me as a teacher	4.53	0.64	Very High
9	Using technology in class strengthens my confidence in my teaching abilities	4.44	0.53	Very High

SN	Indicators	WM	SD	Verbal Description
10	I feel motivated to use ICT because it aligns with my personal commitment to quality education	4.46	0.73	Very High
	Aggregate Mean	4.48		Very High
	Aggregate Standard Deviation		0.64	

Table 14. Level of Motivation to Use ICT in Terms of Intrinsic Motivation

The consistently high ratings indicated that respondents viewed ICT integration as meaningful rather than merely a requirement. The aggregate mean of 4.48 reflected a very high level of intrinsic motivation to use ICT, while the low aggregate standard deviation of 0.64 suggested that this strong motivation was consistently shared among the respondents.

Table 15 presented the level of motivation to use ICT among the respondents in terms of extrinsic motivation. The results showed that most indicators were rated Very High, with weighted means ranging from 4.42 to 4.71, while one indicator was rated High. The highest rating was obtained for access to available ICT resources in school, indicating that the presence of adequate technological resources strongly encouraged ICT integration. Indicators related to administrative encouragement, alignment with Department of Education expectations, professional development trainings, and recognition through performance evaluations were likewise rated very high. The indicator on external support from colleagues received a high rating, suggesting slightly less influence compared to other extrinsic factors. Nevertheless, the aggregate mean of 4.48 indicated that the respondents demonstrated a very high level of extrinsic motivation to use ICT. The relatively low aggregate standard deviation of 0.60 reflected consistency in responses, suggesting that external support systems, institutional expectations, and professional incentives collectively played a strong role in motivating ICT use among the respondents.

SN	Indicators	WM	SD	Verbal Description
1	I use ICT in the classroom because our school administration encourages or requires it	4.58	0.57	Very High
2	The support and recognition I receive from school leaders motivate me to integrate ICT	4.52	0.58	Very High
3	I use ICT because it helps me meet the expectations of the Department of Education	4.58	0.58	Very High
4	I am motivated to use ICT when I see it reflected positively in classroom observations or PMS ratings	4.50	0.59	Very High
5	Access to available ICT resources at school encourages me to use them in teaching	4.71	0.59	Very High
6	Professional development trainings in ICT motivate me to apply what I have learned in class	4.42	0.56	Very High
7	I feel encouraged to use ICT because parents appreciate digital learning activities for their children	4.45	0.54	Very High
8	I feel motivated to use ICT because it enhances my professional growth and career advancement	4.44	0.60	Very High
9	I am motivated to use ICT because it helps reduce manual work (e.g., checking, recording, presentations)	4.51	0.51	Very High
10	External support from colleagues motivates me to use ICT more regularly	4.14	0.85	High
	Aggregate Mean	4.48		Very High
	Aggregate Standard Deviation		0.60	

Table 15. Level of Motivation to Use ICT in Terms of Extrinsic Motivation

Table 16 presented the level of motivation to use ICT among the respondents in terms of amotivation. The results showed that most indicators were rated High, with weighted means ranging from 3.52 to 3.82, while one indicator was rated Moderate. The highest rating was obtained for uncertainty about whether ICT integration was worth the effort given existing challenges in the school context, followed closely by perceptions that ICT required excessive time and effort and concerns about technical disruptions during classes. These findings indicated that, despite generally positive motivation, respondents still experienced notable challenges that contributed to reduced drive or hesitation in ICT use. Indicators related to lack of confidence in technical skills, unreliable internet connectivity, limited digital tools, and feelings of being overwhelmed by ICT demands were likewise rated high, suggesting that infrastructural and competency-related concerns influenced respondents' motivation. The indicator on not seeing the relevance of ICT in teaching literacy and numeracy received a moderate rating, indicating comparatively lower

agreement with this concern. The aggregate mean of 3.61 reflected a high level of amotivation, while the relatively higher aggregate standard deviation of 0.92 suggested greater variability in responses, implying that the extent of amotivation differed among respondents.

SN	Indicators	WM	SD	Verbal Description
1	I sometimes avoid using ICT because I am unsure if it truly improves my pupils' learning	3.52	0.92	High
2	I feel overwhelmed when asked to use ICT in my lessons	3.64	1.03	High
3	I use ICT less often because I am not confident using technical skills	3.60	0.97	High
4	I feel that using ICT takes too much time and effort compared to traditional teaching approaches	3.72	0.89	High
5	I sometimes do not see the relevance of ICT in teaching literacy and numeracy	3.35	0.96	Moderate
6	I avoid ICT integration because technical problems usually disrupt my classroom	3.71	0.83	High
7	I do not feel motivated to use ICT when school internet connection is unreliable	3.55	1.04	High
8	I feel discouraged to use ICT when digital tools are limited or unavailable	3.58	0.84	High
9	I am uncertain whether ICT integration is worth the effort	3.82	0.83	High
10	I sometimes do not use ICT because I feel it complicates my teaching rather than supports it	3.61	0.92	High
	Aggregate Mean	3.61		High
	Aggregate Standard Deviation		0.82	

Table 16. Level of Motivation to Use ICT in Terms of Amotivation

Variables	χ^2-value	df	p-value	Decision	Remarks
Age	2.774	3	0.428	Failed to reject Ho	Not Significant
Civil Status	2.458	1	0.117	Failed to reject Ho	Not Significant
Highest Educational Attainment	2.146	2	0.342	Failed to reject Ho	Not Significant
Number of Years of Teaching	1.809	3	0.613	Failed to reject Ho	Not Significant
School	11.841	8	0.158	Failed to reject Ho	Not Significant
Grade Level Handled	3.968	3	0.265	Failed to reject Ho	Not Significant
Number of Relevant Trainings Attended	1.586	2	0.452	Failed to reject Ho	Not Significant

Table 17. Test of relationship between the profile of the respondents and their ICT Integration competencies

Table 17 presented the test of relationship between the profile of the respondents and their ICT integration competencies. The results showed that none of the profile variables, including age, civil status, highest educational attainment, number of years of teaching, school, grade level handled, and number of relevant trainings attended, had a statistically significant relationship with ICT integration competencies. All computed p- values were greater than the 0.05 level of significance, which led to the failure to reject the null hypotheses for all variables. These findings indicated that the respondents' ICT integration competencies were not significantly influenced by their demographic and professional characteristics. Regardless of differences in age, educational background, teaching experience, school assignment, grade level handled, or training exposure, the level of ICT integration competencies remained comparable among the respondents. This suggested that ICT integration competencies were consistently demonstrated across different respondent profiles.

Table 18. Test of relationship between the profile of the respondents and their level of motivation to use ICT

Variables	χ^2-value	df	p-value	Decision	Remarks
Age	7.882	6	0.247	Failed to reject Ho	Not Significant
Civil Status	3.897	2	0.142	Failed to reject Ho	Not Significant
Highest Educational Attainment	3.724	4	0.445	Failed to reject Ho	Not Significant

Variables	χ^2-value	df	p-value	Decision	Remarks
Number of Years of Teaching	7.483	6	0.278	Failed to reject Ho	Not Significant
School	42.349*	16	0.000	Reject Ho	Significant
Grade Level Handled	5.124	6	0.528	Failed to reject Ho	Not Significant
Number of Relevant Trainings Attended	9.769*	4	0.044	Reject Ho	Significant

Table 18 presented the test of relationship between the profile of the respondents and their level of motivation to use ICT. The results showed that age, civil status, highest educational attainment, number of years of teaching, and grade level handled did not have statistically significant relationships with motivation to use ICT, as all corresponding p-values were greater than the 0.05 level of significance. Consequently, the null hypotheses for these variables were not rejected. In contrast, the variables school and number of relevant trainings attended exhibited statistically significant relationships with motivation to use ICT. The school variable yielded a p-value of 0.000, while the number of relevant trainings attended yielded a p-value of 0.044, both of which were below the 0.05 level of significance. These findings led to the rejection of the null hypotheses for these variables. The results indicated that the respondents' level of motivation to use ICT differed significantly depending on their school assignment and their exposure to relevant training activities. This suggested that institutional context and professional development opportunities played an important role in shaping teachers' motivation to integrate ICT in instruction.

Discussion

The findings of the study revealed that the respondents were generally young to middle-aged, predominantly female, and professionally experienced, with most teachers having several years of teaching experience and having pursued graduate-level education. These demographic characteristics suggest a workforce that is both relatively mature and academically motivated. The high participation in relevant ICT-related trainings further indicates that teachers were given opportunities for professional development, which may have contributed to their readiness to integrate technology into instruction. Across all domains of ICT integration competencies preparation, production, instruction, development, and issues the respondents consistently demonstrated a very high level of competence. This suggests that ICT use among teachers was not limited to basic tasks but was deeply embedded in instructional planning, classroom delivery, assessment, professional growth, and the responsible and ethical use of technology. The consistently low standard deviations across these domains further indicate that these high levels of competence were shared by most respondents, reflecting a relatively uniform capacity for ICT integration within the group.

In terms of motivation to use ICT, the results showed that both intrinsic and extrinsic motivation were rated very high, indicating that teachers were strongly driven to integrate technology due to personal satisfaction, enjoyment, and professional commitment, as well as external factors such as administrative support, availability of resources, and institutional expectations. However, the presence of a high level of amotivation suggests that despite overall positive motivation, teachers still faced challenges related to time constraints, technical difficulties, limited resources, and uncertainty about the effort required for ICT integration. The tests of relationship further revealed that ICT integration competencies were not significantly related to any demographic or professional profile variables, implying that competence in ICT use was consistently demonstrated regardless of age, educational attainment, teaching experience, or training exposure. In contrast, motivation to use ICT was significantly influenced by school assignment and the number of relevant trainings attended, highlighting the importance of institutional context and access to professional development in sustaining teachers' motivation. These findings suggest that while teachers generally possess strong ICT competencies, continued institutional support and targeted training initiatives are crucial in enhancing motivation and addressing barriers to effective ICT integration in teaching.

Conclusion

The study concludes that teachers demonstrated a very high level of ICT integration competencies across all areas, including preparation, instruction, development, and ethical use of technology. These competencies were consistently observed regardless of respondents' demographic and professional profiles. Moreover, teachers showed very high intrinsic and extrinsic motivation to use ICT, driven by personal commitment and institutional support. Although challenges such as technical issues and time constraints contributed to some level of amotivation, motivation to use ICT was significantly influenced by school context and relevant training, highlighting the importance of sustained support and continuous professional development.

References

[1]. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman and Company.

[2]. Creswell, J. W., & Creswell, J. D. (2023). Research design: Qualitative, quantitative, and mixed methods approach (6th ed.). SAGE Publications.

[3]. Department of Information and Communications Technology. (2022). National ICT household survey: Regional results for Central Visayas (Region VII). DICT Philippines. https://dict.gov.ph

[4]. Dominek, J., Novák, J., & Havelka, M. (2024). Teachers' age, teaching experience, and digital competence: Implications for ICT integration in education. Education and Information Technologies, 29(2), 1–18. https://doi.org/10.1007/s10639-023-11984-2

[5]. Fütterer, T., Hoch, E., & Kunter, M. (2024). Teachers' intrinsic motivation for technology integration and its effects on instructional quality. Teaching and Teacher Education, 132, 104259. https://doi.org/10.1016/j.tate.2023.104259

[6]. Hsu, S. (2010). The relationship between teacher technology integration and professional development. Computers & Education, 55(3), 1221–1232. https://doi.org/10.1016/j.compedu.2010.05.007

[7]. McCombes, S. (2023a). Correlational research design. Scribbr. https://www.scribbr.com/methodology/correlational-research/

[8]. Mwei, K. M. (2020). Teacher characteristics and ICT integration in classroom instruction. International Journal of Education and Development Using Information and Communication Technology, 16(2), 1–15. https://www.learntechlib.org/p/217105/

[9]. Nandi, D., Hamilton, M., & Harland, J. (2020). Teacher preparedness and barriers to ICT integration in schools. Computers & Education, 144, 103700. https://doi.org/10.1016/j.compedu.2019.103700

[10]. Oparah, C. C., Falade, A. A., & Kolawole, E. B. (2017). Teachers' attitude toward ICT integration in teaching. Journal of Education and Practice, 8(15), 1–8. https://eric.ed.gov/?id=EJ1143837

[11]. Organisation for Economic Co-operation and Development. (2022). Education at a glance 2022: OECD indicators. OECD Publishing. https://doi.org/10.1787/3197152b-en

[12]. Polit, D. F., & Beck, C. T. (2021). Nursing research: Generating and assessing evidence for nursing practice (11th ed.). Wolters Kluwer.

[13]. Thaanyane, M., & Jita, L. C. (2024). Institutional support and teachers' extrinsic motivation for ICT integration. Education Sciences, 14(1), 87. https://doi.org/10.3390/educsci14010087

[14]. United Nations Educational, Scientific and Cultural Organization. (2022). Reimagining our futures together: A new social contract for education. UNESCO Publishing. https://www.unesco.org/en/futures-education

[15]. United Nations Educational, Scientific and Cultural Organization. (2023). Global education monitoring report 2023: Technology in education—A tool on whose terms? UNESCO Publishing. https://www.unesco.org/gem-report

[16]. Wang, S., & Zhao, Y. (2021). Teachers' ICT self-efficacy and classroom technology integration. Educational Technology Research and Development, 69(4), 1–21. https://doi.org/10.1007/s11423-021-09976-3

[17]. World Bank. (2021). Transforming Philippine basic education: An education sector analysis. World Bank Group. https://www.worldbank.org/en/country/philippines