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Teacher's Learning Tools and Level of Competencies in ICT Instruction

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***Abstract*—** The rapid advancement of Information and Communication Technology (ICT) in education has transformed the teaching and learning process in the 21st century. Teachers are challenged to cope with innovative practices to maximize the use of digital tools to support and enhance students' digital competencies and engagement. This study aims to determine the ICT learning tools utilized in ICT instruction, determine the level of competencies of teachers handling ICT, identify teachers' innovations in ICT instruction, and design lesson exemplars in ICT instruction. The results reveal that teachers use various hardware and software learning tools in ICT instruction. Overall, teachers are competent in handling ICT instruction. Teachers applied contextualization, gamification, computer-aided instruction, and the recognition of emerging digital technologies in ICT instruction. These are seen through their use of Strategic Intervention Materials (SIM), modules, and Learning Activity Sheets (LAS). An output, "Lesson Exemplars: Innovations of Teachers in Teaching ICT," was developed to help teachers reimagine classroom teaching through effective integration of technology. Therefore, schools should be provided with adequate ICT resources for learning. Also, policymakers should establish a methodical Innovation Enhancement and Resource Development Program to continuously enhance teachers' competence in ICT-related teaching-learning tools. The Department of Education may use the developed lesson exemplars to promote ICT instruction and support innovative teaching practices. Further research may be conducted to continuously explore advancements in emerging technologies that may enhance ICT teaching and learning.

***Keywords*—** ICT instruction, Lesson Exemplars, teachers' competence.

I. INTRODUCTION

The rapid advancement of Information and Communication Technology (ICT) in education has transformed the teaching and learning process in the 21st century. Teachers are challenged to cope with innovative practices to maximize the use of digital tools to support and enhance students' digital competencies and engagement.

Information and Communication Technology (ICT) integration in the teaching-learning process is an essential component in 21st century education. ICT tools help teachers access information and create digital learning environments that support students' knowledge acquisition and skill development (UNESCO, 2018). ICT integration enhances instructional delivery by providing opportunities for interactive, collaborative, and student-centered learning (Ghavifekr & Rosdy, 2015) and increases the opportunity of teaching, whether in the classroom or outside of the classroom context (Hsu & Wang, 2019). Moreover, the development of technology in education influences the materials used in the teaching-learning process, such as E-books, online resources, and other applications are used as supporting materials. ICT has made the learning environment more interactive, flexible, and innovative (Harper & Milman, 2016), and its availability in the classroom instruction plays a vital role in learning outcomes (Arante, 2018). In addition, the student learning is deeper and more meaningful when a range of interactive tools and resources are used (Barber et al., 2014). More so, teachers' training on the use of ICT contributes to increased digital competence among learners (Kaarakainan et al., 2018).

Teachers are expected to integrate information into their teaching, which requires competence in both subject matter and skills (Limon, 2014). The teachers' competencies represent the content and function of their professional obligations. However, in terms of ICT level of competence, teachers need to further

develop their ability to apply ICT-pedagogical competencies in teaching (Lubuva et al., 2022).

Furthermore, despite having the understanding on the importance of ICT integration, challenges remain, such as limited resources, inadequate training, and insufficient infrastructure. These barriers affect teachers' ability to effectively integrate ICT in teaching and learning.

This study is grounded in several theories that help explain how technology can be effectively integrated into the teaching-learning processes. Firstly, the Technological Pedagogical Content Knowledge (TPACK) where it describes the knowledge a teacher must possess for effective technology integration and emphasizes the connections among teachers' understanding of content, pedagogy, and technology (Mishra & Koehler, 2006). Secondly, the Substitution, Augmentation, Modification, and Redefinition (SAMR) model, which explains and supports the stages of technology integration and how technology can transform teaching and learning experiences (Puentedura, 2014; Hamilton et al., 2016). Lastly, the Self-Efficacy Theory, which shows that an individual's belief in their capacity to perform specific tasks successfully and influence events (Lopez-Garrido, 2025). Teachers who have strong self-efficacy are more likely to integrate technological tools and implement innovative instructional strategies.

The mentioned studies emphasize that ICT integration in instruction helps prepare 21st century learners in developing their technical skills, problem-solving skills, and work values. However, a gap exists in terms of examining the relationship between ICT competencies and teaching performance of TLE ICT teachers, particularly within the Philippine public-school context.

This study focuses on ICT teachers' competencies and teaching performance in Irosin District, Sorsogon Province. It includes determining the ICT learning tools, level of competency, and innovations used by teachers in ICT instruction. Specifically, this study aims to: (1) identify ICT learning tools utilized in teaching ICT; (2) determine the level of competency of ICT teachers; (3) describe teachers' innovation in ICT instruction; and (4) design a lesson exemplar in ICT instruction..

II. METHODOLOGY

Research Design

This study utilized a mixed-method research design, specifically an explanatory sequential design, where quantitative data were collected through surveys, followed by qualitative data through interviews to explain or elaborate on the quantitative results.

Source of Data

The present study obtained 53 elementary teachers handling Grades 4, 5, and 6 in Irosin District, Sorsogon Province, through purposive sampling. The respondents are composed of 17 male teachers and 36 females who handle ICT or subjects requiring ICT integration. They were given survey questionnaires to determine the ICT learning tools and their level of competencies based on the UNESCO ICT Competency Framework for Teachers (ICT-CFT), and a researcher-made interview guide was utilized for selected respondents.

Research Ethics

Research ethical standards were strictly followed in the conduct of this study. The respondents were given a consent form to ensure their willingness to participate in this study. The responses were kept with utmost confidentiality, such as the names and addresses. Moreover, the researcher ensured that during data gathering, respondents would not feel any discomfort, stress, or harm. More so, they were informed that participation in this study was entirely voluntary, and they had the freedom to withdraw from the study at any point. Likewise, they had the right to refuse to answer any specific questions without providing a reason. And lastly, the researcher maintained a high level of integrity and transparency throughout the study.

Research Instrument

A survey questionnaire was used in collecting data needed for this study. A researcher-made interview

guide question was also utilized as a basis for the conduct of interviews with the selected respondents. The survey questionnaire consisted of two parts. Part I was to identify the specific type of digital learning tools that are most effective in teaching ICT through a checklist. Part II was to explore the level of competencies of teachers in handling ICT using a Likert scale. This part is based on the UNESCO ICT Competency Framework for Teachers (ICT-CFT); hence, no validation was done since it is an adopted questionnaire.

Furthermore, the researcher-made interview guide questions in determining the ICT tools and innovations used by ICT teachers underwent validation from experts to ensure accuracy and correctness of the research instrument. The suggestions and recommendations were incorporated into the improvement of the instrument before it was utilized during the data-gathering procedure.

Data Collection

During the data collection procedure, researchers asked consent from the school head of Bulawan Elementary School, and through a letter of communication, respondents were asked if they were willing to participate in the study. The topic stated in the letter was the main objective of the study, and they had the right to refuse to be participants. Consent was secured that served as the basis for identifying the teachers who were willing to participate. The researcher used a survey questionnaire through a checklist and a Likert scale. The collection of data finished on November 15, 2025.

Data Analysis

The data gathered were analyzed using frequency count and ranking to determine ICT learning tools, weighted mean to determine the level of competence using a 5-point Likert scale, and thematic analysis to identify innovations in ICT instruction.

Scale	Level of Competence
4.50 – 5.00	Very Much Competent
3.50 – 4.49	Much Competent
2.50 – 3.49	Competent
1.50 – 2.49	Moderately Competent
1.0 – 1.49	Not Competent

III. RESULTS

Learning Tools in ICT Instruction

Table 1. *Hardware Materials*

Learning Tools	f (n=53)	Rank
Computer laptop	51	1
Television	43	2
Smart phone	31	3
Projector	23	4
Media player	9	5
Radio	5	6
Interactive whiteboard	4	7
Tablet	3	8
DVD	1	9

Shown in Table 1 is the frequency and rank of the hardware materials as ICT learning tools used by teachers in ICT instruction. Table 1 shows that computer laptops are the most commonly used hardware material, with a frequency of 51 out of 53 participants, ranking first in the list. The television

ranked second, with a frequency of 43. While smartphones ranked third with a frequency of 31, and projectors ranked fourth with 23 responses.

Further, the media players ranked fifth with a frequency of 9, followed by radio, which was used by 5 teachers. Comparatively, the use of interactive whiteboards and tablets was limited, obtaining frequencies of 4 and 3, which ranked seventh and eighth. Lastly, there was only 1 who responded to the use of DVD in teaching ICT, placing it in ninth rank. These results indicate that teachers primarily rely on commonly available digital devices, particularly laptops and televisions, as hardware tools in delivering ICT instruction.

Table 2 shows the frequency and rank of the software materials as ICT learning tools used by teachers in ICT instruction. The data reveal that among the available ICT software tools, Microsoft PowerPoint ranked first with a frequency of 48 out of 53 teachers. The video lessons ranked second with a frequency of 45. However, both Microsoft Word and YouTube obtained the same frequency of 37, resulting in a tied rank of 3.5. Also, 31 teachers responded that video clips are one of the software learning tools that they are using, which makes it the fifth in rank, while Google Docs was used by 24 teachers, ranking sixth.

Table 2. *Software Materials*

Learning Tools	f (n=53)	Rank
Microsoft PowerPoint	48	1
Video lessons	45	2
Microsoft Word	37	3.5
YouTube Apps	37	3.5
Video clips	31	5
Google Docs	24	6
Online Quizzes	14	7
Video Games	6	8
Interactive White Board Software	2	9
E-books	1	10

On the other hand, online quizzes were utilized by 14 teachers, placing them in seventh rank, followed by video games, which had a frequency of 6 and ranked eighth. The least utilized software materials were interactive whiteboard software and e-books, with frequencies of 2 and 1, ranking ninth and tenth, respectively. These findings show that teachers commonly use presentation and video-based software tools in delivering ICT instruction.

Level of Competence of Teachers in ICT Instruction

Table 3. *Technological Knowledge and Proficiency*

Indicators	Weighted Mean	Interpretation
• *Performing basic computer operations (hardware and software)*	4.43	Much competent
• *Navigating the internet effectively, maintaining an understanding of online safety principles.*	3.96	Much competent
• *Using productivity tools (e.g., MS Office, Google Workspace)*	4.15	Much competent

• *Troubleshooting basic technical issues*	3.70	Much competent
• *Understanding emerging technologies (AI, AR/VR, cloud computing)*	3.42	Competent
• *Understanding of educational technology, such as using interactive whiteboards and smart devices*	3.66	Much competent
• *Guiding students in solving technical problems related to their devices or learning tools.*	3.60	Much competent
Overall Weighted Mean	3.85	Much competent

The data disclosed indicator in performing the basic computer operation got the highest weighted mean of 4.43, described as much competent. On the other hand, the teachers are competent in understanding the emerging technologies, having the lowest weighted mean of 3.42.

Table 4. *Digital Pedagogy and Instructional Proficiency*

Indicators	Weighted Mean	Interpretation
1. Integrating ICT into lesson planning	4.36	Much competent
2. Use a learning management system (LMS) (e.g., module, Google Classroom)	4.19	Much competent
3. Adopting digital assessment tools (Kahoot, Quizzes, Google Forms)	3.53	Much competent
4. Creating interactive learning content (videos, presentations, animations)	4.06	Much competent
5. Applying gamification and adaptive learning techniques	3.58	Much competent
6. Using multimedia resources (podcasts, simulations) to enhance learning experiences.	3.51	Much competent
Overall Weighted Mean	3.87	Much competent

It can be asserted from the table that the integration of ICT in lesson planning emerged with the highest weighted mean of 4.36, which is interpreted as much competent. Meanwhile, they are much competent in using multimedia resources (podcasts, simulations) to enhance learning experiences, with the lowest weighted mean of 3.51.

Table 5. *Online Teaching and Learning Facilitation*

Indicators	Weighted Mean	Interpretation
1. Conducting asynchronous and synchronous online classes	3.15	Competent
2. Engaging students through virtual collaboration tools (Zoom, MS Teams, Google Meet)	2.91	Competent
3. Managing student participation and behavior in a digital environment	3.34	Competent
4. Designing and implementing flipped/blended learning strategies	3.36	Competent
5. Integrating technology into their teaching methods, such as blended learning (mixing traditional face-to-face instruction with online learning).	3.57	Much competent

6. *Maintaining a positive and supportive online learning community, especially in hybrid or fully online settings.*	3.28	Competent
Overall Weighted Mean	3.27	Competent

It can be gleaned from the table that the indicator on integrating technology into their teaching methods, such as blended learning (mixing traditional face-to-face instruction with online learning), has the highest weighted mean of 3.57, described as much competent. Meanwhile, they are competent in engaging students through virtual collaboration tools (Zoom, MS Teams, Google Meet) with the lowest weighted mean of 2.91.

Table 6. *Digital Literacy and Information Management*

Indicators	Weighted Mean	Interpretation
1. *Evaluating online information for credibility and relevance*	3.53	Much competent
2. *Citing digital resources properly (copyright, fair use, open educational resources)*	3.66	Much competent
3. *Teaching digital citizenship, online ethics, and responsible online social media use*	3.51	Much competent
4. *Understanding data privacy laws (e.g. GDPR, COPPA)*	3.57	Much competent
5. *Understanding of digital tools and how they work, from basic software applications (e.g., spreadsheets) to advanced multimedia tools (e.g., video editing software, graphic design tools).*	3.43	Competent
6. *Teaching students how to responsibly navigate the digital world, from using the internet for research to understanding digital citizenship.*	3.36	Competent
Overall Weighted Mean	3.51	Much competent

The data showed that teachers are much competent with citing digital resources properly (copyright, fair use, open educational resources), with the highest weighted mean of 3.66.

Meanwhile, indicators on using the internet for research to understand digital citizenship got the lowest weighted means of 3.36, described as competent.

It can be gleaned in Table 7, the indicator on the adaptation of digital tools to support diverse learning styles and abilities emerged with the highest weighted mean of 3.17, whereas the indicator on using tools such as screen readers, speech-to-text software, and captioning services that can ensure all students have equal access to education got the lowest weighted mean of 2.75, described as competent.

Table 7. *ICT for Inclusive and Differentiated Instruction*

Indicators	Weighted Mean	Interpretation
1. *Utilizing assistive technologies for students with special needs*	2.87	Competent
2. *Adapting digital tools to support diverse learning styles and abilities*	3.17	Competent
3. *Using AI-based tools for personalized learning experiences*	2.85	Competent
4. *Providing multilingual and culturally responsive digital content*	2.81	Competent

5. *Using tools such as screen readers, speech-to-text software, and captioning services can ensure all students have equal access to education.*	2.75	Competent
6. *Aware of and proficient in using assistive technology to support diverse learners, including those with disabilities.*	2.77	Competent
Overall Weighted Mean	2.87	Competent

Table 8. *ICT for Assessment and Evaluation*

Indicators	Weighted Mean	Interpretation
1. *Designing and administering digital quizzes and exams*	3.09	Competent
2. *Using data analytics for student's performance tracking*	3.19	Competent
3. *Implementing formative and summative assessments with technology*	3.55	Much competent
4. *Providing timely and constructive feedback via e-mail*	2.70	Competent
5. *Providing digital feedback through online grading platforms.*	2.87	Competent
Overall Weighted Mean	3.08	Competent

The data revealed that the indicator implementing the formative and summative assessments with technology got the highest weighted mean of 3.55, described as much competent. However, the indicator on providing timely and constructive feedback via e-mail got the lowest weighted mean of 2.70, described as competent.

It can be asserted from Table 9 that the indicator on participating in webinars, MOOCs, and digital certifications got the highest weighted mean of 3.42, described as competent. Meanwhile, the engagement with parents through communication platforms has the lowest weighted mean of 2.74, in which the teachers are still competent.

Table 9. *ICT for Professional Development and Collaboration*

Indicators	Weighted Mean	Interpretation
1. *Engaging in online professional learning communities (PLCs)*	3.02	Competent
2. *Participating in webinars, MOOCs, and digital certifications*	3.42	Competent
3. *Collaborating on lesson plans and research via cloud-based tools*	2.77	Competent
4. *Sharing best practices through social media, blogs, or academic networks*	2.85	Competent
5. *Using video conferencing tools (Zoom, Microsoft Teams, Google Meet) for virtual meetings or lessons.*	3.23	Competent
6. *Engaging with parents through communication platforms like ClassDojo, Remind, or email newsletters.*	2.74	Competent
Overall Weighted Mean	3.01	Competent

Table 10. *Cyber Security Awareness and Use of Technology*

Indicators	Weighted Mean	Interpretation
1. *Recognizing and preventing cybersecurity threats (phishing malware)*	3.43	Competent

2. Protecting student and teacher data privacy	0.68	Much competent
3. Promoting ethical use of AI and digital use	3.25	Competent
4. Understanding school policies on ICT use and compliance	3.60	Much competent
5. Understanding privacy policies with regulations like GDPR (General Data Protection Regulation) FERPA (Family Educational Rights and Privacy Act).	3.36	Competent
6. Ensuring compliance with regulations like GDPR (General Data Protection Regulation) or FERPA (Family Educational Rights and Privacy Act).	3.30	Competent
Overall Weighted Mean	3.44	Competent

The data showed that the indicator on the promotion of student and teacher data privacy emerged as the highest weighted mean of 3.68, described as much competent, whereas the indicator on ensuring compliance with regulations such as the General Data Protection Regulation (GDPR) and Family Educational Rights and Privacy Act (FERPA) got the lowest weighted mean of 3.30, described as competent.

Innovations Used by Teachers in ICT Instruction

Based on the responses of the participants, four instructional innovations emerged: contextualization, gamification, AI integration, and computer-aided instruction.

These innovations were reflected in the teachers' use of Strategic Intervention Materials (SIM), modules, and Learning Activity Sheets (LAS) in ICT instruction.

Contextualization. One of the innovations highlighted by the participants is the use of Strategic Intervention Materials (SIM) in ICT instruction. The findings revealed that SIM focuses on addressing students' least mastered competencies and is labeled as a remedial and supplementary material crafted to elevate, enhance, and improve students' performance in ICT. Respondents stated that they "used SIM in ICT instruction" and identified it as an innovation designed to "improve the least learned competencies of my students in teaching ICT" (T1, T3, T5, T6), while others remarked that "I crafted SIM as one of my innovations in teaching ICT for remedial purposes" (T17, T14) and that "we developed SIM based on the least mastered competencies and used these innovations in remedial sessions" (T33, T44, T39). These materials were used to help learners better understand ICT concepts using instructional resources that are accessible and appropriate to the learners' context.

Table 11. *Innovations Used in ICT Instruction*

Innovation	Description
Contextualization	Teachers developed the Strategic Intervention Materials (SIM) that focus on students' least mastered competencies and are used as remedial and supplementary instructional materials in ICT instruction.
Gamification	The Learning Activity Sheets (LAS) include varied activities, tasks, and drills that support students' engagement and participation in ICT learning.
AI Integration	Teachers recognize the emerging and advancement of digital technologies needed in ICT instruction.
Computer-Aided Instruction	Modified printed or digital copies of modules and other teacher-developed instructional materials are used as alternative learning tools to ensure continuity of learning.

Computer-Aided Instruction. Another innovation used by teachers in ICT instruction is the use of modules as instructional materials. The findings revealed that modules served as alternative learning tools developed by teachers to support ICT instruction, particularly during class suspension to ensure continuity of learning. One of the respondents stated that they "used modules in ICT instruction specifically during class suspension to ensure that learning is continuous on the part of our learners," adding that the modules were developed by teachers as alternative learning tools (T99, T0). The major role of modules was also emphasized, where one respondent stated that "the innovative modules are the most instructional learning materials we used in teaching ICT" (T12, T13). These materials allowed teachers to continue delivering ICT lessons even in situations where access to digital devices or a stable internet connection was limited.

Gamification. The use of Learning Activity Sheets (LAS) was also emphasized as an innovation in ICT instruction. The respondents defined LAS as teacher-developed instructional materials consisting of varied activities intended to support and enhance students' ICT skills. One respondent stated that "learning activity sheets developed by teachers are the innovations we used in ICT instruction," highlighting that LAS "consist of various activities that will surely enhance students' ICT" (T4, T11, T16). Another respondent revealed that LAS are commonly utilized because these materials include "different activities, tasks, and drills which can cater to the learning needs of my learners" (T15). These materials provided opportunities for learners to actively participate in ICT learning through structured tasks and exercises.

AI Integration. The findings revealed that teachers recognize the emergence of digital technologies that support ICT instruction using digital learning tools and facilities. Thus, this supports technology-based instruction and provides opportunities for innovative teaching strategies in ICT learning.

Lesson Exemplars in ICT Instruction

As an output of the study, the Lesson Exemplars in ICT Instruction were developed. This is based on the innovations utilized by teachers in ICT instruction, particularly the use of Strategic Intervention Materials (SIM), modules, and Learning Activity Sheets (LAS). The innovations mentioned reflect the instructional strategies employed by teachers to address students' least mastered competencies, to ensure continuity of learning, and to provide varied activities that enhance students' ICT skills. The development of the lesson exemplars was therefore guided by the practices and instructional materials identified from the responses of the participants.

This set of Innovative ICT Teaching Lesson Exemplars helps teachers reimagine classroom teaching through effective integration of technology. Each lesson encourages practical, learner-centered strategies that intend to promote exploration, collaboration, problem-solving, and most of all digital literacy. Thus, these lessons reflect the commitment of teachers who continually seek new ways to engage students, maximize learning outcomes, and adapt to emerging educational challenges.

IV. DISCUSSIONS

Teachers' Commonly Used Learning Tools in ICT Instruction

A. Hardware Materials

Relative to hardware materials, there are 51 teachers who are using a computer laptop in teaching ICT in rank 1, followed by television (43) and smartphones (31). There are 23 teachers who make use of a projector, while 9 teachers utilize the media player. Five teachers are using the radio, four teachers have an interactive whiteboard, and only one teacher is using the DVD in the last rank. These tools are perceived as effective ways of teaching students, depending on the availability of these materials in schools.

B. Software Materials

Relative to software materials, there are 48 teachers who utilize Microsoft PowerPoint in rank 1, followed by video lessons (45). The YouTube Apps and Microsoft Word are employed by 37 teachers, while 31 teachers make use of video clips and 24 teachers utilize Google Docs. Online quizzes are employed by 14 teachers, video games by 6 teachers, interactive

whiteboard software by 2 teachers, and only one teacher utilizes the e-book. This indicates that schools are using current trends in educational technology to support interactive and flexible learning environments.

Teachers' Capability to Leverage ICT Instruction

Technological Knowledge and Proficiency. The data disclosed that generally, the teachers are highly competent in technological knowledge and proficiency, with an overall weighted mean of 3.85. Specifically, they are highly competent in performing basic computer operations with the highest weighted mean of 4.43. In the same manner, the teachers are highly competent in using the productivity tools and in navigating the internet effectively, with weighted means of 4.15 and 3.96, respectively. On the other hand, the teachers are competent in understanding the emerging technologies, with the lowest weighted mean of 3.42.

This shows that the teachers' level of competencies in handling ICT enables them to perform their functions and duties effectively. The results were congruent with the study of Alharbi (2019) and reveal that highly competent teachers are deemed to utilize ICT integration effectively in their teaching. Thus, this emphasizes the need to continue professional development programs to enhance teachers' technological competencies.

Digital Pedagogy and Instructional Proficiency. It can be asserted from the table that the teachers are generally highly competent in digital pedagogy and instructional design, with an overall weighted mean of 3.87. The integration of ICT in lesson planning emerged with the highest weighted mean of 4.36, followed by the use of a learning management system (4.19) and creating interactive learning content (4.06). Consequently, the teachers are highly competent in adopting digital assessment tools (3.53) and in using multimedia resources (3.51).

This reveals that teachers are proficient in the use of technology to support and enhance teaching and learning processes. However, one's efficiency in ICT integration requires more than technical skills it also involves understanding how technology can enhance teaching and learning outcomes (Voogt et al., 2015).

Online Teaching and Learning Facilitation. Teachers are highly competent in integrating technology into their teaching methods, such as blended learning, with the highest weighted mean of 3.57. They are also competent in managing student participation and behavior and in designing and implementing flipped/blended learning strategies. Meanwhile, they are competent in engaging students through virtual collaboration tools with the lowest weighted mean of 2.91. This shows that teachers should have technical, pedagogical, and content knowledge to succeed in online education. Instructors with strong ability in ICT tools make the learning process more effective (Freeman et al., 2014).

Digital Literacy and Information Management. Most of the teachers are found highly competent in digital literacy and information management, with an overall weighted mean of 3.5. This reveals that when teachers understand the nature and effectiveness of digital literacy, they help students achieve the optimal learning outcomes. Thus, digitally literate teachers can effectively utilize ICT tools to enhance teaching and learning (Bawden, 2008).

ICT for Inclusive and Differentiated Instruction. On the other hand, teachers are generally competent with ICT for inclusive and differentiated instruction, with an overall weighted mean of 2.87. Their adaptation of digital tools to support diverse learning styles has the highest weighted mean of 3.17, while the use of assistive tools has the lowest weighted mean of 2.75. Therefore, teachers handling ICT are competent in fostering an inclusive learning environment. Accordingly, teachers need competencies to integrate technology in ways that support diverse learners (Al-Azawei et al., 2016).

Teachers are competent in ICT for assessment and evaluation, with an overall weighted mean of 3.08. They are highly competent in implementing formative and summative assessments using technology, while providing feedback via e-mail has the lowest weighted mean. This reveals that teachers' ICT competencies

contribute to the integration of technology in assessment

ICT for Professional Development and Collaboration. Teachers are generally competent in ICT for professional development and collaboration, with an overall weighted mean of 3.01. The teachers' participation in webinars and digital certifications has the highest weighted mean, while engagement with parents has the lowest. Thus, this reveals that ICT plays a role in professional development and collaboration.

Cyber Security Awareness and Ethical Use of Technology. The teachers are already competent in cybersecurity awareness and ethical use of technology, with an overall weighted mean of 3.44. While promotion of data privacy has the highest weighted mean, compliance with regulations has the lowest. This implies that teachers are capable of promoting responsible digital behavior.

Teachers' Innovative Instructional Strategies in ICT Instruction

Contextualization. One of the innovations applied by teachers in teaching ICT is the usage of Strategic Intervention Materials (SIM). The participants use this as one of the tools to meet the needs of the students in understanding the lesson. The SIM is crafted based on the students' least-mastered competencies, which is purposefully created to meet ICT learning gaps. Based on the interview conducted, teachers use this during remedial sessions when students need more help. According to them, it led to better student performance. It scaffolded complex concepts to make the lesson easier to understand and encouraged learner involvement. Accordingly, Castillo and Dolosa (2021) and Dizon (2016) found that SIMs improve student performance through content simplification and systematic learning pathways.

Therefore, innovation in ICT is important to enhance ICT education. The application of SIMs highlights the importance of focused, learner-centered interventions in fostering fair learning outcomes, particularly in courses that call for both technical and conceptual competence. More so, it is indicative to create a competency-driven teaching method that will serve as an educational resource or instrument for closing learning gaps rather than merely supplemental ones. This pedagogical approach will cater to diverse learners while promoting mastery of fundamental skills in effective ICT learning. Thus, SIM, as one of the instructional strategies, improves a more comprehensive culture of adaptable, evidence-based learning to hone technology-proficient students.

Computer-Aided Instruction. Another innovation applied by the teachers is the use of modules in ICT instruction. Specifically, modules are used when in-person instruction is not possible due to class suspension. Although most of these modules are developed by educators to act as substitute learning resources, enabling students to keep honing their ICT skills outside of the classroom. These modules serve as the "go-to" source of teachers. However, there are instances in which teachers craft modified modular instructional resources in a variety of subject areas, including ICT. The teacher-crafted modules function as crucial educational tools intended to help students navigate ICT independently.

The modified modules promote continuity of instruction and enable self-paced learning because they were created by teachers without compromising the curriculum competencies; research on modular distance education has verified this strategy (Banayo & Domingo, 2021). The modules provide students with the opportunity to practice toward mastery of the concepts. According to Almario (2020), well-crafted modules enhance student performance, engagement, and comprehension, especially in technology-related courses.

This reveals that conducting training on crafting self-made modules or materials is important because the first-hand teachers know better what to give and how to teach it to their students, particularly in teaching ICT. This innovation implies that teachers are dedicated to finding ways or tactics to ensure learning proceeds despite learning obstacles. The increasing demand for utilizing modules as the main learning tools promotes independent learning that is also found effective in ICT instruction. Thus, teacher-crafted

modules play a role in enhancing ICT education to encourage continuity of learning and ensure accessibility to learners regardless of their learning surroundings.

Gamification. According to the respondents, the utilization of Learning Activity Sheets (LAS) is also one of their innovations in ICT instruction. The LAS is crafted by teachers, incorporating varied activities such as assignments, drills, and organized activities that are appropriate for students' learning needs to improve students' ICT learning (T4, T11, T16). LAS is regarded as a teaching tool that promotes student participation and ICT skill development.

LAS is an organized, activity-based learning approach that assists students in gradually mastering ICT competencies and has been found to be successful in ICT learning. The use of LAS allows students to practice concepts independently at their own pace. The varied tasks and drills help reinforce important ICT skills because it is an activity-based learning materials that can improve student performance and comprehension (Andaya, 2018). Therefore, the use of LAS scaffolded learning opportunities is reflected in the widespread usage of LAS in ICT instruction. On top of that, the use of LAS demonstrates teachers' instructional innovation that fosters active engagement and long-term skill development in a more flexible and encouraging ICT learning environment.

AI Integration. In addition to the innovations identified, teachers also recognize the importance of integrating digital technologies in ICT instruction. Utilization of digital tools and technology-supported instructional strategies allows teachers to support interactive learning environments and enhance students' ICT learning experiences. Although the responses of the participants did not explicitly indicate the direct use of artificial intelligence tools, teachers acknowledged the importance of utilizing emerging technologies in ICT instruction as part of innovative teaching practices.

Lesson Exemplars in ICT Instruction

Teachers' role goes far beyond imparting knowledge. It is a challenge for a teacher to cope with the rapid changes, particularly in the educational context. In this digital era, Information and Communication Technology has turned into a vital tool in empowering learners to be holistically developed, which prepares them to face a technological world. In this regard, innovative teaching practices are in higher demand than ever.

This set of Innovative ICT Teaching Lesson Exemplars helps teachers reimagine classroom teaching through effective integration of technology. Further, this responds to teachers continually seeking innovative ways to keep students' ICT learning motivating without compromising learning outcomes. The lesson exemplars support exploration, collaboration, problem-solving, and digital literacy using different approaches, from interactive platforms and creative digital tools to project-based learning and real-world applications.

V. CONCLUSION AND RECOMMENDATION

Based on the findings of the study, it was concluded that teachers use different technological tools in handling ICT, where computer laptops and Microsoft PowerPoint are the most commonly used in teaching ICT. Generally, the level of competencies of teachers handling ICT falls within the adjectival description of competent. Moreover, the innovations utilized by teachers in ICT instruction include the usage of SIM, Modules, and LAS, which demonstrate instructional strategies such as contextualization, gamification, and computer-aided instruction in ICT teaching. These materials allow teachers to address students' least mastered competencies, provide varied learning activities, and support continuity of learning. An output, "Lesson Exemplars: Innovations of Teachers in Teaching ICT," was developed to help teachers reimagine classroom teaching through effective integration of technology and instructional strategies in ICT instruction.

Therefore, schools should be provided with adequate ICT resources for learning. Also, policymakers should establish a methodical Innovation Enhancement and Resource Development Program to continuously enhance teachers' competence in ICT-related teaching-learning tools. The Department of Education may use

the developed lesson exemplars to promote ICT instruction and support innovative teaching practices. Further research may be conducted to continuously explore advancements in emerging technologies that may enhance ICT teaching and learning.

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