

The Nexus of Digital Learning Ecosystem, Techno-Pedagogical Self-Efficacy, and Teaching Competence of Selected Public Junior High School English Teachers in Misamis Oriental: A Sequential Explanatory Mixed Methods Study

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| Rodgen D. Palmes^{1*} | Lydia Josefina R. Curaza² |

^{1,2} Saint Joseph Institute of
Technology, Butuan City,
Philippines

*rodpals15@gmail.com



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ABSTRACT

This study investigated the relationship among the Digital Learning Ecosystem (DLE), Techno-Pedagogical Self-Efficacy (TPSE), and Teaching Competence (TC) among public junior high school English teachers in selected cities and municipalities of Misamis Oriental. Employing an explanatory sequential mixed-method design, quantitative data were first collected to determine the extent of DLE, the level of TPSE, and the degree of TC, as well as the relationships among these variables. Qualitative data from focus group discussions and in-depth interviews were subsequently gathered to explain and contextualize the quantitative findings. Results revealed that teachers generally experienced a high extent of digital learning ecosystem support, demonstrated high techno-pedagogical self-efficacy, and exhibited outstanding teaching competence. While a significant positive relationship was found between DLE and TPSE, neither DLE nor TPSE significantly predicted teaching competence. Mediation analysis further showed that TPSE did not significantly mediate the relationship between DLE and TC, and the null model emerged as the best-fitting structural model for teaching competence. Qualitative findings indicated that teaching competence is more strongly influenced by teacher agency, pedagogical translation, learner readiness, reflective practice, adaptability, and contextual realities than by digital resources and technological confidence alone. Based on the integrated findings, the study proposed the Contextually Mediated, Agency-Driven Digital ELT Upskilling Framework for Generative Teaching Competence, which conceptualizes teaching competence as a context-sensitive and process-driven outcome shaped by the interaction of digital support, pedagogy, teacher agency, and classroom conditions.

KEYWORDS

Digital learning ecosystem; techno-pedagogical self-efficacy; teaching competence; English language teaching; mixed-methods; teacher agency and digital pedagogy.

INTRODUCTION

English language education is increasingly shaped by the digital conditions in which teaching and learning now take place. English teachers are required to employ digital tools, multimodal resources, and technology-mediated interactions to enhance literacy,

engagement, and involvement, and to help students improve their language proficiency and communication skills. Because of this growing role, digital readiness is a crucial issue in English language instruction, particularly in public schools where access to resources, infrastructure, and technical assistance may differ.

The Philippine Professional Standards for Teachers (PPST), which incorporate ICT use into broader professional expectations, including topic knowledge, learner-centered instruction, assessment, resource utilization, and ongoing professional development, reflect this expectation in the country. This suggests that digital competence is no longer considered a distinct technological talent but rather as part of effective, responsive, and professionally grounded teaching practice (Department of Education, DO 42, s. 2017).

Given ongoing worries about student achievement, the need to improve technology-supported learning has become more pressing. According to the PISA 2022 findings, there was no increase from the 2018 cycle in the Philippines' reading, math, and science scores compared to the OECD average. This is especially important for English education since students' access to, comprehension of, evaluation of, and communication of information in both print and digital contexts are strongly correlated with reading competency and language acquisition. These issues highlight the need for education that is more adaptable to modern, text-rich, technology-mediated learning environments and to student performance.

The Philippine government has responded by stepping up policy initiatives to encourage the use of technology in the classroom. DepEd Order No. 16, s. 2023, also known as The DepEd Computerization Program, which aims to supply public schools and DepEd offices with suitable, high-quality, and equitable technologies to improve teaching, learning, governance, and operations, has updated its criteria in 2023. Republic Act No. 12234, also known as the Konektadong Pinoy Act, likewise advocates an all-encompassing, inclusive connectivity framework that recognizes the importance of reliable, affordable internet access in vital areas, such as education. When taken as a whole, these programs confirm that better teaching and learning require digital infrastructure, access, and connectivity. But having access to technology by itself does not ensure significant integration in the classroom.

This distinction is crucial because when teachers face difficulties with training, confidence, technical and institutional support, and the pedagogical use of digital tools, ICT resources in Philippine public schools may remain underutilized (Cabunoc & Ubayubay, 2024; Garrido, 2024). Therefore, the availability of devices and internet connectivity should not be the only factors considered when analyzing the digital divide. It also encompasses the pedagogical and professional circumstances that allow educators to turn accessible technology into worthwhile educational opportunities.

Techno-pedagogical self-efficacy, or instructors' confidence in their ability to use technology for teaching and learning, is a concept that helps explain this problem. Teachers might not fully incorporate digital technologies, even when they are available, if they lack confidence, pedagogical guidance, and opportunities to use them in the classroom. Social Cognitive Theory, which describes how people's perceptions of their own skills partly influence behavior, lends support to this viewpoint (Bandura, 1997). Additionally, it is consistent with the TPACK framework (Mishra & Koehler, 2006), which emphasizes the deliberate integration of technology, pedagogy, and content in teaching practice.

Public junior high school English teachers in the selected cities and municipalities of Misamis Oriental operate in educational settings that vary in digital infrastructure, connectivity, learning resources, administrative support, and technical support. These

distinctions offer a pertinent framework for investigating the relationship between teaching competency, techno-pedagogical self-efficacy, and the digital learning environment. Rather than a straightforward or automatic causal relationship, nexus in this study denotes the dynamic interconnectedness among these factors.

Although interest in technological integration is growing, several gaps remain. There is little information on how ICT competency, digital hurdles, and teacher self-efficacy interact because much of the local research focuses on these issues separately. Even though local school conditions may significantly influence digital teaching practices, there remains a dearth of research on English teachers in public junior high schools in Misamis Oriental. Furthermore, the majority of research on technology integration in the Philippines is descriptive or correlational; fewer studies employ mixed methods to examine mediating linkages and draw on teachers' lived experiences to explain quantitative findings.

The study used an explanatory sequential mixed-methods approach to address these gaps. Techno-pedagogical self-efficacy, teaching ability, the state of the digital learning environment, the correlations among these factors, and the potential mediation role of self-efficacy were explored in the quantitative phase. Focus groups and interviews were used in the qualitative phase to provide more in-depth explanations of the quantitative results.

This study advances the quest for inclusive and equitable quality education by examining teachers' confidence and professional practice alongside digital access, aligning with Sustainable Development Goal 4. Instead of viewing technology as a stand-alone solution, the study examines the relationship between teachers' perceptions of their own teaching abilities and digital school environments in real classroom settings. By doing this, it provides a solid grasp of how techno-pedagogical self-efficacy and digital learning environments influence the teaching proficiency of English teachers in public junior high schools in Misamis Oriental.

Objective of the study

This study employed an explanatory sequential mixed methods design to develop and explicate a structural model of teaching competence among public Junior High School English teachers in selected cities and municipalities of Misamis Oriental. Phase 1 (Quantitative) employs Bayesian analysis and model comparison to characterize the nexus among the Digital Learning Ecosystem, Techno-Pedagogical Self-Efficacy, and Teaching Competence, while Phase 2 (Qualitative) explores teachers' lived experiences to provide a deeper explanation of the statistical results.

RESEARCH METHODS

Research Design

This study employed an explanatory sequential mixed-methods design to examine the relationships among the Digital Learning Ecosystem (DLE), Techno-Pedagogical Self-Efficacy (TPSE), and Teaching Competence (TC) among public junior high school English teachers in selected cities and municipalities of Misamis Oriental. The quantitative phase was conducted first to establish statistical patterns, relationships, mediation effects, and the best-fitting structural model using Bayesian analyses. This was followed by a qualitative phase involving focus group discussions (FGDs) and key informant interviews (KIIs) to explain and contextualize the quantitative findings. The integration of both strands enabled the development of a contextually grounded explanatory framework for teaching competence.

Research Respondents and Participants

The quantitative phase employed total population sampling, including all eligible public junior high school English-major teachers from selected medium-sized schools in Gingoog City, El Salvador City, Balingasag, Villanueva, Tagoloan, and Opol. Although the target population consisted of 78 teachers, only 60 valid and complete responses met the inclusion criteria, yielding a 76.9% retrieval rate.

For the qualitative phase, purposive maximum variation sampling was employed. Fifteen participants were selected based on their quantitative profiles and competency classifications. Three FGDs were conducted: one homogeneous group of Very Satisfactory teachers, one homogeneous group of Outstanding teachers, and one heterogeneous group composed of both categories. Additional KIIs were conducted with three information-rich participants to achieve theoretical saturation.

Research Locale

The study was conducted in selected cities and municipalities of Misamis Oriental, Philippines. The locales were clustered geographically into eastern (Gingoog City and Balingasag), central (Villanueva and Tagoloan), and western (El Salvador City and Opol) clusters to ensure technological and socioeconomic comparability. Only medium-sized public junior high schools were included to minimize extreme variations in school resources and digital infrastructure. School classifications were based on the Department of Education's Enhanced Basic Education Information System (EBEIS) standards.

Research Instruments

Three instruments were utilized in the study. The Digital Learning Ecosystem Inventory (DLEI), adapted from Barrot, J. S. (2021) and Abrazado, G. F., & Bongoc, R. (2021) measured ICT infrastructure and connectivity, digital resource accessibility, and technical and administrative support using a 5-point Likert scale.

The Techno-Pedagogical Self-Efficacy Scale (TPSES), adapted from Schmidt et al. (2009), measured teachers' confidence in integrating technology into English language instruction through the domains of Technological Content Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and Technological Pedagogical Content Knowledge (TPACK).

Teaching competence was measured using official IPCRF numerical ratings obtained as secondary data. Pilot testing established high reliability coefficients, with Cronbach's alpha values of 0.935 for the DLEI and 0.992 for the TPSES.

Data Gathering Procedure

After securing approvals from the Department of Education Regional Office X and the Schools Division Offices, coordination was conducted with district supervisors and school heads. Online survey links containing the DLEI and TPSES were distributed through official communication channels. Participants also submitted their IPCRF numerical ratings for teaching competence.

Following the quantitative analysis, participants for the qualitative phase were purposively selected. FGDs and KIIs were conducted using validated semi-structured interview guides. All sessions were audio-recorded, transcribed, and analyzed iteratively until thematic saturation was achieved. The qualitative findings were then integrated with the quantitative results to develop the final explanatory framework.

Ethical Considerations

The study adhered to the principles of voluntary participation, informed consent, confidentiality, beneficence, non-maleficence, and research integrity. Participants were informed of the purpose of the study, their rights to withdraw at any time, and the confidentiality of their responses. Compliance with the Data Privacy Act of 2012 was strictly observed through anonymization, password-protected filestorage, and the deletion of identifiable records after validation. All data were used exclusively for research purposes, and AI tools were limited to language refinement and formatting assistance.

Statistical Treatment and Data Analysis

Descriptive statistics, including mean and standard deviation, were used to determine the levels of DLE, TPSE, and TC. Pearson Product-Moment Correlation, supported by the Bayes Factor (BF_{10}), was employed to examine the strength and direction of relationships among variables. Bayesian mediation analysis assessed whether TPSE mediated the relationship between DLE and TC, while Bayesian model comparison identified the best-fitting explanatory model for teaching competence.

Qualitative data from FGDs and KIIs were analyzed using thematic analysis, including transcription, coding, categorization, and theme generation. The qualitative findings were integrated with the quantitative results to provide contextual explanations for the observed statistical patterns and to develop the proposed Contextually Mediated, Agency-Driven Digital ELT Upskilling Framework for Generative Teaching Competence.

RESULTS AND DISCUSSION

Digital Learning Ecosystem

The Digital Learning Ecosystem (DLE) among public junior high school English teachers in selected areas of Misamis Oriental was rated at a high extent overall ($M=3.53$, $SD=0.51$). Among its dimensions, Technical and Administrative Support obtained the highest composite mean ($M=3.57$, $SD=0.56$), followed by ICT Infrastructure and Connectivity ($M=3.53$, $SD=0.53$), while Digital Resource Accessibility obtained the lowest mean ($M=3.48$, $SD=0.67$).

At the item level, the availability of peripheral devices for instructional material production received one of the highest ratings ($M=3.92$, $SD=0.99$), while the functionality of computer laboratories received the lowest rating ($M=2.48$, $SD=1.24$). Internet reliability was also rated only moderate ($M=3.35$, $SD=0.88$). These findings indicate that although schools possess essential digital equipment, infrastructure limitations and unstable internet connectivity remain major barriers to effective digital instruction. Similar challenges were reported by Navarro (2024), who emphasized that many Philippine public schools continue to struggle with unreliable internet access and inadequate ICT facilities.

The findings further suggest that institutional support systems, such as ICT coordinators, school policies, and digital upskilling programs, contributed positively to the sustainability of digital instruction. Training programs such as INSET and Learning Action Cell (LAC) sessions were rated highly ($M=3.53$, $SD=1.13$), reflecting the schools' efforts to support teachers' digital readiness. However, moderate ratings in technical repair support ($M=2.90$, $SD=1.13$) and ICT maintenance funding ($M=3.10$, $SD=1.00$) imply continuing resource limitations. OECD (2023) and UNESCO (2023) emphasized that effective digital learning ecosystems require not only access to devices but also stable governance, sustained technical support, and equitable access to digital resources.

Based on these findings, an intervention program may focus on strengthening school-level digital infrastructure sustainability. Schools may implement a Continuous Digital Support and Resource Enhancement Program that prioritizes internet stabilization, upgrading of computer laboratories, establishment of digital resource repositories, and sustained ICT maintenance funding. Professional development programs may also be expanded to include contextualized digital pedagogy and technology troubleshooting workshops.

Techno-Pedagogical Self-Efficacy

The respondents demonstrated a high level of techno-pedagogical self-efficacy (TPSE) overall ($M=3.86$, $SD=0.64$). Among the dimensions, Technological Pedagogical Knowledge (TPK) obtained the highest composite mean ($M=3.87$, $SD=0.62$), followed closely by Technological Content Knowledge (TCK) ($M=3.86$, $SD=0.67$) and Technological Pedagogical Content Knowledge (TPACK) ($M=3.85$, $SD=0.70$).

The highest-rated item involved teachers' ability to choose technologies that enhance teaching and learning ($M=4.02$, $SD=0.75$), while the lowest-rated item involved curating digital resources aligned with learning objectives and pedagogy ($M=3.75$, $SD=0.86$). These results indicate that teachers generally possessed confidence in integrating technology into English instruction but still experienced challenges in selecting and evaluating appropriate digital resources for instruction.

The findings support Schmidt et al.'s (2009) TPACK framework, which argues that successful technology integration depends on the interaction of pedagogy, technology, and content knowledge. Dinçer et al. (2024) and Zeng et al. (2022) similarly found that teachers with stronger techno-pedagogical self-efficacy demonstrate greater instructional readiness and confidence in digital teaching environments. Studies in RIELS Journal have emphasized that teachers require technological, pedagogical, and content knowledge to effectively integrate ICT into classroom instruction and respond to rapidly evolving educational technologies (Herianto et al, 2023)

However, despite high TPSE ratings, qualitative findings revealed that teachers' confidence remained context-dependent. Participants explained that technical disruptions, limited student digital readiness, and unstable internet connectivity often affected their confidence in implementing technology-integrated lessons. This finding supports Althubyani (2024), who argued that teacher confidence alone cannot guarantee successful technology integration when institutional and contextual barriers persist.

An intervention program based on these findings may include a Contextualized Techno-Pedagogical Upskilling Program focused on lesson design, digital resource curation, learner-centered technology integration, and adaptive instructional strategies. Mentoring systems and collaborative digital lesson planning through Learning Action Cells (LACs) may further strengthen teachers' confidence and practical application of technology.

Teaching Competence

The respondents demonstrated an outstanding level of teaching competence based on their IPCRF ratings, with an overall mean of 4.52 ($SD=0.31$). Among the 60 respondents, 37 teachers (61.7%) obtained Outstanding ratings, while 23 teachers (38.3%) received Very Satisfactory ratings. No respondents were classified under the Satisfactory or Unsatisfactory categories.

At the domain level, the highest rating was obtained in Personal Growth and Professional Development ($M=4.55$), followed by Content Knowledge and Pedagogy

($M=4.54$). Assessment and Reporting obtained the lowest mean ($M=4.48$), although it still fell within the Very Satisfactory range. These findings indicate that respondents consistently demonstrated high levels of professional practice across PPST-aligned domains.

The results support the Philippine Professional Standards for Teachers (DepEd, 2017), which conceptualize teaching competence as an integration of pedagogical expertise, classroom management, assessment practices, learner engagement, and professional development. Hasanodin and Arazo (2024) similarly noted that effective teaching competence is associated with strong instructional knowledge and professional commitment.

Despite the high competence ratings, the relatively narrow standard deviation ($SD=0.31$) suggests limited variability among respondents, indicating that most participants already belonged to a high-performing professional group. This ceiling effect may explain why DLE and TPSE failed to significantly predict teaching competence in subsequent analyses.

To sustain teaching excellence, schools may implement Reflective Professional Growth Programs that emphasize mentoring, peer observation, reflective teaching, action research, and learner-centered innovation. Such interventions may help teachers move beyond baseline competence toward continuous instructional refinement.

Relationship Among DLE, TPSE, and Teaching Competence

Correlation analysis revealed a strong positive relationship between DLE and TPSE ($r=0.54$, $BF_{10} > 1000$), indicating that teachers who perceived stronger digital learning environments also demonstrated higher techno-pedagogical self-efficacy. However, no meaningful relationship was found between TPSE and Teaching Competence ($r=-0.10$, $BF_{10} < 1$) and between DLE and Teaching Competence ($r=-0.14$, $BF_{10} < 1$).

These findings suggest that favorable digital environments contribute significantly to teachers' confidence in technology integration but do not automatically lead to higher teaching competence ratings. Hu et al. (2025) and Liu et al. (2025) similarly found that institutional support, digital resources, and collaborative professional development positively influence teachers' technological self-efficacy.

However, the absence of significant relationships between TPSE, DLE, and teaching competence supports Asis (2024), who found that teacher self-efficacy may not directly predict formal performance outcomes. Leijen et al. (2024) further argued that instructional quality is influenced more strongly by pedagogical expertise, reflective judgment, and contextual responsiveness than by confidence alone.

These findings imply that intervention efforts should move beyond technology provision and focus instead on pedagogical translation, learner engagement, and reflective instructional practice. Schools may therefore adopt learner-centered digital pedagogy programs that integrate technology use with authentic classroom application and differentiated instruction.

Mediation and Structural Model Analysis

Bayesian mediation analysis showed that TPSE did not significantly mediate the relationship between DLE and teaching competence. Although the pathway from DLE to TPSE was strongly supported ($BF > 1000$), the TPSE-to-Teaching Competence pathway and the DLE-to-Teaching Competence pathway were both unsupported ($BF < 1$).

Similarly, Bayesian model comparison identified the null model as the best-fitting structural model for teaching competence, with the highest posterior probability

($P(M|data)=0.515$). The DLE-only model explained only 2.1% of the variance in teaching competence ($R^2=0.021$), while the TPSE-only model explained only 1.0% ($R^2=0.010$). The combined DLE + TPSE model explained just 2.2% of the variance ($R^2=0.022$), which remained insufficient to outperform the null model.

These findings indicate that while digital environments and techno-pedagogical confidence contribute to teacher readiness, they do not sufficiently explain differences in teaching competence among already high-performing teachers. Carretta and Ree (2022) explained that limited variability and ceiling effects weaken predictive relationships in statistical models.

The findings suggest that factors such as teacher agency, learner readiness, reflective practice, school culture, and pedagogical adaptability may have stronger influence on teaching competence than digital conditions alone. Consequently, intervention programs should emphasize reflective pedagogy, adaptive teaching, mentoring systems, and collaborative professional learning rather than focusing exclusively on digital skills training.

Qualitative Findings and Integrative Discussion

Qualitative findings revealed that teachers viewed the influence of DLE and TPSE on teaching competence as conditional rather than automatic. Participants consistently emphasized that technology and digital confidence become meaningful only when translated into effective pedagogy, learner-centered instruction, and reflective classroom practice.

Five major themes emerged: (1) the digital learning ecosystem as enabling but uneven; (2) techno-pedagogical self-efficacy as developing and context-dependent; (3) student readiness as a critical condition for effective technology integration; (4) pedagogical primacy and teacher agency as the real drivers of competence; and (5) reflective and learner-centered practice as the basis of teaching excellence.

Participants described unstable internet connectivity, limited devices, and unequal learner access as continuing barriers to technology integration. Teachers also emphasized that learner readiness significantly influenced the effectiveness of digital instruction. Several participants explained that even highly confident teachers struggled when students lacked basic digital skills or internet access.

Moreover, participants consistently highlighted pedagogy and teacher creativity as more important than technology itself. Teachers reported that instructional competence depended primarily on how lessons were designed, adapted, and delivered rather than on the availability of digital tools alone. This supports Novoa-Echaurren (2024), who argued that teacher agency and pedagogical decision-making determine how digital technologies become educationally meaningful.

The findings therefore support the proposed “Contextually Mediated, Agency-Driven Digital ELT Upskilling Framework for Generative Teaching Competence,” which conceptualizes competence as a process-driven and context-sensitive outcome shaped by digital support, pedagogy, learner readiness, teacher agency, and reflective practice.

Based on these results, schools and educational leaders may implement a Sustainable Techno-Pedagogical Upskilling Framework that integrates digital support, mentoring, collaborative learning communities, learner-centered pedagogy, reflective teaching practices, and continuous professional development to enhance long-term teaching competence.

CONCLUSION

Based on the foregoing findings, the following conclusions are drawn:

1. The majority of public junior high school English teachers in the chosen regions work in a digital learning environment that facilitates education facilitated by technology. The overall availability of infrastructure, digital resources, and school support suggests that these schools currently have a reasonably good basis for incorporating digital technologies into teaching and learning, even though the Digital Learning Ecosystem may not be equally robust across all dimensions.
2. The respondents exhibit a high degree of confidence when it comes to utilizing technology to teach English. Their high scores on TCK, TPK, and TPACK indicate that they believe they are capable of choosing and using digital tools in ways related to both subject content and suitable teaching techniques.
3. It is possible to characterize the study's teachers as very effective and professionally qualified. Their IPCRF ratings, which are primarily Outstanding and Very Satisfactory, show that they already exhibit a high degree of teaching competency in their real professional activity.
4. Teachers' techno-pedagogical self-efficacy seems to be correlated with a more robust digital learning environment. Nevertheless, the results also demonstrate that higher Teaching Competence is not directly correlated with either the Digital Learning Ecosystem or Techno-Pedagogical Self-Efficacy. This implies that factors other than digital access, support, and teachers' technological confidence may influence instructional competency.
5. Techno-Pedagogical Self-Efficacy did not act as a mediator between Teaching Competence and the Digital Learning Ecosystem. To put it another way, instructors' confidence in incorporating technology may be strengthened by advantageous digital settings, but this confidence does not always translate into improved formal competence ratings.
6. The null model provides the best explanation for the respondents' teaching competency. Because the competence ratings are concentrated at the upper end of the scale, it appears that DLE and TPSE do not significantly differentiate teachers within an existing high-performing group.
7. Technology and confidence are enabling factors, but they are not the only factors that contribute to competence, as the teachers' own experiences attest. It is better to think of teaching competency as a process-driven, context-sensitive outcome that is influenced by teacher agency, pedagogy, learner readiness, classroom reality, and reflection.
8. The suggested techno-pedagogical upskilling framework is a suitable and fact-based reaction to the study's findings. It bolsters the idea that, rather than being only dependent on digital access or confidence, teaching competency is developed through the interaction of digital assistance, techno-pedagogical preparedness, learner conditions, pedagogy, and ongoing professional reflection.

Recommendations

In light of the findings and conclusions of the study, the following recommendations are offered: The Department of Education and policy makers. They can think about enhancing the digital learning ecosystem in public schools by guaranteeing dependable technical support, functional gadgets, up-to-date digital platforms, and steady internet access. Future policies might be more successful if they go beyond technology provision and concentrate on long-term, context-responsive, pedagogy-cantered teacher development, as the results

indicated that digital conditions were connected to teachers' techno-pedagogical self-efficacy but did not directly explain teaching competence. Students' digital readiness should also be taken into consideration because it affects how well technology may enhance teaching and learning in the classroom.

The Schools Division Offices of the Selected Cities and Municipalities. The study's conclusions might also serve as a foundation for creating more regionalized professional development initiatives for English instructors. Division-level training may concentrate more on the meaningful use of technology in language instruction rather than only technical abilities since the findings indicate that teaching competency is impacted by pedagogy, reflection, and teacher agency in addition to access to digital resources. In medium-sized public schools, where availability to technology and support may vary, this strategy can help guarantee that division-supported programs are more sensitive to the real demands and classroom realities of teachers.

School heads and Instructional Leaders. Schools may be crucial in fostering an atmosphere that supports educators' professional development and self-assurance. The results indicate that although institutional support is important, teaching competence is more likely to increase when it results in real-world opportunities for teamwork, peer mentoring, introspective discussions, and deliberate technology experimentation. As a result, schools can maintain professional learning spaces where educators can exchange tactics, talk about their experiences in the classroom, and improve how they use technology while still being sensitive to the requirements of students and the current educational environment.

Public Junior High School English Teachers. Since the study indicates that learner-centered tactics, reflective practice, and pedagogical decision-making are more important to teaching competency than just digital confidence, they might keep improving these areas. The qualitative results suggest that, despite the respondents' high levels of techno-pedagogical self-efficacy, meaningful teaching still depends on how teachers use technology to effectively train students through innovation, flexibility, and awareness of their preparation. Teachers may therefore benefit from considering technology as a tool that only becomes useful when it is in line with specific learning objectives, good pedagogy, and real classroom needs rather than as the main emphasis of the lesson.

Curriculum Developers, Teacher Educators, and Program Designers. The suggested framework could be a helpful guide for creating interventions in teacher education and professional development that address technology, pedagogy, learner engagement, and reflection as interrelated aspects of professional competence. According to the study's findings, upskilling initiatives may have greater impact if they address teachers' use of tools as well as their exercise of judgment, agency, and pedagogical translation in digitally mediated classrooms. Pre-service and in-service programs might profit from giving contextualized practice, reflective teaching, and the use of digital resources into real-world English language instruction more emphasis. Future Researchers. Since the current study found that DLE and TPSE did not significantly distinguish teachers who were already performing at very satisfactory to outstanding levels, they might investigate other factors that could better explain variations in teaching competence among high-performing teachers. Further understanding of the factors that contribute to teaching excellence in digitally transitioning school contexts may be provided by variables such as instructional leadership, school climate, professional judgment, teacher identity, quality of reflective practice, and learner engagement conditions. In order to assess its applicability in a variety of educational contexts, future research may potentially evaluate and improve the suggested framework in different subject areas, school kinds, divisions, or grade levels.

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