

The Effectiveness of the Master Teachers' Competence in the Utilization of the Information and Communication Technology (ICT) Tools in Their Mentoring Practices in the Public Elementary Schools, Division of Camarines Sur

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ARTICLE INFORMATION	ABSTRACT
Article history: Published: October 2026	The study examined master teachers' utilization of information and communication technology (ICT), their competence, perceived effectiveness in mentoring, and problems encountered in public elementary schools in the Division of Camarines Sur during School Year 2025–2026. A descriptive-evaluative-correlational design used questionnaire responses from 273 respondents. Weighted means, frequency count, percentage, ranks, Kendall's coefficient of concordance, and chi-square tests were reported, with significance set at 0.05. Findings were organized across five congressional districts. Overall utilization was Much Utilized (4.46), competence was Much Competent (4.35), perceived mentoring effectiveness was Much Effective (4.17), and problems were Much Serious (4.43). Laptops received the highest utilization mean (4.51). Word processing (4.62) and email and file management (4.60) received the strongest competence ratings. Instructional supervision had the highest effectiveness mean (4.45), while action research and conducting training/Learning Action Cell sessions had the lowest (3.43). Maintenance and technical malfunctions were the highest-rated problems (both 4.54). High concordance was reported, although inconsistent test entries, decisions, and descriptive values require reconciliation. A three-day training design addressed lower-rated competencies and technical constraints. The findings support targeted professional learning and institutional technical support, but do not establish causal effects on mentoring or learner outcomes. Missing sampling and measurement documentation, overlapping tool categories, and reporting discrepancies limit reproducibility and generalization.
Keywords: Master Teachers ICT Competence Mentoring Practices Instructional Supervision Professional Development Camarines Sur	

1. Introduction

Master teachers combine instructional expertise with responsibility for supporting colleagues' professional learning. ICT can provide channels for communication, resource sharing, observation, feedback, and documentation. Its value in mentoring depends on how those functions serve the professional needs of teachers. Device use, operational competence, and effective mentoring are therefore related concerns that should be assessed separately rather than treated as interchangeable indicators of success.

The technological pedagogical content knowledge framework describes the interaction of technological, pedagogical, and content knowledge in teaching (Koehler & Mishra, 2009). It provides a relevant conceptual distinction between knowing a tool and selecting its use for an instructional purpose. Harris and Hofer (2011) further examined how teachers expressed this knowledge through curriculum-based planning. These perspectives help frame mentoring as support for purposeful instructional decisions, beyond demonstrations of software functions.

Mentoring can also provide an example of pedagogical technology use. Vandeyar and Adegoke (2024), in a qualitative study of in-service teachers in Rwanda, found that participants mirrored the ICT practices experienced during their own learning. Gcabashe (2024) examined technology peer mentoring among Business Studies teachers in South Africa and identified benefits from colleagues' pedagogical and technological knowledge. These studies offer relevant mechanisms for discussion, while their settings and methods differ from the local questionnaire assessment.

Professional support must also address the conditions in which technology is used. Akram et al. (2022) identified barriers involving training, access, and technical support in a systematic review of teachers' perceptions. Trust and Whalen (2020) examined teachers' experiences during emergency remote teaching and highlighted preparation and support needs. Neither work establishes the effects of a particular mentoring device in Camarines Sur, but both support considering skills alongside the institutional environment.

The study examined public elementary schools in the Division of Camarines Sur during School Year 2025–2026. Its questions concerned utilization of computers, laptops, desktops, smart phones, projectors, and smart TVs; competence across seven ICT functions; perceived effectiveness across six mentoring domains; and problems encountered. Each set of ratings was accompanied by a question about agreement on indicator rank orders among respondent groups. A final question concerned a training design based on the findings. This organization separates descriptive priorities from the consistency of rankings across districts.

2. Methods

2.1 Design and participants

The study employed a descriptive-evaluative-correlational design. A total of 273 respondents answered a questionnaire. Master

teachers were identified as respondents, and the findings were tabulated across the first through fifth congressional districts of Camarines Sur. The eligible population, sampling procedure, recruitment process, response rate, district counts, school counts, and participant characteristics were not reported. No district allocation of the total was inferred. The findings describe the participating group rather than a verified probability sample of all master teachers in the division.

The study period was identified as School Year 2025–2026; exact administration dates were not specified. No random assignment, comparison condition, before-and-after measure, or independently assessed mentee or learner outcomes were reported. Despite the correlational design designation, the reported inferential analyses concerned rank agreement. No separate participant-level correlation between ICT competence and mentoring effectiveness was presented.

2.2 Instrument and procedures

The questionnaire addressed six device-utilization categories, seven competence domains, six mentoring-effectiveness domains, and problems encountered. Computers, laptops, and desktops were retained as separately reported categories, although their operational boundaries were not defined. Competence covered word processing, spreadsheets, presentations, information sourcing and internet navigation, downloading and installing software, email and file management, and video conferencing. Effectiveness covered classroom instruction, instructional supervision, preparation of materials, lesson planning, assessment, and action research and training/LAC sessions.

Response anchors, interpretation intervals, questionnaire development, validation, pilot procedures, and reliability coefficients were not reported. Codes and average columns are retained as tabulated, including inconsistent codes and repeated indicators. Utilization codes include VMU, MU, and U; competence codes include VMC and MC, although MU appears in the spreadsheet table. Effectiveness codes include VME, ME, and E, although utilization codes appear in lesson planning. Problem codes are VMS and MS. No numerical cutoff scheme was reconstructed from these entries.

Permission to conduct the study was acknowledged, but questionnaire administration and retrieval procedures, missing-response handling, individual consent, confidentiality safeguards, and ethics approval or exemption details were not specified. Administrative permission is not treated as proof of independent ethics review. All findings are reported in aggregate, without adding participant identifiers or unreported procedures.

2.3 Statistical analysis and presentation

Frequency count, percentage, rank, Kendall's coefficient of concordance (W), and chi-square (χ^2) were identified as statistical tools; weighted means were used in the results tables. Significance was set at 0.05. The concordance tables identify five respondent groups corresponding to the district presentation. Their number of cases refers to ranked indicators, not to the total participant count. Raw rankings, tie correction, weighting by district sample size, exact p values, and software were not specified. No statistics were recalculated from individual responses.

The indicator tables present the reported Average columns: weighted mean, interpretation code, and rank. The district overview retains the reported domain means. District-specific item columns are not repeated in this condensed presentation. Reported domain means are not substituted with averages calculated from rounded items. The reported inferential tables retain W , χ^2 , indicator count, degrees of freedom, alternative-hypothesis decision, and significance entries; narrative conflicts are identified explicitly. Concordance concerns similarity in ordering, not the size of competence, change over time, or causal effectiveness.

3. Results

The findings are presented through the reported average indicator profiles and district domain summaries. W_x denotes weighted mean, I interpretation code, and R rank. Codes reproduce the tabular entries: VMU = Very Much Utilized; MU = Much Utilized; U = Utilized; VMC = Very Much Competent; MC = Much Competent; VME = Very Much Effective; ME = Much Effective; E = Effective; VMS = Very Much Serious; and MS = Much Serious. An inconsistent code is retained without imposing a new interpretation. Blank ranks for domain means are shown as an em dash.

3.1 Overview across congressional districts

Table 1. Reported domain weighted means across congressional districts

Domain	1st	2nd	3rd	4th	5th	Avg.
Utilization: Computers	4.37	4.38	4.39	4.40	4.44	4.40
Utilization: Laptops	4.51	4.49	4.47	4.53	4.55	4.51
Utilization: Desktops	4.39	4.38	4.35	4.41	4.43	4.39
Utilization: Smart Phones	4.51	4.49	4.47	4.52	4.53	4.50
Utilization: Projectors	4.50	4.48	4.47	4.52	4.53	4.50
Utilization: Smart TVs	4.46	4.44	4.43	4.48	4.50	4.46
Utilization: Average Weighted Mean	4.46	4.44	4.43	4.48	4.50	4.46
Competence: Word processing	4.60	4.61	4.63	4.62	4.63	4.62
Competence: Spreadsheet operations	4.01	4.02	4.04	4.06	4.07	4.04
Competence: Electronic presentation/PowerPoint	4.14	4.12	4.15	4.16	4.19	4.15
Competence: Information sourcing and internet navigation	4.40	4.38	4.37	4.42	4.43	4.40
Competence: Downloading and installing software	4.42	4.41	4.39	4.44	4.45	4.42
Competence: Email and file management	4.59	4.57	4.61	4.59	4.63	4.60
Competence: Video conferencing	4.26	4.23	4.24	4.24	4.29	4.25
Competence: Average Weighted Mean	4.35	4.33	4.35	4.36	4.38	4.35
Mentoring effectiveness: Classroom instruction	4.35	4.33	4.31	4.37	4.39	4.35

RESEARCH ARTICLE

Domain	1st	2nd	3rd	4th	5th	Avg.
Mentoring effectiveness: Instructional supervision	4.44	4.44	4.46	4.46	4.47	4.45
Mentoring effectiveness: Preparation of instructional materials	4.42	4.39	4.40	4.43	4.45	4.42
Mentoring effectiveness: Lesson Planning	4.23	4.22	4.21	4.22	4.28	4.23
Mentoring effectiveness: Assessment	4.11	4.10	4.13	4.13	4.15	4.12
Mentoring effectiveness: Action Research and conducting Training/LAC Session	3.42	3.41	3.43	3.45	3.46	3.43
Mentoring effectiveness: Average Weighted Mean	4.16	4.15	4.16	4.18	4.20	4.17

Note. Domain and overall means are retained from the summary tables. These values are not district participant counts or tests of district differences.

Table 1 shows favorable overall ratings across utilization, competence, and mentoring effectiveness. Laptops lead the utilization profile, document and email functions lead competence, and instructional supervision leads perceived effectiveness. Action research and training/LAC sessions are comparatively lower. These patterns identify professional-learning priorities without demonstrating that one domain caused another. District means are closely grouped descriptively, but no test of differences in district means was reported.

3.2 Utilization of ICT tools

Table 2. Computers

Indicator	Wx	I	R
Computer-based tools help develop personalized mentoring strategies tailored to individual needs.	4.36	MU	7
Determine the level of computer literacy and familiarity with different technologies.	4.28	MU	8
Encourage teachers to reflect on their use of technology and identify areas for improvement.	4.14	U	10
Provide opportunities for collaboration and peer learning among teachers.	4.55	MU	3
Computer applications assist in organizing mentoring schedules, coaching sessions, and relevant documentation	4.45	MU	5.5
Allow mentor to maintain continuous communication with mentees through various digital channels.	4.57	VMU	2
Help teachers overcome any technical difficulties or challenges they encounter.	4.13	U	11
Encourage teachers to use computers to enhance their teaching practices.	4.45	MU	5.5
Create a supportive coaching environment where teachers feel confident experimenting with computer-based tools.	4.75	VMU	1
Offer ongoing resources, tutorials, and support to help teachers stay updated with emerging technologies.	4.15	MU	9
Help teachers develop a growth mindset towards technology integration.	4.52	VMU	4
Average Weighted Mean	4.40	MU	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The narrative substitutes a collaboration statement for the 4.14 reflection item and describes some codes differently.

The strongest computer item concerns a supportive coaching environment, while technical problem solving receives the lowest average. The pattern favors maintaining encouragement and communication while improving practical assistance. The lower reflection item is labeled differently in the narrative and table; interpretation should therefore rely on the retained entries rather than a reconstructed category rule.

Table 3. Laptops

Indicator	Wx	I	R
Tailor mentoring approaches to individual teacher needs using data and tools accessed via laptop	4.45	MU	7.5
Utilize laptops to present videos, simulations, and instructional models to enhance teacher understanding.	4.57	VMU	3
Manage digital coaching plans and documentation efficiently using laptop tools.	4.46	MU	6
Connect with mentees and colleagues for virtual collaboration and feedback.	4.54	VMU	4
Help gather and analyze data that inform and improve mentoring practices.	4.43	MU	9
Communicate through shared documents, online meetings, and virtual platforms.	4.66	VMU	1
Create interactive presentations and multimedia materials for coaching sessions.	4.39	MU	10
Provide teachers with access to differentiated digital resources and coaching support materials.	4.53	VMU	5
Develop digital coaching tools, record notes, and monitor teacher progress through online platforms.	4.45	MU	7.5
Help access online resources, research, and professional development content.	4.63	VMU	2
Average Weighted Mean	4.51	VMU	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The domain entry 4.51 is retained literally; the overview reports 4.51.

Laptops receive their strongest ratings for shared communication and access to professional resources, with multimedia creation comparatively lower. This suggests that communication and retrieval may be more established than production of interactive coaching materials. The domain mean is printed with a comma in the detailed table and with a point in the summary; both representations are retained where relevant. Training should connect existing communication routines with authentic design and analysis tasks.

Table 4. Desktops

Indicator	Wx	I	R
Use desktops to research new coaching strategies and stay updated on best instructional practices	4.33	MU	8
Desktop tools allow mentors to make coaching sessions more engaging, interactive, and responsive to teacher needs.	4.56	VMU	1
Create multimedia materials—such as presentations, coaching videos, and digital guides—to enhance mentoring	4.25	MU	10
Make coaching plans, develop professional learning materials, and prepare mentoring presentations.	4.22	MU	11
Create and evaluate coaching tools (e.g., surveys, reflections), monitor teacher growth, and maintain mentoring records.	4.37	VMU	6
Share coaching updates and professional resources with teachers and stakeholders through desktop communication tools.	4.53	VMU	3
Desktops support collaborative work with colleagues in planning, mentoring, and professional learning communities.	4.36	MU	7
Utilize desktops to access professional learning platforms, webinars, and digital libraries relevant to coaching.	4.55	VMU	2
Regularly use desktops to update instructional expertise and explore new tools for teacher development.	4.44	MU	5
Access and utilize educational software that supports teacher coaching and capacity building.	4.29	MU	9
Document and organize mentoring sessions and coaching feedback efficiently using desktop applications.	4.45	MU	4
Average Weighted Mean	4.39	VMC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The domain mean code VMC differs from MU in the utilization summary.

The desktop profile favors engaging coaching sessions and professional-learning access over preparation of coaching plans and presentations. A stationary device may still support substantial mentoring work, but the ratings do not test whether portability explains the comparatively lower domain position. The average classification VMC differs from the utilization label in the summary and is retained as a reporting inconsistency. Program decisions should consider tasks and access conditions rather than infer that the device itself determines mentoring quality.

Table 5. Smart Phones

Indicator	Wx	I	R
Access professional learning resources, educational articles, and current research to support coaching.	4.54	VMU	5.5
Provide real-time updates and feedback to teachers using mobile communication tools (e.g., messaging apps, emails)	4.55	VMU	3.5
Help streamline tasks, improving time management and productivity in mentoring activities	4.54	VMU	5.5
Use polling apps and other tools to collect instant feedback from teachers to inform coaching strategies.	4.32	MU	10
Facilitate communication between the mentor and mentees.	4.57	VMU	1
Increase searching and learning skills.	4.55	VMU	3.5
Help to find updated information for professional development discussions.	4.53	VMU	7
Differentiate coaching support by sharing personalized content and strategies via smartphone-based platforms	4.42	MU	8
Allow for flexible, anytime-anywhere access to mentoring materials and coaching conversations.	4.56	VMU	2
Differentiate coaching support by sharing personalized content and strategies via smartphone-based platforms	4.36	MU	9
Average Weighted Mean	4.50	VMU	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. Two near-identical differentiated-support statements have different values; the polling average is retained as 4.32.

Communication and flexible access are among the more favorably rated smartphone functions. Instant-feedback polling is comparatively lower, and two differentiated-support statements are nearly identical but have different means. These entries are preserved rather than merged. The profile suggests a distinction between routine contact and more structured feedback or individualized coaching. It does not establish actual frequency of phone use or the effectiveness of particular applications. Mentoring support should examine how convenient communication can be translated into purposeful feedback and documented follow-through.

Table 6. Projectors

Indicator	Wx	I	R
Display presentations, visuals, and videos to make coaching sessions more engaging.	4.56	VMU	1
Can easily switch between different content, like videos, presentations, and online resources, keeping teachers focused and involved.	4.55	VMU	2.5
Allow seamless access to a vast array of online educational materials	4.53	VMU	5.5

RESEARCH ARTICLE

Indicator	Wx	I	R
4. Introduce diverse teaching perspectives and expand beyond traditional coaching materials	4.47	MU	7.5
5. Integrate real-time data (e.g., assessment results, classroom observations) into presentations to inform coaching.	4.45	MU	9.5
Help deliver dynamic, interactive coaching sessions tailored to teacher needs.	4.54	VMU	4
Project visual content helps teachers better understand professional development topics and strategies	4.47	MU	7.5
8. Clarify complex instructional concepts through visuals, diagrams, and animations.	4.37	MU	11
9. Highlight key points and annotate projected content to focus teacher attention during mentoring sessions.	4.45	MU	9.5
10. Help prepare and deliver well-organized coaching sessions, saving time and improving flow.	4.55	VMU	2.5
11. Promote active engagement and collaboration among teachers by using projected content as a shared learning focus during mentoring.	4.53	VMU	5.5
Average Weighted Mean	4.50	VMU	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Presentation, organization, and shared visual content are rated more favorably than explaining complex instructional concepts. This points toward reviewing the pedagogical use of projected materials, including how mentors connect visuals with discussion and application. The detailed list contains eleven statements, whereas the concordance table reports twelve cases. That inconsistency limits linkage of the indicator profile to the inferential output and requires the complete ranking record.

Table 7. Smart TVs

Indicator	Wx	I	R
Smart TV use during mentoring sessions enhances the clarity and impact of instructional modeling	4.53	VMU	2.5
Facilitate more efficient conduct of group mentoring or Learning Action Cell (LAC) sessions.	4.56	VMU	1
Video demonstrations accessed via Smart TVs help mentees better understand complex teaching strategies.	4.45	MU	6.5
Using Smart TVs encourages Master Teachers/mentors to innovate their coaching approaches.	4.36	MU	11
Help demonstrate instructional strategies visually, supporting teachers who learn best through observation.	4.45	MU	6.5
Incorporating multimedia content through Smart TVs increases teacher engagement in coaching sessions.	4.53	VMU	2.5
Promote active participation and deeper engagement among teachers in professional learning sessions.	4.46	MU	4.5
Use visual content on Smart TVs to help teachers grasp complex teaching concepts and techniques more effectively.	4.40	MU	10
Support deeper understanding of pedagogy by enabling multimedia-rich demonstrations and model lessons.	4.45	MU	6.5
Present information in various formats, catering to different learning styles and individual needs.	4.46	MU	4.5
Easy to integrate into professional learning environments and enhance overall coaching effectiveness.	4.43	MU	9
Average Weighted Mean	4.46	MU	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Smart TVs receive their strongest average for group mentoring or LAC facilitation, while innovation in coaching approaches receives the lowest. The pattern suggests that shared display and session organization are more favorably perceived than changes in mentoring methods. The findings support training on how a displayed model lesson can become the basis for observation, critique, and guided redesign, while retaining the distinction between favorable perceptions and independently assessed mentoring outcomes.

3.3 Competence in ICT functions

Table 8. Word processing

Indicator	Wx	I	R
Adds design elements (e.g., headers, footers, page numbers) to improve organization and professionalism of mentoring documents.	4.55	VMC	11
Converts files into different formats (e.g., PDF) for sharing.	4.65	VMC	5
Creates, saves, and manages mentoring files in organized folders.	4.59	VMC	6.5
Applies appropriate text formatting to improve readability.	4.66	VMC	3.5
Integrates feedback and annotations to support mentees' development.	4.52	VMC	13
Edits and updates documents based on revisions and feedback.	4.56	VMC	9.5
Inserts and formats tables for mentoring data (e.g., schedules, progress).	4.59	VMC	6.5
Uses copy, cut, paste, and find-and-replace functions efficiently	4.66	VMC	3.5
Previews and prints documents with appropriate settings.	4.74	VMC	2
Inserts and formats tables for mentoring data (e.g., schedules, progress).	4.56	VMC	9.5
Uses navigation tools for efficient document review.	4.54	VMC	12

RESEARCH ARTICLE

Indicator	Wx	I	R
Use to check spelling, correct synonyms/antonyms, grammar using auto- correct tool.	4.59	VMC	6.5
Prepares and organizes mentoring documents (e.g., lesson guides, feedback forms, reports).	4.80	VMC	1
Average Weighted Mean	4.62	VMC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Word-processing ratings are uniformly favorable and emphasize document preparation, printing, and formatting. Feedback and annotations receive the lowest average within this strong profile. The same table-formatting statement appears twice with different values and ranks; both rows remain. Routine document competence can support mentoring records, but it does not demonstrate the quality of the feedback those documents contain. Professional learning should build on familiar functions to strengthen revision, annotation, and evidence of mentee development rather than repeat only basic document operations.

Table 9. Spreadsheet operations

Indicator	Wx	I	R
Use spreadsheets to cut, copy, and paste cell contents when organizing mentoring data.	4.14	MU	5
Enter formulas and apply mathematical operations or built-in functions to analyze mentee performance.	3.65	MU	10
Align column or cell contents (e.g., left, center, right, justify) for clear presentation of mentoring records.	4.21	MU	4
Create charts and graphics to visually represent mentees' progress and assessment results.	4.66	MU	8
Format text by setting font types, sizes, and styles to enhance readability of mentoring documents.	4.52	MU	2
Insert and delete rows and columns to efficiently manage and update mentoring datasets.	4.22	MU	3
Open workbook files and input relevant mentoring data accurately.	4.36	MU	1
Enter labels, titles, numerical values, and headings to systematically organize mentoring information.	3.93	MU	7
Apply appropriate cell formats (e.g., currency, percentage) for interpreting assessment and evaluation results.	3.75	MU	9
Adjust row heights and column widths to improve clarity and accessibility of spreadsheet outputs.	4.00	MU	6
Average Weighted Mean	4.04	MU	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

The reported domain mean places spreadsheets lowest among the competence domains. However, two average entries and their ranks conflict with the narrative and with the apparent ordering of other means. The chart-creation entry of 4.66 is retained at rank 8, and text formatting is retained as 4.52 at rank 2. These contradictions prevent a definitive item ranking. The domain remains a reported training priority, but the relative needs for formulas, charts, and formatting require verification before a precise skills sequence is prescribed.

Table 10. Electronic presentation/PowerPoint

Indicator	Wx	I	R
Utilize PowerPoint effectively in navigating presentations during mentoring sessions	4.27	MC	1
Duplicate, resize, rotate, align, and delete objects to improve slide design and instructional emphasis.	4.19	MC	4
Apply design themes, transitions, and slide timings to improve the flow of mentoring presentations.	4.11	MC	9
Insert slides from other presentations to enrich mentoring materials and resources.	4.15	MC	6
Add and format objects and WordArt to enhance clarity and visual communication in mentoring presentations.	4.25	MC	3
Use PowerPoint to plan and support mentoring activities, including previewing YouTube presentations as instructional resources.	4.26	MC	2
Use PowerPoint to plan and support mentoring activities, including previewing YouTube presentations as instructional resources.	4.26	MC	2
Insert, modify, and format tables and print presentations for mentoring documentation and reporting.	4.16	MC	5
Create and format charts and diagrams to present data and mentoring insights clearly.	4.13	MC	8
Create, edit, rearrange, format, and delete slides to organize mentoring content efficiently.	4.14	MC	7
Set up slide shows and apply presentation effects to deliver structured and interactive mentoring sessions	4.08	MC	11
Insert multimedia elements such as movie clips and sound clips to enhance engagement in mentoring sessions.	4.04	MC	12
Reorder animation effects to ensure logical and effective presentation of mentoring content	4.09	MC	10
Average Weighted Mean	4.15	MC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The PowerPoint planning statement is repeated across the continuation; both rows remain.

Presentation navigation and planning functions receive relatively stronger averages than multimedia insertion and slide-show effects. This is consistent with a need to connect operational familiarity with more deliberate instructional design. The continuation repeats the planning-and-YouTube statement at the same value and rank; the repetition remains visible. The listed rows therefore cannot be

assumed to represent thirteen distinct competencies. Training can use actual mentoring presentations to examine clarity, purposeful media use, and interaction, while the questionnaire inventory is reconciled.

Table 11. Information sourcing and internet navigation

Indicator	Wx	I	R
1. Communicate with mentees, parents, and colleagues through digital platforms for mentoring support.	4.45	MC	4
2. Access online materials to strengthen mentoring strategies and guidance.	4.47	MC	3
3. Participate in webinars, online courses, and professional communities for mentoring development.	4.55	VMC	2
4. Find and curate lesson ideas, presentations, and digital resources to support mentoring.	4.63	VMC	1
5. Use online tools to design mentoring interventions and learning support activities.	4.37	MC	5
6. Utilize online platforms to guide discussions and provide mentoring assistance.	4.35	MC	7
7. Identify reliable online sources to support mentoring decisions.	4.29	MC	10
8. Evaluate the credibility of online information used in mentoring.	4.27	MC	11
9. Use digital platforms to monitor and assess mentee progress and provide feedback.	4.34	MC	8.5
10. Use online information effectively to achieve mentoring objectives.	4.36	MC	6
11. Recognize and address informational needs in mentoring practice.	4.34	MC	8.5
Average Weighted Mean	4.40	MC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Finding and curating resources receives the highest average, while evaluating credibility receives the lowest. This distinction matters because access to online material does not establish the quality or suitability of the information used in mentoring. The pattern supports activities in source evaluation and selection of evidence for specific coaching needs. The findings identify a perceived priority within an otherwise favorable competence domain.

Table 12. Downloading and installing software

Indicator	Wx	I	R
Download software from the official website of the software developer.	4.54	VMC	3
Locate the download link on the trusted website.	4.55	VMC	1.5
Locate the downloaded installation file.	4.55	VMC	1.5
Double-click the file to start the installation process.	4.52	VMC	4
Choose the installation type (e.g., standard or custom).	4.37	MC	8
Select the destination folder for the software.	4.35	MC	9
Complete any other required steps, such as entering a license key or configuring settings.	4.27	MC	12
Aware of the licensing terms for any software installed, especially if it is for use in a classroom or lab setting.	4.34	MC	10
Review the End User License Agreement (EULA) presented during installation.	4.32	MC	11
Follow the installer's prompts, which may ask for additional input, such as enabling optional features or agreeing to additional terms and conditions.	4.39	MC	6
Check for updates to ensure the software is running the latest version.	4.45	MC	5
Consider saving a copy of the installer file or writing down activation keys for future use.	4.38	MC	7
Average Weighted Mean	4.42	MC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Locating links and installation files receives stronger ratings than licensing and configuration-related tasks. The pattern suggests that routine acquisition steps and more demanding setup responsibilities should be distinguished. The competence table retains favorable ratings, but the corresponding inferential table marks the alternative hypothesis Rejected despite the narrative reporting acceptance. The descriptive profile can inform training; the agreement decision requires separate reconciliation.

Table 13. Email and file management

Indicator	Wx	I	R
Create email templates for frequently used mentoring responses to save time.	4.63	VMC	3.5
Use clear subject lines and concise messages to ensure effective mentoring communication.	4.58	VMC	6.5
Use email to create messages and attach mentoring-related files.	4.79	VMC	1
Manage inbox effectively by unsubscribing from irrelevant newsletters or promotional emails.	4.59	VMC	5
Ensure proper grammar, spelling, and clarity before sending mentoring-related emails.	4.63	VMC	3.5
Print email messages when needed for documentation or mentoring records.	4.65	VMC	2
Process emails in focused batches to improve efficiency in mentoring communication.	4.57	VMC	8
Create multiple email accounts for file backup and secure storage of mentoring documents.	4.54	VMC	9
Use email functions (reply and forward) for mentoring communication.	4.58	VMC	6.5
Organize and save files in appropriate locations (desktop, documents, pictures, music, videos) for mentoring resources.	4.52	VMC	10
Use cloud storage to save, access, and download mentoring files.	4.51	VMC	11

RESEARCH ARTICLE

Indicator	Wx	I	R
Average Weighted Mean	4.60	VMC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Creating email messages and attaching files receives the highest average; cloud storage receives the lowest within a uniformly strong profile. Communication competence therefore appears more favorably rated than some shared-storage functions. The statement recommending multiple email accounts for secure backup remains questionnaire content, not an endorsed security practice. Mentoring support should examine organized collaboration and appropriate handling of records while preserving the distinction between a competence rating and demonstrated information security.

Table 14. Video conferencing

Indicator	Wx	I	R
Effectively connect with teachers remotely, supporting flexible mentoring and coaching sessions.	4.35	MC	3.5
Design presentations with adequate white space to reduce cognitive overload and help focus coaching points.	4.08	MC	10.5
Use strategic visuals (e.g., diagrams, images) in place of lengthy explanations to enhance teacher understanding.	4.29	MC	5
Use a conversational tone that builds rapport and encourages open dialogue during video coaching.	4.18	MC	8.5
Engage in regular virtual collaboration with colleagues to share best practices in teaching and coaching.	4.27	MC	6.5
Tailor coaching approaches to address the individual professional development needs of each teacher.	4.38	MC	2
Provide automated or summarized notes from sessions to support teacher follow-through and reflection.	4.18	MC	8.5
Ensure all video sessions and materials are accessible and inclusive for all participating teachers.	4.27	MC	6.5
Include both visual and audio enhancements to accommodate various learning preferences of adult learners.	4.39	MC	1
Incorporate interactive elements (e.g., polls, breakout rooms, shared whiteboards) to make coaching sessions engaging.	4.08	MC	10.5
Actively foster engagement so that teachers feel empowered and involved, not just passive recipients.	4.35	MC	3.5
Average Weighted Mean	4.25	MC	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Audio-visual enhancement and individualized coaching receive relatively stronger ratings than presentation white space and interactive features. This suggests that access to a virtual meeting is different from designing an engaging mentoring process within it. The findings support practice with polls, shared workspaces, and inclusive participation, but they do not establish which platform or feature would improve outcomes.

3.4 Perceived effectiveness in mentoring

Table 15. Classroom instruction

Indicator	Wx	I	R
Video recordings are used effectively to reflect and improve teaching practices.	4.37	ME	3.5
Master Teachers integrate multimedia presentations effectively during classroom observations.	4.54	VME	2
ICT tools are used effectively to model differentiated instruction strategies.	4.36	ME	5
Master Teachers use educational platforms (e.g., Google Classroom) to model digital instruction.	4.15	ME	11
ICT tools are used to demonstrate innovative teaching methods	4.37	ME	3.5
ICT tools are effectively used to simulate real-time classroom teaching scenarios.	4.29	ME	9
Technology is used to provide constructive feedback during classroom instruction.	4.32	ME	8
Online resources are effectively used by Master Teachers to support lesson delivery.	4.35	ME	6
Collaborate with colleagues in the conduct and application of research to enrich knowledge of content and pedagogy.	4.22	ME	10
10. Master Teachers effectively utilize smart boards or projectors in modeling classroom instruction.	4.34	ME	7
The use of ICT tools by Master Teachers enhances classroom demonstration during coaching.	4.56	VME	1
Average Weighted Mean	4.35	ME	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. No learner performance change was measured.

Demonstration and multimedia-supported observation receive stronger averages than modeling through an educational platform. The profile suggests that visible instructional modeling may be more established than the use of a platform to organize continuing learning. Vandeyar and Adegoke (2024) provide relevant qualitative evidence that teachers may mirror the pedagogical technology practices they experience. The settings differ, and the study does not test that mechanism directly. Its findings support examining how demonstrations are connected to mentees' own planning, practice, and feedback.

Table 16. Instructional supervision

Indicator	Wx	I	R
Master Teachers use ICT tools to monitor mentee teaching performance.	4.45	ME	5.5
Digital tools (e.g., rubrics, observation checklists) are used effectively in classroom supervision.	4.47	ME	4
Online conferencing tools (e.g., Zoom, MS Teams) are used for post-observation conferences.	4.33	ME	9.5
Supervision feedback is effectively delivered through digital platforms.	4.33	ME	9.5
Video lesson recordings are used for mentoring discussion and evaluation.	4.45	ME	5.5
Online documents (e.g., shared lesson plans) are effectively reviewed by Master Teachers.	4.56	VME	1
Master Teachers effectively use ICT tools to document and store supervision records.	4.55	VME	2
ICT tools facilitate regular and timely communication in supervision.	4.37	ME	8
Digital tracking tools are used to monitor mentees' instructional progress.	4.42	ME	7
ICT-based supervision reports are clear and informative.	4.53	VME	3
Reported domain mean from the summary	4.45	ME	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The detailed domain mean row is blank; 4.45 is explicitly supplied by the reported summary.

Shared-document review and supervision records receive stronger ratings than online conferences and digital delivery of feedback. The distinction suggests that documentation may be more established than interactive supervisory dialogue. The detailed average row is blank, so the domain mean is explicitly taken from the reported summary rather than inferred from the items. The results support reviewing the continuity and usefulness of feedback, but they do not demonstrate improved supervision quality or changes in teacher performance.

Table 17. Preparation of instructional materials

Indicator	Wx	I	R
Master Teachers demonstrate how to incorporate multimedia into lesson materials.	4.35	ME	7.5
Master Teachers guide mentees in using online repositories (e.g., DepEd Commons)	4.29	ME	9
Online content curation tools are introduced and used in mentoring sessions.	4.43	ME	6
Collaborative tools (e.g., Google Docs) are effectively used in co-developing materials.	4.35	ME	7.5
Use of ICT tools enhances creativity in instructional material design.	4.57	VME	3
Master Teachers use ICT tools to assist mentees in creating engaging instructional materials.	4.59	VME	1
ICT tools help streamline the production of instructional materials.	4.58	VME	2
Help teachers develop digital materials like presentations, videos, interactive exercises, or online simulations that align with the learning objectives	4.25	ME	10
Templates and examples of digital teaching materials are effectively shared.	4.53	VME	4
Master Teachers provide technical guidance in using ICT tools for material creation.	4.45	ME	5
Digital tools (e.g., Canva, PowerPoint) are effectively modeled in material creation.	4.23	ME	11
Average Weighted Mean	4.42	ME	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. Production efficiency is 4.58 in the table but 4.57 in the narrative.

Assistance with engaging materials and production efficiency receives stronger ratings than modeling specific design tools. The contrast suggests that perceived support for producing a resource and the demonstration of how to create it may be different mentoring needs. The table's production-efficiency value is 4.58, while the narrative gives 4.57; the tabulated value is retained. The practical priority is to connect exemplars with guided creation and critique.

Table 18. Lesson planning

Indicator	Wx	I	R
Master Teachers model the use of online resources in planning engaging lessons.	4.53	VMU	2.5
Digital lesson plan formats are effectively introduced and explained.	4.56	VMU	1
ICT tools are used to demonstrate alignment with MELCs or curriculum guides.	4.45	MU	6.5
Master Teachers use ICT tools to guide mentees in writing lesson plans.	4.36	MU	11
Mentees are effectively mentored to integrate ICT into lesson objectives and activities.	4.45	MU	6.5
ICT tools facilitate more efficient and timely lesson planning support.	4.53	VMU	2.5
Online collaboration tools are used for co-planning lessons	4.46	MU	4.5
Lesson plans are critiqued and revised using digital platforms.	4.40	MU	10
Use of ICT in lesson planning enhances mentees' understanding of instructional design.	4.45	MU	6.5
Online feedback on lesson plans is comprehensive and constructive.	4.46	MU	4.5
Multimedia resources are integrated to enrich lesson plan content and instructional strategies.	4.43	MU	9
Average Weighted Mean	4.23	ME	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The mean 4.23 and utilization codes are retained despite conflict with the displayed effectiveness items.

Digital formats and access to online resources receive favorable averages, while direct guidance in writing lesson plans is comparatively lower. The item profile nevertheless does not reconcile with the reported domain mean, and its codes refer to utilization rather than effectiveness. Both features remain visible. Harris and Hofer (2011) emphasize purposeful planning around content and learning activities, which

offers a relevant lens for mentoring. The unresolved scoring issue prevents treating the domain average as a validated summary of the displayed items.

Table 19. Assessment

Indicator	Wx	I	R
ICT tools are used by Master Teachers to demonstrate digital formative assessment techniques.	4.14	ME	4.5
Mentees are mentored on using technology to analyze assessment data.	4.12	ME	7
Use of learning management systems (LMS) for assessment is demonstrated effectively.	4.08	ME	9
Master Teachers effectively use ICT to develop rubrics and scoring guides.	4.16	ME	2
Online quiz platforms (e.g., Quizziz, Google Forms) are modeled effectively.	4.06	ME	10
E-portfolios and digital journals are effectively introduced for learner assessment.	4.09	ME	8
Technology is integrated in providing immediate feedback to teachers	4.14	ME	4.5
Master Teachers model ICT tools for performance-based assessment tasks.	4.14	ME	4.5
ICT tools are used to analyze learner data and guide evidence-based mentoring decisions	4.17	ME	1
ICT tools help streamline and organize assessment documentation.	4.15	ME	3
Average Weighted Mean	4.12	ME	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Analysis of learner data and development of rubrics receive stronger averages than online quizzes and learning-management-system assessment. The small descriptive differences identify possible topics for review rather than statistically established skill gaps. Gikandi et al. (2011) discuss formative assessment in online higher education; the applicable principle is attention to feedback and learning processes, not direct equivalence with elementary mentoring. The study supports examining how mentors model assessment use, while no learner assessment gains or quality judgments can be inferred from questionnaire ratings.

Table 20. Action research and conducting training/LAC Session

Indicator	Wx	I	R
Master Teachers use ICT tools to mentor mentees in collecting action research data.	3.44	E	5.5
Online survey tools are introduced effectively for action research purposes.	3.45	E	3.5
Digital presentations during LAC sessions are engaging and informative.	3.45	E	3.5
ICT tools help track LAC session outputs and mentee progress.	3.37	E	7
ICT tools are used to guide mentees in writing research reports.	3.36	E	8.5
Master Teachers model how to present action research findings using technology.	3.36	E	8.5
Research templates and samples are shared through ICT tools.	3.57	ME	1
Master Teachers conduct effective training/LAC sessions using digital platforms.	3.34	E	10
Online collaboration tools are effectively used in group research and discussions.	3.44	E	5.5
Online collaboration tools are effectively used in group research and discussions.	3.44	E	5.5
Average Weighted Mean	3.43	E	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained. The online-collaboration statement appears twice, with the same values and ranks.

Sharing research templates receives the strongest average, whereas conducting digitally supported training or LAC sessions receives the lowest. This suggests that distributing an example may be more established than facilitating sustained collaborative inquiry. The repeated online-collaboration row remains, so the inventory of distinct behaviors requires clarification. The reported domain classification is Effective, below the Much Effective ratings for other mentoring domains. It supports prioritizing guided inquiry and facilitation, but does not establish that a particular training activity will produce improvement.

3.5 Problems encountered

Table 21. Problems encountered

Indicator	Wx	I	R
Access to technology and resources	4.52	VMS	5.5
Internet connection	4.53	VMS	3.5
Training and skills	4.45	MS	7
Technical support	4.52	VMS	5.5
Time constraint	4.43	MS	8
Resistance to change	4.15	MS	9
Insufficient maintenance of ICT equipment	4.54	VMS	1.5
Negative attitudes towards technology	4.12	MS	10
Technical glitches, outdated software, and computer malfunctions	4.54	VMS	1.5
Existing training programs may not adequately address the specific needs of mentors in using ICT for mentoring.	4.53	VMS	3.5
Average Weighted Mean	4.43	MS	—

Note. Values, codes, and ranks reproduce the reported Average columns; repeated or inconsistent entries are retained.

Maintenance and technical malfunctions share the highest average, with internet connection and training relevance also highly rated. Negative attitudes receive the lowest average but remain classified Much Serious. The profile supports attention to equipment,

connectivity, and responsive support alongside skills training. Akram et al. (2022) identify training and access barriers in their systematic review, providing relevant context without validating the study's local causal explanations.

3.6 Agreement on indicator rank orders

Table 22. Reported concordance statistics for utilization

Domain	Cases	W	χ^2	df	H ₁	Sig.
Computers	11	0.97	48.50	10	Accepted	0.001
Laptops	10	0.99	44.55	9	Accepted	0.001
Desktops	11	1.00	50	10	Accepted	0.001
Smart Phones	10	0.93	41.85	9	Accepted	0.001
Projectors	12	0.96	52.25	11	Accepted	0.001
Smart TVs	11	0.95	47.50	10	Accepted	0.001

Note. Five respondent groups are reported. Cases are indicators; Sig. reproduces the table's Significance of Agreement entry and is not an exact p value. Decisions concern the alternative hypothesis (H₁). Narrative projector $\chi^2 = 48.00$ differs from table 52.25; desktop $p > 0.001$ conflicts with the table significance entry.

The utilization statistics report high concordance across devices, indicating similar indicator ordering if the calculations are verified. The projector case count differs from the eleven displayed items, and the competing chi-square entries prevent a single unqualified report for that domain. The desktop probability statement also requires reconciliation. Agreement cannot establish that a device was used frequently by every respondent, nor does it test whether utilization improved mentoring. The descriptive profile remains distinct from the unresolved inferential reporting.

Table 23. Reported concordance statistics for competence

Domain	Cases	W	χ^2	df	H ₁	Sig.
Word processing	13	0.94	56.40	12	Accepted	0.001
Spreadsheet operations	10	0.99	44.55	9	Accepted	0.001
Electronic presentation/PowerPoint	12	0.98	53.90	11	Accepted	0.001
Information sourcing and internet navigation	11	0.99	49.50	10	Accepted	0.001
Downloading and installing software	12	0.98	53.90	11	Rejected	0.001
Email and file management	11	0.80	40	10	Accepted	0.001
Video conferencing	11	0.96	48	10	Accepted	0.001

Note. Five respondent groups are reported. Cases are indicators; Sig. reproduces the table's Significance of Agreement entry and is not an exact p value. Decisions concern the alternative hypothesis (H₁). The table marks downloading/installing Rejected, although the narrative accepts all alternatives.

The competence table reports high W values, with email and file management lower than the other domains. This concerns consistency of ordering, not a lower competence mean: email remains one of the highest-rated domains. The downloading/installing decision conflicts with the significance entry and narrative and must be verified. The PowerPoint repetition also complicates the relationship between displayed items and the stated case count. These issues limit the conclusion of universally significant agreement without overturning the reported descriptive means.

Table 24. Reported concordance statistics for mentoring effectiveness

Domain	Cases	W	χ^2	df	H ₁	Sig.
Classroom instruction	11	0.91	45.50	10	Accepted	0.001
Instructional supervision	10	0.93	41.85	9	Accepted	0.001
Preparation of instructional materials	11	0.99	49.50	10	Accepted	0.005
Lesson planning	12	0.95	52.25	11	Accepted	0.001
Assessment	10	0.86	38.70	9	Accepted	0.001
Action research and conducting training/LAC Session	10	0.94	42.30	9	Accepted	0.001

Note. Five respondent groups are reported. Cases are indicators; Sig. reproduces the table's Significance of Agreement entry and is not an exact p value. Decisions concern the alternative hypothesis (H₁). Materials preparation is 0.005 in the table but $p < 0.001$ in the narrative. The reported effectiveness concordance values suggest greater ranking consistency for materials preparation than for assessment. That comparison does not show that materials preparation had the largest educational effect. The significance entry for materials differs from the narrative, and lesson planning has eleven listed items but twelve inferential cases. The study reports agreement as significant overall, while these specific inconsistencies require confirmation. No claim of improved mentee teaching or learner achievement follows from concordance alone.

Table 25. Reported concordance statistics for problems

Domain	Cases	W	χ^2	df	H ₁	Sig.
Problems encountered	10	0.91	40.95	9	Accepted	0.001

Note. Five respondent groups are reported. Cases are indicators; Sig. reproduces the table's Significance of Agreement entry and is not an exact p value. Decisions concern the alternative hypothesis (H₁).

The problem-ranking result reports high agreement across the five district groups. This supports treating the reported barriers as a shared planning concern, subject to verification of the ranking calculations. It does not imply that all respondents rated every barrier

identically or establish which barrier causes the greatest reduction in mentoring quality. The practical implication is coordinated attention to maintenance, connectivity, support, and training relevance, together with assessment of actual service conditions.

3.7 Training design based on the findings

Table 26. Proposed training design and reported budget

Component	Reported plan
Proponent and participants	Christina D. Papares; Master Teachers
Venue and duration	Nabua East District Multipurpose Hall; October 14–16, 2026; three-day live-out workshop
Day 1	Computer, desktop, and Smart TV use; spreadsheet operations; PowerPoint for mentoring and LAC facilitation
Day 2	Video conferencing; ICT-supported coaching, LACs, and action research; online assessment; ICT-supported lesson planning
Day 3	Digital instruction through Google Classroom; technical troubleshooting; responsive ICT training
Learning methods	Lectures, structured discussions, demonstrations, collaborative group work, workshops, hands-on activities, simulations, and reflective exercises
Planned follow-up	Post-evaluation; narrative and financial reports; submission; monitoring during the 2nd–4th week of November
Training Materials	P 10,000.00
Food for Speakers/Guests	P 6,000.00
Token	P 5,000.00
Sound System	P 3,000.00
Tarpaulin/Decoration	P 4,000.00
Other Miscellaneous expenses	P 5,000.00
Total proposed budget	P 33,000.00

Note. The design is proposed, not an evaluated intervention. Budget punctuation is retained, including 4,000,00 and 5,000,00. No completed attendance, expenditure, or training-effectiveness data were reported.

The proposed design addresses the comparatively lower spreadsheet, presentation, video-conferencing, and action-research/LAC findings alongside technical constraints. It uses practical activities rather than relying solely on presentation of concepts. Its inclusion of evaluation and follow-up provides a plan for examining application, but no implementation results are available. The proposed budget is not a verified expenditure statement. Training should therefore be discussed as an output of the needs assessment, with its feasibility and effectiveness requiring subsequent documentation.

4. Discussion

4.1 From operational competence to mentoring practice

The descriptive pattern favors document preparation, communication, and supervisory records over action research and LAC facilitation. Operational competence and support for collaborative inquiry should therefore be distinguished. The results identify training priorities, but do not establish a developmental sequence or explain the differences among domains.

Koehler and Mishra's (2009) framework connects technological knowledge with pedagogy and content. Mentoring requires decisions about examples, participation, feedback, and application. Harris and Hofer (2011) likewise emphasize deliberate technology selection in planning. Familiarity with a program should therefore support purposeful professional learning, while the lesson-planning scoring discrepancy requires resolution.

Vandeyar and Adegoke (2024) and Gcabashe (2024) provide relevant qualitative evidence on modeling and peer mentoring. The stronger demonstration ratings and comparatively lower facilitation ratings suggest a local priority for connecting examples with guided application. Their different settings and methods prevent treating those studies as confirmation of a mechanism operating among the participating master teachers.

4.2 Assessment and inquiry as development priorities

Assessment and action research/LAC facilitation received comparatively lower effectiveness ratings. Sharing templates should be connected with supervised practice, feedback, and follow-through. The proposed training addresses these needs, but its benefits remain prospective. Gikandi et al. (2011) and Redecker and Johannessen (2013) place digital assessment within feedback and learning processes. Their work supports attention to educational purpose, without attributing benefits to platforms that the study did not test. The ratings do not establish validated assessment quality or learner gains.

4.3 Institutional support and proposed action

The problem profile prioritizes maintenance, technical malfunctions, connectivity, and responsive training. This is consistent with barriers discussed by Akram et al. (2022). Trust and Whalen (2020) also identify preparation and support needs in a different context. Neither comparison establishes that resource constraints caused the study's competence ratings.

The study recommends sustained ICT use, peer-led workshops, a digital mentoring repository, dedicated support, an ICT mentoring task force, and training with monitoring. Evaluation should distinguish attendance, satisfaction, practical performance, and subsequent application. Implementation success cannot be claimed without corresponding records.

5. Conclusion

The study reported ICT utilization as Much Utilized (4.46), competence as Much Competent (4.35), perceived mentoring effectiveness as Much Effective (4.17), and problems as Much Serious (4.43). Word processing and email/file management were strengths, while spreadsheets and action research/training/LAC facilitation were comparatively lower. Maintenance, technical malfunctions, connectivity, and training relevance were prominent concerns. High rank agreement was reported, but conflicting statistical entries and decisions require reconciliation. The findings support targeted professional learning and institutional support, including the proposed training design. They do not establish causal effects on mentoring quality or learner outcomes. Completion of methodological documentation and resolution of numerical inconsistencies are necessary before submission.

References

- [1] Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' perceptions of technology integration in teaching-learning practices: A systematic review. *Frontiers in Psychology*, 13, Article 920317. <https://doi.org/10.3389/fpsyg.2022.920317>
- [2] Gcabashe, N. B. (2024). Empowering teachers: Enhancing Business Studies teachers' technology integration skills through technology peer mentoring. *Interdisciplinary Journal of Education Research*, 6, 1–12. <https://doi.org/10.38140/ijer-2024.vol6.12>
- [3] Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers & Education*, 57(4), 2333–2351. <https://doi.org/10.1016/j.compedu.2011.06.004>
- [4] Harris, J. B., & Hofer, M. J. (2011). Technological pedagogical content knowledge (TPACK) in action: A descriptive study of secondary teachers' curriculum-based, technology-related instructional planning. *Journal of Research on Technology in Education*, 43(3), 211–229. <https://doi.org/10.1080/15391523.2011.10782570>
- [5] Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70. <https://citejournal.org/?p=881>
- [6] Redecker, C., & Johannessen, Ø. (2013). Changing assessment—Towards a new assessment paradigm using ICT. *European Journal of Education*, 48(1), 79–96. <https://doi.org/10.1111/ejed.12018>
- [7] Trust, T., & Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 189–199. <https://www.learntechlib.org/primary/p/215995/>
- [8] Vandeyar, T., & Adegoke, O. O. (2024). Teachers' ICT in pedagogy: A case for mentoring and mirrored practice. *Education and Information Technologies*, 29, 18985–19004. <https://doi.org/10.1007/s10639-024-12603-4>