

The Strategies in Developing the Computer Literacy Skills of the Grade 6 Learners in Lagonoy South District, Division of Camarines Sur

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ARTICLE INFORMATION	ABSTRACT
Article history: Published: October 2026 Keywords: computer literacy Grade 6 ICT teaching instructional strategies school size Kendall concordance Lagonoy South District	The study determined the strategies used in developing Grade 6 learners' computer literacy in Lagonoy South District, Division of Camarines Sur, during school year 2025–2026. A descriptive-evaluative-correlational design involved 30 Grade 6 teachers teaching information and communication technology. A self-made questionnaire was the main instrument; the procedural account also referred to interviews. Weighted means and ranks summarized ratings for big, medium, and small school groups. Kendall's coefficient of concordance and chi-square comparisons assessed agreement at the 0.05 level. All five literacy domains were rated Very Much Evident, with an overall mean of 4.74. Microsoft Office ranked highest (4.92), followed by social media management (4.77), basic computer skills (4.74), search engines and digital libraries (4.63), and email and communication systems (4.62). All four strategy domains were rated Very Much Utilized, with an overall mean of 4.66. Audience engagement ranked highest in the summary (4.88), although its detailed table reported 4.86. Significant agreement was reported for three literacy domains and three strategy domains. Email and communication systems, Microsoft Office, and partnership for teacher education showed nonsignificant agreement. The findings support continued practical instruction, teacher learning, community collaboration, and attention to online safety. These are teachers' ratings and rankings; they do not demonstrate causal effects or independently measured gains in learner performance.

1. Introduction

Computer literacy in elementary education involves more than operating a device. Learners also need to communicate appropriately, judge information, create useful digital products, and make responsible decisions online. These abilities can develop unevenly. Familiarity with documents and presentations, for example, does not automatically establish skill in evaluating sources or protecting personal information. A local assessment can help teachers identify which aspects are most visible and which require more deliberate instruction. Law et al. (2018) developed a global framework covering hardware and software operations, information and data literacy, communication, content creation, safety, and problem solving. The framework provides a basis for treating computer literacy as multidimensional. Its use here is conceptual: the study did not administer that framework's measures or establish proficiency against its benchmarks.

Vuorikari et al. (2022) likewise described digital competence through knowledge, skills, and attitudes needed for confident, critical, and safe engagement with technology. This perspective makes responsible use relevant alongside technical operations. It also suggests why instruction should connect software activities with a clear purpose rather than equate frequent use of a tool with broad competence. Teacher learning and the conditions supporting technology use are also relevant. Mashroofa et al. (2020) examined computer literacy and academic position in relation to university e-learning portal use in Sri Lanka. Their findings concern a different population, but identify the importance of considering skill and institutional context together. Qasem and Viswanathappa (2016) studied professional development for science teachers in Yemen through blended learning. That investigation supports discussing organized teacher learning, while its outcomes cannot be assumed to apply directly to Grade 6 learners in Camarines Sur.

The study focused on Grade 6 teachers teaching ICT in Lagonoy South District. It examined five learner-skill domains: basic computer skills, email and communication systems, social media management, search engines and digital libraries, and Microsoft Office. It also considered four strategy domains: supporting community-level initiatives, establishing partnership for teacher education, promoting audience engagement, and teaching computer literacy interactively. These domains connect classroom activities with professional and community support.

The research questions concerned the reported extent of learner skills, the reported utilization of teaching strategies, and agreement among school-size groups on indicator rankings. A final objective was to formulate policy recommendations. The study's contribution is a district-level profile of professional perceptions and shared priorities. Distinguishing perceived competence, reported strategy use, and statistical agreement is essential because each answers a different question.

2. Methods

2.1 Design and setting

The study used descriptive-evaluative-correlational methods in Lagonoy South District, Division of Camarines Sur, during school

year 2025–2026. Descriptive and evaluative components concerned ratings of learners' computer literacy and teachers' utilization of strategies. The reported inferential component assessed agreement on indicator rankings across school-size groups. No direct correlation between strategy scores and literacy scores was reported.

2.2 Respondents and instruments

The respondents were 30 Grade 6 teachers teaching ICT in Lagonoy South District. They were the raters of the learner-skill and instructional-strategy indicators; they were not a sample of 30 learners. The findings were organized into Big School, Medium Schools, and Small Schools groups. The number of teachers and schools within each category and the criteria for school-size classification were not specified.

The main data-gathering instrument was a self-made questionnaire. The findings account also referred to a prepared questionnaire and interview. The questionnaire covered five computer-literacy domains and four teaching-strategy domains, each containing eight indicators. The complete set of reported indicator means, interpretation codes, and ranks is presented in the results. The questionnaire's development process, validation, reliability evidence, interview protocol, and procedures for integrating interview material were not described in the available methodological account.

2.3 Procedure and scoring

Responses were tallied, tabulated, computed, presented graphically, and statistically analyzed. The period identified was school year 2025–2026; exact recruitment and administration dates were not specified. Sampling procedures, eligibility criteria beyond the stated teaching assignment, response rate, treatment of missing responses, and administration mode were not reported. Interview themes or quotations were not presented as separate results.

Computer-literacy ratings used the intervals 4.50–5.00, Very Much Evident; 3.50–4.49, Much Evident; 2.50–3.49, Evident; 1.50–2.49, Fairly Evident; and 1.00–1.49, Not at All. Strategy ratings used the same intervals with the labels Very Much Utilized, Much Utilized, Utilized, Fairly Utilized, and Not at All. The reported weighted means, tied ranks, and interpretation codes were retained without recalculation.

2.4 Statistical treatment

The statistical tools identified were weighted mean, frequency count, percentage, rank, and Kendall's coefficient of concordance (W), with the corresponding chi-square test. Significance was set at 0.05. The findings provided indicator and domain means and ranks, along with W, chi-square, degrees of freedom, comparison thresholds, and null-hypothesis decisions. Unreported respondent frequencies and percentages have not been reconstructed from aggregate ratings.

The concordance analyses considered rankings from the three school-size groups. Each tested domain contained eight items, with seven degrees of freedom. Tables 7 and 13 retain all five reported chi-square comparison thresholds. The decision labels Accepted and Rejected are reproduced as reported; a nonsignificant finding is interpreted as insufficient evidence of concordance, rather than proof that the groups disagreed on every indicator.

No individual-response data, dispersion estimates, performance-test scores, or baseline measurements were reported. Ethical approval, consent, and data protection procedures were not specified. These reporting limits constrain reproducibility and the strength of interpretation. The analyses describe perceived skills and reported practices; neither the design label nor the title establishes that a strategy caused skill development.

3. Results

Tables 1–7 present computer-literacy ratings and concordance. Tables 8–13 present strategy ratings and concordance. Each rating cell combines the reported mean, interpretation, and rank, retaining the Big School, Medium Schools, Small Schools, and Average columns. Analysis follows each table. Summary values are retained independently of detailed domain tables where they differ.

Table 1. Basic computer skills

Indicator	Big school	Medium schools	Small schools	Average
1. The learner can create and edit documents using software like Microsoft Word or Google Docs.	4.99 VME / 1.5	4.95 VME / 1	4.91 VME / 2	4.95 VME / 2
2. The learner can work with data in spreadsheets (e.g., Microsoft Excel, Google Sheets).	4.83 VME / 4	4.81 VME / 4.5	4.82 VME / 4.5	4.82 VME / 4.5
3. The learner can create and deliver presentations (e.g., Microsoft PowerPoint).	4.85 VME / 3	4.84 VME / 3	4.84 VME / 3	4.84 VME / 3
4. The learner knows about the motherboard, hard drive, CPU, and memory.	4.82 VME / 5	4.81 VME / 4.5	4.82 VME / 4.5	4.82 VME / 4.5
5. The learner can use peripherals like a mouse, keyboard, and monitor.	4.99 VME / 1.5	4.93 VME / 2	4.95 VME / 1	4.96 VME / 1
6. The learner can identify and resolve common hardware issues.	4.50 VME / 7.5	4.50 VME / 7.5	4.50 VME / 7.5	4.50 VME / 7.5
7. The learner can identify and resolve common software issues (e.g., restarting applications, checking internet connectivity).	4.50 VME / 7.5	4.50 VME / 7.5	4.50 VME / 7.5	4.50 VME / 7.5

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Indicator	Big school	Medium schools	Small schools	Average
8. The learner knows common keyboard shortcuts (e.g., Ctrl+C for copy, Ctrl+V for paste).	4.68 VME / 6	4.52 VME / 6	4.51 VME / 6	4.57 VME / 6
Weighted Average Mean	4.77 VME	4.73 VME	4.73 VME	4.74 VME

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VME = Very Much Evident. Ranks are omitted in the reported mean row.

Basic computer skills received a mean of 4.74, Very Much Evident. Use of peripherals and document creation received the strongest average ratings, whereas hardware and software troubleshooting were lower within the same category. This distinction indicates a relative difference between routine use and responding to technical problems. The favorable overall rating should not erase that difference. It also does not demonstrate independent mastery, because no observed troubleshooting task or practical performance test was reported. The similar group means support a descriptive impression of broadly favorable ratings without establishing statistical equivalence among groups.

Table 2. Email and communication systems

Indicator	Big school	Medium schools	Small schools	Average
1. Learners are able to how to write clear, concise, and professional emails.	4.56 VME / 4.5	4.55 VME / 3.5	4.50 VME / 6.5	4.54 VME / 3.5
2. Learners are able compose, send, and receive emails.	4.56 VME / 4.5	4.55 VME / 3.5	4.50 VME / 6.5	4.54 VME / 3.5
3. Learners know how to attach files (such as images or documents) to emails.	4.56 VME / 4.5	4.54 VME / 5	4.50 VME / 6.5	4.53 VME / 5.5
4. Learners are cautious when clicking on links or downloading attachments from unknown sources.	4.51 VME / 8	4.50 VME / 7.5	4.50 VME / 6.5	4.50 VME / 8
5. Learners uses instant messaging tools, learn how to use them effectively for quick communication with colleagues.	4.99 VME / 1	4.83 VME / 2	4.84 VME / 2	4.89 VME / 2
6. Learners are familiar with video conferencing platforms.	4.92 VME / 2	4.90 VME / 1	4.90 VME / 1	4.91 VME / 1
7. Learners know how to reply to emails and forward messages.	4.56 VME / 4.5	4.51 VME / 6	4.51 VME / 3.5	4.53 VME / 5.5
8. Learners understand the purpose of CC (carbon copy) and BCC (blind carbon copy).	4.52 VME / 7	4.50 VME / 7.5	4.51 VME / 3.5	4.51 VME / 7
Weighted Average Mean	4.65 VME	4.61 VME	4.60 VME	4.62 VME

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VME = Very Much Evident. Ranks are omitted in the reported mean row.

Email and communication systems received 4.62, Very Much Evident. Video conferencing and instant messaging were rated more strongly than cautious handling of links and unfamiliar attachments. This pattern distinguishes communication familiarity from the judgment required for safe use. It gives a reason to retain explicit attention to message quality, attachment handling, and privacy even in a highly rated domain. The study did not measure actual exposure to online threats or the frequency of particular communication activities. The ratings should therefore guide follow-up assessment rather than be treated as a verified account of every learner's online behavior.

Table 3. Social media management

Indicator	Big school	Medium schools	Small schools	Average
1. The learner can create and manage social media profiles.	4.85 VME / 2.5	4.83 VME / 2.5	4.82 VME / 3	4.83 VME / 3
2. The learner can set privacy preferences.	4.85 VME / 2.5	4.83 VME / 2.5	4.83 VME / 2	4.84 VME / 2
3. The learner can recognize real vs. fake news on social media.	4.71 VME / 7	4.71 VME / 6	4.70 VME / 6	4.71 VME / 6
4. The learner can understand various social media platforms (e.g., Facebook, Twitter, Instagram).	4.89 VME / 1	4.88 VME / 1	4.88 VME / 1	4.88 VME / 1

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Indicator	Big school	Medium schools	Small schools	Average
5. The learner can understand norms and best practices for online communication.	4.71 VME / 7	4.69 VME / 7.5	4.65 VME / 7	4.68 VME / 7
6. The learner can create engaging content (text, images, videos) for social media.	4.71 VME / 7	4.69 VME / 7.5	4.61 VME / 8	4.67 VME / 8
7. The learner can interpret social media analytics (likes, shares, engagement).	4.82 VME / 4	4.80 VME / 4	4.78 VME / 4	4.80 VME / 4
8. The learner can create and maintains a content calendar for social media posts.	4.81 VME / 5	4.79 VME / 5	4.71 VME / 5	4.77 VME / 5
Weighted Average Mean	4.79 VME	4.78 VME	4.75 VME	4.77 VME

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VME = Very Much Evident. Ranks are omitted in the reported mean row.

Social media management received 4.77, Very Much Evident. Understanding platforms and privacy preferences ranked above creating engaging content and applying communication norms. The indicators combine platform operations, evaluation, expression, and responsible participation. Their relative ordering is useful because a learner can recognize a platform without demonstrating the same proficiency in judging content or communicating appropriately. Law et al. (2018) provide a broader conceptual basis for distinguishing operational and information-related competence. In the study, however, those dimensions were rated together and were not assessed through separate observed tasks.

Table 4. Search engines and digital libraries

Indicator	Big school	Medium schools	Small schools	Average
1. The learner can formulate precise queries, evaluate search results, and identify reliable sources.	4.87 VME / 1	4.83 VME / 3	4.78 VME / 1	4.83 VME / 1
2. The learner can refine their searches and find relevant information efficiently.	4.86 VME / 2.5	4.85 VME / 1.5	4.76 VME / 2.5	4.82 VME / 2.5
3. The learner can assess the credibility and relevance of search results.	4.86 VME / 2.5	4.85 VME / 1.5	4.76 VME / 2.5	4.82 VME / 2.5
4. The learner is familiar with platforms like JSTOR, PubMed, or Project MUSE, which help them access scholarly articles, e-books, and research papers.	4.55 VME / 4.5	4.54 VME / 4.5	4.51 VME / 4	4.53 VME / 4.5
5. The learner is familiar with Zotero, EndNote, or Mendeley for organizing and citing sources.	4.55 VME / 4.5	4.54 VME / 4.5	4.50 VME / 6.5	4.53 VME / 4.5
6. The learner knows how to protect their personal information, avoid phishing scams, and recognize fake news.	4.51 VME / 8	4.50 VME / 7.5	4.50 VME / 6.5	4.50 VME / 8
7. The learner is aware of their digital rights and responsibilities.	4.52 VME / 7	4.50 VME / 7.5	4.50 VME / 6.5	4.51 VME / 6.5
8. The learner is familiar with the tools that enhance collaboration and document management skills.	4.53 VME / 6	4.51 VME / 6	4.50 VME / 6.5	4.51 VME / 6.5
Weighted Average Mean	4.66 VME	4.64 VME	4.60 VME	4.63 VME

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VME = Very Much Evident. Ranks are omitted in the reported mean row.

Search engines and digital libraries received 4.63, Very Much Evident. Formulating queries and evaluating results ranked above protection from phishing and recognition of digital rights. The indicators also refer to scholarly databases and reference-management software. Those advanced activities need careful interpretation for Grade 6, particularly because the study did not describe the practical tasks or evidence teachers used when rating familiarity. The domain identifies areas for instructional review; it does not establish that learners independently searched scholarly databases or managed citations. A high mean is therefore best interpreted as a professional perception within the stated instrument.

Table 5. Microsoft Office

Indicator	Big school	Medium schools	Small schools	Average
1. The learner can insert, cuts, and pastes text in a document.	4.88 VME / 7	4.76 VME / 7	4.68 VME / 7	4.77 VME / 7

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Indicator	Big school	Medium schools	Small schools	Average
2. The learner can adjust the font size of the text.	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3
3. The learner can choose different typefaces for a uniform and readable appearance.	4.95 VME / 6	4.91 VME / 6	4.90 VME / 6	4.92 VME / 6
4. The learner can adjust the page size, margins, and indentations.	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3
5. The learner can explore pivot tables for summarizing and analyzing large data tables.	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3
6. The learner can use statistical functions (e.g., AVERAGE, STDEV) to analyze data sets.	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3
7. The learner can perform basic mathematical operations (addition, subtraction, multiplication, division) within cells.	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3	4.99 VME / 3
8. The learner can artistically combine text, images, animations, or themes in the presentation.	4.83 VME / 8	4.73 VME / 8	4.63 VME / 8	4.73 VME / 8
Weighted Average Mean	4.95 VME	4.92 VME	4.90 VME	4.92 VME

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VME = Very Much Evident. Ranks are omitted in the reported mean row.

Microsoft Office received the highest literacy-domain mean, 4.92, Very Much Evident. Five indicators were reported at 4.99 in every school-size group, producing extensive tied ranks. These values indicate a highly concentrated rating profile, while limiting differentiation among tasks ranging from formatting to pivot tables and statistical functions. The study did not supply artifacts or test results confirming those task-specific skills. Lower relative ratings for combining presentation elements and editing text remain useful descriptive priorities, but the near-maximum ratings should not be equated with an independently validated proficiency standard.

Table 6. Summary of computer literacy skills

Indicator	Big school	Medium schools	Small schools	Average
1. Basic Computer Skills	4.77 VME / 3	4.73 VME / 3	4.73 VME / 3	4.74 VME / 3
2. Email and Communication Systems	4.65 VME / 5	4.61 VME / 5	4.60 VME / 4.5	4.62 VME / 5
3. Social Media Management	4.79 VME / 2	4.78 VME / 2	4.75 VME / 2	4.77 VME / 2
4. Search Engines and Digital Libraries	4.66 VME / 4	4.64 VME / 4	4.60 VME / 4.5	4.63 VME / 4
5. Microsoft Office	4.95 VME / 1	4.92 VME / 1	4.90 VME / 1	4.92 VME / 1
Weighted Average Mean	4.76 VME	4.74 VME	4.72 VME	4.74 VME

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VME = Very Much Evident. Ranks are omitted in the reported mean row.

The overall computer-literacy mean was 4.74, Very Much Evident. Microsoft Office ranked first in all three school-size groups, while email and communication systems ranked last in the average column. The small-school profile placed email and search-related skills at the same rank. This common domain ordering does not replace the indicator-level concordance analyses, which address a different question. The narrow spread of favorable means also makes it important to examine the substance and complexity of the indicators rather than infer that all areas are equally developed. No test of between-group mean differences was reported.

Table 7. Agreement on rankings of computer literacy skills

Domain	Squared deviation	n	W	χ^2	df	Ho	Sig.
Basic computer skills	344.75	8	0.91	19.11	7	Rejected	0.01
Email and communication systems	243.25	8	0.64	13.44	7	Accepted	NS
Social media management	360.25	8	0.95	19.95	7	Rejected	0.01
Search engines and digital libraries	303	8	0.80	16.80	7	Rejected	0.025

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Domain	Squared deviation	n	W	χ^2	df	Ho	Sig.
Microsoft Office	177.75	8	0.47	9.87	7	Accepted	NS

Table 7 continued. Reported chi-square comparison values

Domain	0.05	0.025	0.01	0.005	0.001
Basic computer skills	14.07	16.62	18.48	20.28	24.32
Email and communication systems	14.07	16.62	18.48	20.28	24.32
Social media management	14.07	16.62	18.48	20.28	24.32
Search engines and digital libraries	14.07	16.62	18.48	20.28	24.32
Microsoft Office	14.07	16.62	18.48	20.28	24.32

Note. Squared deviation is the reported summation of squared deviations for the difference; n = number of items; W = Kendall's coefficient of concordance; χ^2 = computed chi-square; df = degrees of freedom; Ho = reported decision on the null hypothesis; Sig. = reported significance of agreement. NS = not significant. The study used a 0.05 significance level.

Significant agreement was reported for basic computer skills, social media management, and search engines and digital libraries. Email and communication systems and Microsoft Office did not exceed the reported 0.05 comparison threshold. The Microsoft Office result is especially instructive: the highest domain mean did not produce significant indicator-level concordance. A favorable level and a shared ordering are different properties. Extensive ties and reliance on three group rank profiles also limit how precisely W can be interpreted. The findings do not show that a nonsignificant domain was ineffective or that its mean differed significantly among school groups.

Table 8. Supporting community-level initiatives

Indicator	Big school	Medium schools	Small schools	Average
1. The teacher collaborates with non-governmental organizations (NGOs) and local government bodies.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5
2. The teacher joining joint initiatives can focus on digital literacy campaigns, e-governance, or community surveys.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5
3. The teacher encourages learners to create apps that address community needs.	4.82 VMU / 2	4.79 VMU / 1	4.67 VMU / 3	4.76 VMU / 2
4. The teacher encourages learners to use multimedia tools to share local culture, history, or personal experiences.	4.85 VMU / 1	4.78 VMU / 2	4.68 VMU / 1.5	4.77 VMU / 1
5. The teacher organizes coding clubs or workshops within the community.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5
6. The teacher organizes local hackathons or coding competitions.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 6.5
7. The teacher leads campaigns to raise awareness about digital literacy.	4.60 VMU / 4	4.62 VMU / 4	4.61 VMU / 4	4.61 VMU / 4
8. The teacher set up tech repair clinics in collaboration with local repair shops or experts.	4.69 VMU / 3	4.64 VMU / 3	4.68 VMU / 1.5	4.67 VMU / 3
Weighted Average Mean	4.62 VMU	4.60 VMU	4.58 VMU	4.60 VMU

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VMU = Very Much Utilized. Ranks are omitted in the reported mean row.

Support for community-level initiatives received 4.60, Very Much Utilized. Multimedia activities sharing local culture and applications addressing community needs ranked above several formal partnership and coding activities. The profile suggests that community relevance was expressed through different kinds of activity, rather than through a single partnership mechanism. The ratings do not establish the number, duration, or outcomes of any initiative. They provide a reason to connect practical ICT tasks with local purposes while reviewing whether proposed activities, including repair clinics and coding competitions, match the learners' stage and available support.

Table 9. Establishing partnership for teacher education

Indicator	Big school	Medium schools	Small schools	Average
1. The teacher invites pre-service teachers to observe ICT classes or participate in workshops.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 5.5	4.50 VMU / 6.5

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Indicator	Big school	Medium schools	Small schools	Average
2. The teacher conduct joint training sessions where experienced ICT teachers share effective practices with aspiring educators.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 5.5	4.50 VMU / 6.5
3. The teacher establish mentorship programs within schools wherein experienced ICT teachers guide newer colleagues in integrating technology effectively.	4.55 VMU / 3	4.51 VMU / 3	4.51 VMU / 2	4.52 VMU / 3
4. The teacher encourage peer collaboration and knowledge-sharing.	4.55 VMU / 3	4.51 VMU / 3	4.50 VMU / 5.5	4.52 VMU / 3
5. The teacher invites guest speakers or organize field trips related to technology.	4.55 VMU / 3	4.51 VMU / 3	4.50 VMU / 5.5	4.52 VMU / 3
6. The teacher engage parents and community members in discussions about digital literacy and responsible technology use.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 5.5	4.50 VMU / 6.5
7. The teacher join online forums, social media groups, or professional networks focused on ICT in education.	4.71 VMU / 1	4.62 VMU / 1	4.60 VMU / 1	4.64 VMU / 1
8. The teacher conduct action research within the school context and explore how specific ICT strategies impact learners learning.	4.50 VMU / 6.5	4.50 VMU / 6.5	4.50 VMU / 5.5	4.50 VMU / 6.5
Weighted Average Mean	4.55 VMU	4.52 VMU	4.51 VMU	4.53 VMU

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VMU = Very Much Utilized. Ranks are omitted in the reported mean row.

Partnership for teacher education received 4.53, Very Much Utilized, the lowest strategy-domain average. Participation in online professional networks was rated above pre-service observation, joint training, parent discussion, and action research. This suggests a relative distinction between accessing professional exchange and establishing sustained institutional arrangements. Qasem and Viswanathappa (2016) provide evidence from a different setting that organized ICT professional development can be studied directly. The study did not evaluate a training intervention, so its partnership ratings should identify professional-learning priorities rather than be interpreted as proof of improved teaching competence.

Table 10. Promoting audience engagement

Indicator	Big school	Medium schools	Small schools	Average
1. The teacher use discussions, peer feedback, and knowledge sharing.	4.99 VMU / 2	4.97 VMU / 1.5	4.94 VMU / 1	4.97 VMU / 1
2. The teacher utilize online platforms, discussion forums, or learning management systems where learners can actively participate, ask questions, and collaborate.	4.99 VMU / 2	4.97 VMU / 1.5	4.93 VMU / 2	4.96 VMU / 2
3. The teacher incorporate educational games, quizzes, or challenges related to ICT concepts.	4.89 VMU / 5	4.82 VMU / 4.5	4.82 VMU / 6	4.84 VMU / 6
4. The teacher foster teamwork by assigning group projects.	4.75 VMU / 7	4.65 VMU / 7	4.73 VMU / 7.5	4.71 VMU / 7
5. The teacher use videos, animations, and interactive simulations to explain complex ICT concepts.	4.99 VMU / 2	4.91 VMU / 3	4.91 VMU / 3.5	4.94 VMU / 3
6. The teacher create tutorials, lead workshops, or present on ICT topics.	4.72 VMU / 8	4.64 VMU / 8	4.73 VMU / 7.5	4.70 VMU / 8
7. The teacher tailor learning experiences based on learners' interests and abilities.	4.95 VMU / 4	4.76 VMU / 6	4.91 VMU / 3.5	4.87 VMU / 4
8. The teacher engage learners in discussions about ethical issues related to technology.	4.87 VMU / 6	4.82 VMU / 4.5	4.88 VMU / 5	4.86 VMU / 5
Weighted Average Mean	4.89 VMU	4.82 VMU	4.86 VMU	4.86 VMU

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VMU = Very Much Utilized. Ranks are omitted in the reported mean row.

The detailed audience-engagement table reports 4.86, Very Much Utilized. Discussions and peer feedback, participation through online platforms, and multimedia explanations were among the higher-rated activities. Creating tutorials and assigning group projects were lower within the same favorable category. This ordering suggests that engagement should be examined through what learners do, not simply through the presence of a platform. The summary table later reports a different medium-school and overall value for this domain. Both presentations are retained, so the precise aggregate requires reconciliation before further numerical interpretation.

Table 11. Teaching learners' computer literacy in an interactive way

Indicator	Big school	Medium schools	Small schools	Average
1. The teacher uses online tools for formative and summative assessments.	4.50 VMU / 7.5	4.50 VMU / 8	4.50 VMU / 7.5	4.50 VMU / 7.5
2. The teacher teaches learners to search for information online, evaluate sources, and cite appropriately.	4.68 VMU / 3	4.59 VMU / 3	4.58 VMU / 3	4.62 VMU / 3
3. The teacher uses gamification learning by incorporating game elements into lessons (e.g., quizzes, badges, leaderboards).	4.52 VMU / 6	4.51 VMU / 6.5	4.51 VMU / 5.5	4.51 VMU / 6
4. The teacher utilizes Moodle, Edmodo, or Google Classroom for assignments, discussions, and quizzes.	4.53 VMU / 5	4.52 VMU / 5	4.51 VMU / 5.5	4.52 VMU / 5
5. The teacher uses interactive whiteboards to display content, engage learners, and encourage participation.	4.98 VMU / 1	4.97 VMU / 1	4.85 VMU / 1	4.93 VMU / 1
6. The teacher attends webinars on emerging technologies and trends.	4.50 VMU / 7.5	4.51 VMU / 6.5	4.50 VMU / 7.5	4.50 VMU / 7.5
7. The teacher explores platforms that adapt content based on learners' progress and learning pace.	4.55 VMU / 4	4.53 VMU / 4	4.54 VMU / 4	4.54 VMU / 4
8. The teacher discusses the impact of social media and digital footprints.	4.96 VMU / 2	4.93 VMU / 2	4.84 VMU / 2	4.91 VMU / 2
Weighted Average Mean	4.65 VMU	4.63 VMU	4.60 VMU	4.63 VMU

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VMU = Very Much Utilized. Ranks are omitted in the reported mean row.

Interactive teaching received 4.63, Very Much Utilized. Interactive whiteboards and discussion of social media and digital footprints received the highest average ranks, whereas online assessment tools and attendance at emerging-technology webinars were lower. These indicators combine classroom instruction with teacher learning. A domain mean consequently summarizes activities directed at different immediate beneficiaries and cannot be read as one observed teaching behavior. The profile supports reviewing how a digital activity elicits explanation, feedback, and responsible use. It does not establish that whiteboards or gamification independently caused improvements in learner skills.

Table 12. Summary of teaching strategies

Indicator	Big school	Medium schools	Small schools	Average
1. Supporting Community-level Initiatives	4.62 VMU / 3	4.60 VMU / 3	4.58 VMU / 3	4.60 VMU / 3
2. Establishing Partnership for Teacher Education	4.55 VMU / 4	4.52 VMU / 4	4.51 VMU / 4	4.53 VMU / 4
3. Promoting Audience Engagement	4.89 VMU / 1	4.89 VMU / 1	4.86 VMU / 1	4.88 VMU / 1
4. Teaching Learners' Computer Literacy in an Interactive Way	4.65 VMU / 2	4.63 VMU / 2	4.60 VMU / 2	4.63 VMU / 2
Weighted Average Mean	4.68 VMU	4.66 VMU	4.64 VMU	4.66 VMU

Note. Each cell reports weighted mean, interpretation, and rank (mean; code / rank). VMU = Very Much Utilized. Ranks are omitted in the reported mean row.

The strategy summary reports an overall mean of 4.66, Very Much Utilized. Audience engagement ranked first, interactive teaching second, community initiatives third, and teacher-education partnership fourth in each school-size group. The repeated domain ordering provides a useful district-level planning profile. Nevertheless, the audience-engagement summary mean of 4.88 differs from the detailed mean of 4.86; its medium-school value also differs. The summary is therefore retained as reported rather than used to overwrite the detailed results. The ordering is descriptive and does not compare the causal effectiveness of the strategies.

Table 13. Agreement on rankings of teaching strategies

Domain	Squared deviation	n	W	χ^2	df	H ₀	Sig.
Supporting community-level initiatives	283.50	8	0.75	15.75	7	Rejected	0.05
Establishing partnership for teacher education	223.50	8	0.59	12.39	7	Accepted	NS
Promoting audience engagement	338	8	0.89	18.69	7	Rejected	0.01
Teaching learners' computer literacy in an interactive way	311.25	8	0.82	17.22	7	Rejected	0.025

Table 13 continued. Reported chi-square comparison values

Domain	0.05	0.025	0.01	0.005	0.001
Supporting community-level initiatives	14.07	16.62	18.48	20.28	24.32
Establishing partnership for teacher education	14.07	16.62	18.48	20.28	24.32
Promoting audience engagement	14.07	16.62	18.48	20.28	24.32
Teaching learners' computer literacy in an interactive way	14.07	16.62	18.48	20.28	24.32

Note. Squared deviation is the reported summation of squared deviations for the difference; n = number of items; W = Kendall's coefficient of concordance; χ^2 = computed chi-square; df = degrees of freedom; H₀ = reported decision on the null hypothesis; Sig. = reported significance of agreement. NS = not significant. The study used a 0.05 significance level.

Three strategy domains showed significant concordance, while partnership for teacher education was nonsignificant at the stated level. This pattern is consistent with a shared priority ordering for many classroom and community activities, but less conclusive evidence of a shared ordering for professional partnerships. It does not establish identical implementation or a lack of partnership activity. In particular, the lowest mean remained within Very Much Utilized. The inference concerns rankings within domains, and cannot be extended to a correlation between strategy utilization and learner skills or to the impact of a particular instructional approach.

4. Discussion

4.1 Reported skill and independently demonstrated competence

The findings present a consistently favorable picture of teachers' perceptions of Grade 6 computer literacy. Every domain and indicator was classified Very Much Evident. At the same time, the indicators span substantially different demands, including routine software use, online communication, source evaluation, privacy, scholarly searching, and statistical functions. A common category does not establish that these activities were demonstrated at equivalent levels of independence or complexity.

The study's instructional implications are therefore strongest when tied to specific tasks. The lower relative ratings for troubleshooting, cautious handling of attachments, online communication norms, and information protection identify areas for continued attention. They remain highly rated on the scale, so they should be described as relative priorities rather than established deficits. A practical assessment could clarify which actions learners can complete unaided and which require guidance.

Law et al. (2018) offer a conceptual distinction among operational, information, communication, creation, safety, and problem-solving competencies. Vuorikari et al. (2022) extend digital-competence descriptions through examples of knowledge, skills, and attitudes. These frameworks help situate the study's domains, but they do not validate the questionnaire or authorize converting its means into externally benchmarked competence levels. Alignment would require explicit mapping of indicators, expected performance, and assessment tasks.

4.2 Interpreting the instructional strategy profile

The strategy profile emphasizes engagement and interactive instruction. High ratings for discussion, peer feedback, online participation, and multimedia use suggest that respondents regarded learner involvement as prominent in their teaching. Yet participation can take different forms. Answering a prompt, constructing a document, evaluating a claim, and contributing to a group project are not equivalent demonstrations of computer literacy. Instructional planning needs to specify the intended skill and the evidence that would show it.

The lower relative position of teacher-education partnership suggests a useful focus for coordination. Professional networks can offer access to ideas, while mentoring, joint training, and action research require sustained arrangements. Mashroofa et al. (2020) examined institutional and skill-related conditions of e-learning use among university academics. Its context differs from elementary teaching, but supports considering professional learning alongside the conditions that allow new practices to be used. It does not explain the local ratings or demonstrate that a particular institutional arrangement is required.

Qasem and Viswanathappa (2016) evaluated blended professional development using a comparison design with secondary science teachers in Yemen. Their work shows that teacher-learning outcomes can be investigated directly, rather than inferred from favorable participation ratings. For the study, the relevant implication is to define what a training or partnership should change and how that change would be assessed. The local findings did not test a blended training program or measure changes in teachers' perceptions over time.

4.3 What agreement adds to the findings

The agreement tests refine the descriptive profile without establishing effectiveness. Microsoft Office received the highest skill rating, but its indicator rankings were not significantly concordant. Conversely, search engines and digital libraries showed

significant concordance despite a lower domain mean. These findings illustrate that rating level and consistency of priority ordering are separate. The same distinction applies to teacher-education partnership, which was highly rated but nonsignificant for agreement. The findings can support shared planning where groups identify similar relative priorities. Where concordance is not established, structured discussion of indicator meaning and examples of practice may be useful. Nonsignificance should not be used to claim that groups were in complete disagreement. Similarly, significant concordance should not be interpreted as evidence that all teachers implemented a strategy in the same way or that learners achieved the same outcomes.

4.4 Policy and practice implications

The study recommended continued practical, hands-on instruction through software exploration, document creation, and collaborative projects. School heads were advised to align teaching strategies with digital-literacy standards and intended learner capabilities. Teachers were also encouraged to integrate digital literacy across subjects, support research and creative expression, and identify specific areas needing additional attention. These recommendations follow the breadth of the measured domains, while remaining proposals rather than evaluated interventions.

Professional-learning recommendations included workshops, conferences, training, mentoring, pre-service observation, joint sessions with experienced ICT teachers, and action research within schools. Department of Education officials were encouraged to communicate webinar opportunities and maintain a centralized source of schedules, registration information, and topics. Partnerships with educational organizations, industry specialists, and technology companies were proposed to strengthen access to relevant professional learning.

The community recommendations included technology events, learner-led projects addressing local needs, digital ambassadors, and opportunities to apply skills beyond isolated classroom exercises. ICT coordinators were encouraged to support projects such as awareness campaigns or application development. These recommendations require age-appropriate scope and supervision, but the study did not supply an evaluated implementation model, budget, or timetable. No such details are treated as established findings.

Privacy and responsible participation were also emphasized. The policy proposals called for educating staff, learners, and parents about data privacy, reviewing security arrangements, discussing digital etiquette and footprints, and helping learners recognize phishing, malware, identity theft, suspicious links, and password risks. These areas are consistent with the information and safety dimensions discussed by Vuorikari et al. (2022). The study did not assess actual exposure to threats or test a cybersecurity program. Recommendations directed to education policymakers and local government concerned investment in ICT education and expanded access to digital-skills instruction. The study also proposed games, quizzes, group projects, tutorials, and workshops. These should be treated as a set of possible responses to local priorities. The data do not identify their comparative costs, feasibility across schools, or effects on learning, so implementation requires a separate planning and evaluation process.

5. Conclusion

The study found teachers' ratings of Grade 6 computer literacy to be Very Much Evident across all five domains, with Microsoft Office highest and email and communication systems lowest in the summary. Strategies were rated Very Much Utilized across all four domains, with audience engagement highest and partnership for teacher education lowest. Significant rank agreement was reported for basic computer skills, social media management, search engines and digital libraries, community initiatives, audience engagement, and interactive instruction. Email and communication systems, Microsoft Office, and teacher-education partnership were nonsignificant. The findings support continued hands-on instruction, focused professional learning, community collaboration, and explicit attention to responsible digital participation. Their evidential scope remains descriptive and perceptual. The study did not establish causal effects of strategies, directly measured learner gains, or statistical differences in mean competence among school-size groups. Interpretation should therefore remain tied to the reported ratings and agreement tests.

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