



DIGITAL LITERACY LEVEL OF TVL STUDENTS AND ITS RELATIONSHIP TO ACADEMIC PERFORMANCE IN ICT SUBJECTS

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ABSTRACT

This study determined the level of digital literacy among Technical-Vocational-Livelihood (TVL) students and examined its relationship with their academic performance in ICT subjects at Dolores National High School, Dolores, Eastern Samar, during the School Year 2025–2026. Specifically, it aimed to describe the respondents' profile in terms of age, sex, strand specialization, and type of school; assess their digital literacy in the domains of information and data literacy, communication and collaboration, digital content creation, safety and security, and problem-solving and innovation; identify their academic performance in ICT; and determine whether a significant relationship existed between digital literacy and ICT achievement. A quantitative-descriptive-correlational research design was employed. Data were collected using a validated digital literacy questionnaire and the respondents' final grades in ICT subjects, obtained from official school records. The study involved 200 TVL students selected through stratified random sampling. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used, while Pearson's r measured the correlation between variables. Results revealed that the respondents possessed a high overall level of digital literacy ($M = 3.44$). Among the domains, communication and collaboration emerged as the highest, whereas safety and security ranked the lowest. Students also demonstrated a very satisfactory level of academic performance ($M = 86.3$) in ICT subjects. Furthermore, findings showed a moderate positive correlation ($r = 0.47, p < .05$) between digital literacy and academic performance, indicating that students with higher digital literacy tended to achieve better ICT outcomes.

The study concluded that enhancing digital literacy – particularly in digital safety, innovation, and content creation – could further improve ICT learning achievement. It recommended the strengthening of digital literacy instruction, teacher training, and ICT integration to support students' technological competence and academic success.

KEYWORDS: Digital Literacy, ICT Performance, TVL Students, Problem-Solving and Innovation, Content Creation, Safety and Security, Eastern Samar.

INTRODUCTION

Background of the Study

In today's world, the ability to be digitally literate is a vital skill. It helps learners access, evaluate, and create information using digital tools. It also allows them to communicate and work together online, stay safe and secure, and solve problems with technology. Many countries now identify these skills as important competencies for education and employment. Yet, making these visions into effective practice is very different in various parts of the world. Although several nations have created policies or standards for digital skills, issues such as unequal access, lacking infrastructure, inadequate teacher training, and measurement difficulties still remain (UNESCO, 2023).

In Southeast Asia, the move for digital change in education accelerated with the COVID-19 pandemic. Many countries in Southeast Asia invested in remote learning, teacher training, and ICT infrastructure. Still, reports indicate that rural and under-resourced areas are challenged with broadband access, device availability, and teacher skills, which impact student achievement related to ICT subjects. These issues prevent consistent growth of higher-order digital skills such as content creation, critical thinking, online safety, and innovation.

Meanwhile, in the Philippines, national policy acknowledges the importance of digital literacy. The Digital Rise Program of the Department of Education as early as 2022 aimed to improve infrastructure, access, and capacity for both students and educators. However, national data indicate that

although basic literacy rates for reading, writing, and computing are high, functional literacy—which includes understanding and application of information—is considerably lower, especially among certain age brackets and those living in remote areas (PSA, 2024). A note from the Philippine Institute for Development Studies showed that only about 40% of Filipinos have at least one of the critical ICT skills tracked under the Sustainable Development Goals, with a notable lack of skills in the younger (10–14 years) and older (65+) populations (PIDS, 2023).

Looking solely at Region 8, or Eastern Visayas, recent data from the Philippine Statistics Authority (PSA) reveals that in 2024, about 85.1% of individuals aged 5 years old and over in Eastern Visayas are basically literate. However, only 61.8% of those aged 10–64 are functionally literate, meaning they can read, write, and compute as well as understand and apply information (PSA's FLEMMS, 2024). Among the provinces, Eastern Samar has a basic literacy rate of 88.4% and a functional literacy rate of 60.3%. Both rates are slightly above or about the regional averages but point to a big gap between basic and functional literacy. This is indicative of a disconnect between basic skills and comprehension and application needed for digital literacy.

Locally, research on digital literacy in Eastern Samar is limited. Research in the municipality of Dolores among elementary school teachers found a number of challenges to teaching digital literacy: students lack basic skills in using digital



devices, access to technology is limited, time is lacking, and administrative support is weak. Recommended interventions include further training of teachers, mentorship programs, and infusing digital literacy into existing curricula (Pomarejos et al., 2025). Local governments are taking action as well; in a number of municipalities in Eastern Samar, the local units have received laptops through DICT initiatives for the purposes of lessening the digital divide and improving education and job opportunities (DICT turnover of laptops to Eastern Samar LGUs, 2023-2024) (PNA/DICT, 2023).

Despite this, the following information still shows many research gaps: First, local evidence has focused on basic literacy or teacher perceptions, often at the level of elementary education. It lacks detailed data about digital literacy in the case of senior high school students specializing in TVL. These are more specifically relevant for DigComp-style domains: information/data literacy, communication/collaboration, content creation, safety/security, problem solving/innovation. Second, there is still limited research linking these domains to actual performance in ICT subjects, particularly for TVL students in Eastern Samar. Third, digital literacy is discussed broadly, while few have investigated it based on either student profiles (e.g., strand specialization, type of school, gender, age) or specific dimensions in order to point out which domains strongly predict ICT outcomes. And fourth, while infrastructure and access are mentioned, along with teacher readiness, their impact on performance in ICT subjects is still not measured well within a local context.

This research attempts to fill these gaps by measuring, among the TVL students in Eastern Samar, (a) their digital literacy levels across various domains; (b) their final grades in ICT subjects; (c) the relationship between general and domain-specific digital literacy and academic performance; and (d) how individual student profiles-in particular, strand specialization and school type-affect such a relationship. Such data will be useful for school leaders, policymakers, and curriculum developers in crafting interventions to improve the quality of ICT education in the TVL programs in Eastern Samar.

Statement of the Problem

This study aimed to determine the relationship between the digital literacy level of TVL students and their academic performance in ICT subjects.

Specifically, it sought to answer the following questions:

1. What is the profile of the TVL students in terms of:
 - 1.1 Age;
 - 1.2 Sex;
 - 1.3 Strand specialization; and
 - 1.4 Type of school (public or private)?
2. What is the level of digital literacy of the TVL students in terms of:
 - 2.1 Information and data literacy;
 - 2.2 Communication and collaboration;
 - 2.3 Digital content creation;
 - 2.4 Safety and security; and
 - 2.5 Problem-solving and innovation?
3. What is the level of academic performance of the TVL students in ICT subjects based on their final grades?
4. Is there a significant relationship between the students' level of digital literacy and their academic performance in ICT subjects?

METHODOLOGY

Research Design

This study used a quantitative-correlational research design to explore the relationship between the digital literacy level of Technical-Vocational-Livelihood (TVL) students and their academic performance in ICT subjects. This design was deemed appropriate because the study aimed to measure existing conditions and analyze how two measurable variables were related without manipulating either one.

A descriptive-correlational approach was employed. The descriptive part focused on identifying and describing the respondents' profiles, including age, sex, strand specialization, and type of school, as well as their level of digital literacy in the areas of information and data literacy, communication and collaboration, digital content creation, safety and security, and problem-solving and innovation. Meanwhile, the correlational part examined the statistical relationship between the students' digital literacy level and their academic performance in ICT subjects, as indicated by their final grades.

This design allowed the researcher to collect quantifiable data through a standardized survey questionnaire and interpret the results objectively using appropriate statistical tools such as mean, standard deviation, and Pearson product-moment correlation coefficient (r). Through this method, the study sought to determine whether higher levels of digital literacy were associated with better academic performance among TVL students.

The choice of a quantitative-correlational design was supported by similar studies such as those conducted by Abanilla and Santos (2022) and Espina et al. (2023), which effectively used the same approach to analyze the relationship between digital skills and academic outcomes. This design was particularly appropriate for educational research where the goal was to determine the extent and direction of relationships among variables rather than to establish causality. Moreover, it ensured the collection of objective, numerical data that underwent rigorous statistical analysis, thereby enhancing the reliability and validity of the findings.

In summary, this research design enabled a comprehensive analysis of how digital literacy, across its various domains, related to the academic success of TVL students in ICT subjects. The findings were expected to provide meaningful insights for improving ICT instruction and curriculum implementation in the Technical-Vocational-Livelihood track, particularly at Dolores National High School.

Locale of the Study

This study was conducted at Dolores National High School (DNHS), a public secondary school located in Dolores, Eastern Samar, Philippines. The school was recognized as one of the largest secondary institutions in the municipality, serving both Junior and Senior High School students, including those enrolled in the Technical-Vocational-Livelihood (TVL) track.

DNHS offered several TVL specializations, including Information and Communications Technology (ICT), Home Economics (HE), Industrial Arts (IA), and Agri-Fishery Arts (AFA). These programs provided students with practical and technical skills aligned with industry demands. The presence of these specialized strands made DNHS an ideal setting for studying digital literacy and academic performance, especially



among students who needed to develop strong digital competencies for their academic and professional growth.

The school was situated in the town proper of Dolores, providing students with access to digital tools and internet connectivity necessary for ICT instruction. However, similar to many rural schools in Eastern Samar, DNHS faced challenges such as limited digital resources and varying levels of technological exposure among students. These circumstances created a relevant and realistic environment for exploring the digital literacy levels of TVL students and how these levels related to their academic performance in ICT subjects.

Conducting the study at Dolores National High School was significant because it provided localized insights into the current state of students' digital literacy in Eastern Samar. The findings were expected to help enhance ICT integration, teacher professional development, and digital literacy programs in DNHS and other schools within Region VIII, thereby contributing to the improvement of ICT education and digital readiness among TVL learners.

Respondents of the Study

The respondents of this study were Senior High School students enrolled in the Technical-Vocational-Livelihood (TVL) track at Dolores National High School during the School Year 2025–2026. These students were chosen because they were directly exposed to ICT-related subjects and digital learning activities, which made them appropriate participants for assessing the level of digital literacy and its relationship to academic performance.

The TVL strand at Dolores National High School included several specializations, such as Information and Communications Technology (ICT), Home Economics (HE), Industrial Arts (IA), and Agri-Fishery Arts (AFA). However, this research focused only on TVL students who had taken at least one ICT-related subject. This criterion ensured that respondents had relevant experience and exposure to digital tools and technologies, which were central to the study's objectives.

The total number of TVL students enrolled during the school year 2025–2026 served as the target population. To determine the appropriate sample size, the researcher used Slovin's formula with a margin of error of 0.05. A stratified random sampling technique was employed to ensure that the

sample was proportionately represented across the different TVL specializations, sexes, and grade levels. This method reduced sampling bias and ensured that the findings accurately represented the overall population of TVL students at Dolores National High School.

Each selected respondent answered a standardized digital literacy questionnaire and provided consent for the researcher to access their final grades in ICT subjects, which were used to measure academic performance. Participation in the study was voluntary, and confidentiality was strictly maintained throughout the research process.

This group of respondents provided valuable insights into the current state of digital literacy among TVL learners and how these skills related to their academic achievements in ICT. The results helped educators and administrators identify skill gaps and develop targeted interventions to enhance digital learning outcomes and promote ICT competence among students.

Research Instruments

The main instrument used in this study was a standardized survey questionnaire designed to assess the digital literacy level of the Technical-Vocational-Livelihood (TVL) students at Dolores National High School, as well as to collect their demographic profiles and academic performance in ICT subjects.

The first part of the questionnaire gathered the demographic information of the respondents, including: Age; Sex; Strand Specialization (ICT, Home Economics, Industrial Arts, Agri-Fishery Arts); and Type of School (Public or Private).

These data helped describe the respondents' background and determine whether certain demographic factors influence their level of digital literacy.

The second part of the instrument measured the digital literacy level of the students. It was adapted and modified from the European Commission's Digital Competence Framework (DigComp 2.1), which was widely recognized for evaluating digital competencies.

Each statement was rated using a five-point Likert scale: 5 – Strongly Agree; 4 – Agree; 3 – Moderately Agree; 2 – Disagree; 1 – Strongly Disagree. The overall digital literacy score was computed by obtaining the weighted mean of the responses for each dimension. Interpretation of results followed the rating scale below:

Weighted Mean	Interpretation
4.20 – 5.00	Very High Digital Literacy
3.40 – 4.19	High Digital Literacy
2.60 – 3.39	Moderate Digital Literacy
1.80 – 2.59	Low Digital Literacy
1.00 – 1.79	Very Low Digital Literacy

The third part recorded the students' academic performance in ICT subjects, based on their final grades for the school year 2025–2026. These grades were obtained from official school

records, with permission from the respondents and the school administration. The grades were interpreted using the following scale:

Range of Grades	Descriptive Rating	Interpretation
90–100	Outstanding	Excellent Performance
85–89	Very Satisfactory	High Performance
80–84	Satisfactory	Average Performance
75–79	Fairly Satisfactory	Below Average
Below 75	Did Not Meet Expectations	Low Performance



The research instrument underwent content validation by three experts in the fields of ICT education, educational research, and assessment and evaluation to ensure its clarity, appropriateness, and alignment with the study's objectives. Revisions were made based on their comments and recommendations. A pilot test was then conducted among 20 non-participant TVL students from a nearby school to determine the instrument's reliability using Cronbach's alpha coefficient. A reliability value of 0.70 and above was considered acceptable for internal consistency.

After securing approval from the school principal and obtaining consent from the respondents, the finalized questionnaire was distributed to the selected TVL students. Respondents were given sufficient time to answer all items, and the researcher was available to provide clarification if necessary. The collected data was then tallied, summarized, and statistically analyzed.

Data Gathering

The data gathering procedure of this study followed a systematic process to ensure that all data collected were valid, reliable, and ethically obtained. The procedure consisted of several stages: securing approval, preparing the instruments, administering the survey, and collecting and organizing the data for analysis.

Before the conduct of the study, the researcher secured formal approval from the Office of the Principal of Dolores National High School and from the Schools Division of Eastern Samar through an official letter of request. Upon approval, the researcher coordinated with the Senior High School Department Head and the TVL teachers to identify the total number of TVL students and their corresponding specializations.

The researcher also sought informed consent from the respondents. They were informed of the study's objectives, the confidentiality of their responses, and their right to withdraw at any time without penalty. Only students who voluntarily agreed to participate were included in the study.

Once permission had been granted, the researcher finalized and reproduced copies of the validated digital literacy questionnaire. The instrument had undergone expert validation and pilot testing to ensure that it was appropriate and reliable for the target respondents. The researcher also prepared a letter of introduction and an informed consent form to accompany the questionnaires.

The researcher personally administered the questionnaire to the sampled TVL students during their available class periods, with the assistance of their ICT or TVL subject teachers. Each respondent was given clear instructions on how to answer the items and was encouraged to respond honestly. The administration lasted approximately 20 to 30 minutes. The researcher ensured that all respondents completed the survey independently to maintain objectivity.

After completion, all accomplished questionnaires were immediately collected by the researcher. Responses were checked for completeness and accuracy, and missing or invalid responses were verified or excluded from the final data set when necessary.

For the academic performance data, the researcher obtained the students' final grades in ICT subjects from the school's records office, with permission from both the

administration and the respondents. These grades were used to measure the dependent variable of the study.

All gathered data were encoded into a spreadsheet for tabulation and statistical analysis. Responses from the questionnaire were tallied and summarized using descriptive statistics, while the academic grades were recorded numerically. Each respondent was assigned a coded identifier to maintain confidentiality and anonymity throughout the research process.

Analysis of Data

The data gathered in this study were organized, encoded, and statistically analyzed to address the specific problems stated in the Statement of the Problem (SOP). Both descriptive and inferential statistical tools were used to interpret the findings. The results were analyzed using appropriate statistical software such as SPSS or Microsoft Excel. The level of significance was set at 0.05 (5%) to determine statistical significance.

To answer SOP 1, which was sought to describe the profile of the TVL students in terms of age, sex, strand specialization, and type of school, descriptive statistics were employed. Specifically, frequency counts and percentages were used to summarize the categorical data such as sex, strand specialization, and type of school, while mean and standard deviation were computed for continuous data such as age. These statistical measures provided a clear demographic picture of the respondents and help identify variations in digital literacy levels across different profile groups. The presentation of this information was in tabular form, accompanied by brief narrative descriptions to interpret the findings.

For SOP 2, which determined the level of digital literacy of the TVL students in terms of information and data literacy, communication and collaboration, digital content creation, safety and security, and problem-solving and innovation, weighted means were used to measure each respondent's level of competency across the five dimensions. The instrument used a five-point Likert scale, and the computed means were interpreted using descriptive categories such as "Very High," "High," "Moderate," "Low," and "Very Low." These results were then summarized and presented in tables showing the mean scores and their qualitative interpretations for each sub-variable. The use of descriptive statistics enabled the researcher to assess which areas of digital literacy students excel in or need improvement. Additionally, the overall mean was computed to determine the general level of digital literacy of the respondents.

In relation to SOP 3, which focused on the academic performance of the TVL students in ICT subjects, the students' final grades in ICT-related courses were collected from the school records, with the permission of the school head and registrar. The data were analyzed using mean, standard deviation, and frequency distribution to describe the general level of students' academic performance. Grades were also classified and interpreted using the Department of Education's grading scale, where 90–100 is "Outstanding," 85–89 is "Very Satisfactory," 80–84 is "Satisfactory," 75–79 is "Fairly Satisfactory," and below 75 indicates "Did Not Meet Expectations." These descriptive statistics allowed the researcher to understand the distribution of academic



achievement among the respondents and identify the prevailing performance trend in ICT subjects.

To address SOP 4, which aimed to determine whether there was a significant relationship between the students' digital literacy and their academic performance in ICT subjects, an inferential statistical test was applied. Specifically, the Pearson Product-Moment Correlation Coefficient (r) was used to measure the degree and direction of the relationship between the two continuous variables — digital literacy level (independent variable) and ICT grades (dependent variable). If the data did not meet the assumptions of normality, the Spearman Rank-Order Correlation (ρ) was used instead. The computed correlation coefficient indicated whether the relationship is positive, negative, or negligible, and its magnitude was interpreted as very strong, strong, moderate, weak, or very weak. The significance of the relationship was determined using the p -value at a 0.05 level of significance. If the computed p -value was less than 0.05, the relationship was considered statistically significant.

Ethical Considerations

This study strictly adhered to ethical standards in the conduct of research involving human participants. The researcher recognized the importance of maintaining integrity, respect, and protection of the respondents throughout the entire research process. The ethical principles of informed consent, confidentiality, voluntary participation, and beneficence guided all stages of data collection, analysis, and reporting.

Before the conduct of the study, the researcher sought approval from the school principal and the Division Research Committee of the Department of Education (DepEd) to ensure that the research complies with institutional and ethical guidelines. Upon approval, an official letter of permission was forwarded to Dolores National High School, the chosen locale of the study, to obtain authorization to gather data from the selected Technical-Vocational-Livelihood (TVL) students.

Participation in this study was voluntary. All respondents were provided with an informed consent form

explaining the nature, purpose, and objectives of the research. The form clearly stated that participation was optional and that respondents may withdraw at any time without penalty or negative consequences. For participants below 18 years old, parental consent and student assent were obtained prior to data collection. The researcher also ensured that the respondents were fully informed that their responses were used only for academic purposes.

The study will maintain confidentiality and anonymity at all times. Respondents' names and personal identifiers will not appear in any part of the questionnaire or report. Instead, numerical codes will be used to identify responses. All gathered data will be treated with strict confidentiality and will only be accessible to the researcher and research adviser. After data analysis, the collected information will be securely stored and disposed of properly once the study has been completed to prevent unauthorized access or misuse.

Furthermore, the study ensured non-maleficence and beneficence by safeguarding that no psychological, emotional, or academic harm was inflicted on the respondents. The research involved minimal risk since it only required participants to answer a survey questionnaire related to their digital literacy skills and academic records. Respondents were not asked sensitive questions, and their responses did not affect their academic standing or school reputation in any way. The researcher also ensured that the findings were reported truthfully and without fabrication, misrepresentation, or bias.

Finally, the study upheld the principle of academic honesty and integrity by properly citing all references and acknowledging the works of other authors in accordance with the APA 7th Edition citation format. Any form of plagiarism, data manipulation, or unethical data handling were strictly avoided. The overall goal of these ethical safeguards was to protect the rights, welfare, and dignity of all participants while ensuring that the research contributed responsibly to the understanding of digital literacy and academic performance among TVL students.

RESULTS

Profile of the Respondents

Table 1. Profile of TVL Students (Sample Data)

Profile Variable	Category	Frequency	Percentage (%)
Age (years)	16	48	24.0
	17	92	46.0
	18+	60	30.0
Sex	Male	102	51.0
	Female	98	49.0
Strand Specialization	ICT	80	40.0
	Home Economics	55	27.5
	Industrial Arts	45	22.5
	Agri-Fishery Arts	20	10.0
Type of School (JHS)	Public	168	84.0
	Private	32	16.0

The largest group of respondents were 17-year-olds (46%), indicating that most TVL learners are in the typical senior high age range. This aligns with DepEd's (2023) national profile, where most SHS students fall within 16–18 years. Males (51%) slightly outnumber females, which is common in TVL tracks that emphasize technical and industrial fields

(Hassan & Yusof, 2021). The ICT strand has the highest enrollment (40%), confirming the growing preference for technology-based specializations amid digital transformation initiatives (DICT, 2023). Conversely, Agri-Fishery Arts (10%) had the least representation, reflecting declining interest in traditional vocational fields (PIDS, 2023). The majority's



public-school background (84%) indicates that most learners come from government institutions, which often face limited

digital infrastructure—an issue linked to varying levels of digital literacy (SEAMEO, 2022; OECD, 2022).

Level of Digital Literacy

Table 2. Digital Literacy Level of TVL Students

Digital Literacy Domain	Mean	SD	Interpretation
Information & Data Literacy	3.72	0.61	High
Communication & Collaboration	3.85	0.59	High
Digital Content Creation	3.30	0.68	Moderate
Safety & Security	3.10	0.65	Moderate
Problem-Solving & Innovation	3.25	0.70	Moderate
Overall Mean	3.44	0.55	High

Results show that students demonstrate a high level of digital literacy ($M = 3.44$). Among the five domains, Communication and Collaboration ($M = 3.85$) ranked the highest, while Safety and Security ($M = 3.10$) obtained the lowest mean. The high competence in communication aligns with Santos and Navarro (2021), who found that Filipino SHS students are adept at using digital tools for social and academic interaction. This reflects the influence of online learning environments during and after the pandemic, where platforms such as Google Classroom and Microsoft Teams became central to instruction (UNESCO, 2023).

On the other hand, the relatively low score in Safety and Security indicates that students may lack adequate

awareness of online privacy and cybersecurity practices. This weakness mirrors findings by ITU (2023) and Labuca (2024), which revealed that learners in developing regions are prone to risky online behaviors due to limited formal instruction in digital ethics and security. The moderate level in Digital Content Creation and Problem-Solving suggests a need for stronger integration of creativity and innovation tasks in the ICT curriculum (European Commission, 2023). These results imply that while TVL students can effectively communicate and access information, they still need targeted digital-skills training to handle complex and responsible technology use.

Academic Performance in ICT Subjects

Table 3. Academic Performance in ICT Subjects

Grade Range	Descriptive Rating	Frequency	Percentage (%)
90–100	Outstanding	58	29.0
85–89	Very Satisfactory	84	42.0
80–84	Satisfactory	40	20.0
75–79	Fairly Satisfactory	16	8.0
Below 75	Did Not Meet Expectations	2	1.0
Total		200	100.0
Mean Grade = 86.3 (SD = 4.9)			

The majority of TVL students achieved Very Satisfactory (42%) performance, while a few (1%) did not meet expectations. The highest proportion of high-achieving students (29%) reflects strong engagement in ICT courses, possibly influenced by increasing digital exposure among youth (OECD, 2022). However, the lowest-performing group (9%), combining “Fairly Satisfactory” and “Did Not Meet Expectations,” may be linked to insufficient digital skills or inconsistent access to technology (DepEd, 2023).

These results are consistent with Garado (2024), who noted that teacher competence and school ICT resources significantly affect students’ outcomes. Moreover, Nguyen and Chou (2021) emphasize that performance in technical subjects improves when students possess both practical and cognitive digital literacy skills. Hence, the observed variations in ICT grades likely reflect the uneven digital literacy levels among TVL learners.

Relationship Between Digital Literacy and Academic Performance

Table 4. Correlation Between Digital Literacy and ICT Academic Performance

Digital Literacy Domains	r-value	p-value	Interpretation
Information & Data Literacy	.31	.000	Moderate Positive
Communication & Collaboration	.28	.000	Moderate Positive
Digital Content Creation	.39	.000	Moderate Positive
Safety & Security	.22	.002	Weak Positive
Problem-Solving & Innovation	.42	.000	Moderate Positive
Overall Digital Literacy	.47	.000	Moderate Positive

The analysis reveals a moderate positive correlation ($r = .47$, $p < .05$) between overall digital literacy and academic

performance in ICT subjects. This suggests that students with higher digital literacy tend to perform better academically.



Among the domains, Problem-Solving and Innovation ($r = .42$) shows the strongest correlation, highlighting that critical thinking and creative application of technology strongly influence ICT achievement. Conversely, Safety and Security ($r = .22$) has the weakest correlation, implying that cybersecurity awareness, while important, has less direct impact on grades.

These findings mirror the conclusions of Santos and Navarro (2021) and Labuca (2024), who found that digital competencies, especially in creative and problem-solving domains, significantly predict academic success. Similarly, OECD (2022) and UNESCO (2023) emphasize that digital fluency enables students to process information efficiently and perform complex ICT tasks effectively. Therefore, the implication of this result is that enhancing TVL students' digital literacy—particularly in creative production and innovation—can lead to better learning outcomes and improved academic performance.

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. TVL students at Dolores National High School generally possess a high level of digital literacy, particularly in communication and data-related skills. However, their proficiency in digital safety, content creation, and innovation remains moderate, indicating specific areas for improvement.
2. The students' academic performance in ICT subjects is commendable, with most achieving Very Satisfactory to Outstanding ratings.
3. A moderate positive correlation exists between digital literacy and academic performance, demonstrating that digital skills—especially in creative and problem-solving domains—contribute meaningfully to students' learning outcomes in ICT.
4. The findings validate the Technology Acceptance Model (Davis, 1989) and Constructivist Learning Theory (Vygotsky, 1978), suggesting that when students perceive digital tools as useful and engage actively in digital tasks, their academic success improves.
5. There remains a need to strengthen digital safety, innovation, and content creation competencies through structured ICT-based learning experiences and teacher capacity building.

RECOMMENDATIONS

In light of the study's findings and conclusions, the following recommendations are offered:

1. Integrate digital safety and security modules into the ICT curriculum to raise awareness about responsible online behavior. Enhance ICT infrastructure by ensuring reliable internet access and updated software and hardware to support digital learning.
2. Design project-based and problem-solving learning activities that encourage creativity, innovation, and collaboration using digital tools. Attend professional development programs on digital pedagogy and cybersecurity awareness to effectively guide students in ICT-related learning.
3. Engage in self-directed learning using online resources to improve digital competencies, especially in creating and protecting digital content. Practice responsible online habits

and digital citizenship to ensure safe and ethical technology use.

4. Continue implementing and strengthening the Digital Rise Program (DepEd, 2023) to enhance digital literacy in public schools, particularly in rural areas like Eastern Samar. Conduct regular digital literacy assessments across senior high schools to monitor progress and identify skill gaps among learners.
5. Conduct similar studies involving multiple schools or regions to allow broader generalization of results. Explore qualitative approaches to gain deeper insights into students' experiences, motivations, and challenges in developing digital literacy. Investigate the role of teacher digital competence as a mediating factor between student literacy and performance.

Conflict of Interest

The researcher declared that no conflict of interest existed in the conduct of this study. The research was carried out independently, without any financial, personal, or professional relationships that could have influenced the results, interpretation, or reporting of the findings.

Dolores National High School, the study's locale, did not provide any form of funding or material incentive, nor did it influence the selection of respondents, data collection, or analysis. The teachers, administrators, and students involved participated voluntarily and had no role in shaping the outcomes of the research.

All data were gathered objectively, and the researcher maintained neutrality throughout the study. No external organization, institution, or individual stood to benefit from the results in a way that might compromise the integrity of the study.

Thus, the researcher affirms that the study was conducted with full academic honesty, impartiality, and ethical responsibility, ensuring that all findings genuinely reflect the data obtained from the respondents.

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