

Utilization of Media Skills in Teaching Technology and Livelihood Education and Academic Performance

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Abstrak

The study aimed to assess the utilization of media skills in teaching Technology and Livelihood Education (TLE) and students' academic performance among Junior High School-TLE teachers with at least one year of teaching experience assigned in Division of Camiguin. This study utilized descriptive correlational design. The survey questionnaire was used in gathering and collecting data. The validity of instrument was evaluated using the Lawshe's Content Validity Index. Descriptive statistics such as frequency and mean were used to determine the demographics and their extent in utilization of media skills in teaching as well as the academic performance of the students. Inferential statistics such as Analysis of Variance (ANOVA) was utilized to analyze the significant difference in the extent of media skills utilization in teaching TLE when grouped according to their demographics. Based on the results, most of the teachers were within the range of 26-45 years old, finished their post graduate studies (doctoral and masteral degree), and majority were teaching TLE for 4-15 years. There was high extent in the utilization of media skills in teaching TLE among students. The teachers used multimedia presentations, instructional videos, and online resources to enhance lessons and they feel confident in integrating ICT and media-based tools in daily instruction. The result showed high academic performance among TLE students. There was no relationship between variables. The result shows weak positive correlation, the changes in academic performance do not predict changes in the utilization of media skills in teaching TLE. The result suggests no strong evidence for association. The extent of utilization of media skills in teaching TLE when grouped according to age showed significance. Post hoc test resulted significance between groups 46 years old and above to 26-35 years. Further, the result showed no significant difference when grouped as to highest educational attainment and number of years in teaching.

Keyword: *Academic Performance, Media Skills, TLE teachers,, Utilization*



Introduction

The integration of media skills in teaching has become an essential component of effective instruction in the 21st century. Media skills refer to teachers' ability to utilize digital tools, multimedia presentations, instructional videos, and online platforms to enhance classroom instruction and student engagement. Studies revealed that the use of technology and multimedia resources in education improves learners' motivation, comprehension, and academic performance, particularly in skill-based subjects such as Technology and Livelihood Education (TLE) (Abdulrahman et al., 2020; Mayer, 2022).

This study aimed to assess the utilization of media skills in teaching Technology and Livelihood Education (TLE) and the students' academic performance. Specifically, this study sought to answer the following research questions: 1. What is the profile of the respondents in terms of: 1.1. Age; 1.2. Highest educational attainment; and 1.3. Number of years in teaching? 2. What is the extent of utilization of media skills in teaching TLE among students? 3. What is the level of academic performance of students in TLE during the S.Y 2024-2025? 4. Is there a significant relationship between utilization of media skills in teaching TLE and students' academic performance? 5. Is there a significant difference in the extent of utilization of media skills in teaching TLE when grouped according to age, highest educational attainment, and number of years in teaching? 6. What action plan can be proposed from the study?

In TLE instruction, media-supported learning enables teachers to demonstrate practical procedures, simulate real-life situations, and present technical concepts more clearly and interactively. As a result, media integration has become an important pedagogical strategy in promoting meaningful and learner-centered instruction. Technology and Livelihood Education plays a vital role in developing students' practical knowledge, technical competencies, and entrepreneurial skills necessary for lifelong learning and employment. The subject covers various fields such as Home Economics, Industrial Arts, Agriculture, and Information and Communication Technology, which require demonstration-based and competency-based instruction (DepEd, 2015).

Effective delivery of TLE lessons often depends on the teacher's ability to integrate appropriate instructional media that can support hands-on learning experiences and improve students' understanding of technical processes. However, despite the recognized importance of media integration, many teachers continue to experience challenges related to limited technological resources, inadequate training, and varying levels of media competence (Pamor et al., 2024). In the Division of Camiguin, limited local studies have examined the utilization of media skills among Junior High School TLE teachers and its relationship to students' academic performance. Hence, this study was conducted to assess the extent of media skills utilization in teaching TLE and determine its relationship to students' academic performance during School Year 2024–2025.



Methods

This study utilized a descriptive-correlational research design to determine the extent of utilization of media skills in teaching Technology and Livelihood Education (TLE) and its relationship to students' academic performance. The descriptive method was used to describe the respondents' demographic profile in terms of age, highest educational attainment, and number of years in teaching, while the correlational approach was employed to determine the significant relationship between media skills utilization and students' academic performance, as well as the significant differences in media skills utilization when respondents were grouped according to their profile variables.

The study was conducted in the Department of Education Division of Camiguin, Province of Camiguin, Philippines. The division consists of five districts namely Mambajao, Mahinog, Catarman, Sagay, and Guinsiliban. These districts provided diverse educational settings due to differences in access to instructional facilities, technological resources, and school environments. Mambajao, Catarman, and Mahinog districts generally have better technological infrastructure and instructional resources, while Sagay and Guinsiliban districts experience more rural limitations that may influence teachers' utilization of media skills. Such variation provided a comprehensive perspective regarding media integration practices among TLE teachers

The respondents of the study were forty-five (45) Junior High School Technology and Livelihood Education teachers with at least one year of teaching experience from selected public secondary schools in the Division of Camiguin. Proportionate random sampling was employed in determining the number of respondents per district. Fifteen respondents came from Mambajao District, eight from Mahinog District, fourteen from Catarman District, and four respondents each from Sagay and Guinsiliban districts.

The study utilized an adapted survey questionnaire based on Duya's (2021) "Multimedia Utilization in Teaching-Learning Process." The instrument was modified and contextualized to suit the TLE subject area while maintaining the original intent of the indicators. Part I of the questionnaire gathered data regarding the respondents' demographic profile, including age, highest educational attainment, and number of years in teaching. Part II consisted of fifteen indicators measuring the extent of utilization of media skills in teaching TLE using a four-point Likert scale. Students' academic performance was measured through their final grades in TLE during School Year 2024–2025. Casual interviews were also conducted to supplement the survey data and obtain additional insights regarding teachers' experiences in media integration.

To ensure content validity, the instrument underwent evaluation by five expert validators using Lawshe's Content Validity Index. Suggestions and recommendations from the validators were incorporated prior to the administration of the questionnaire. Before conducting the study, permission was secured from the Schools Division Superintendent and school principals of the participating schools. Respondents were informed regarding the purpose of the study and were provided informed consent forms to ensure voluntary participation. The researcher personally distributed the questionnaires and explained each indicator to the respondents to ensure clarity



and accuracy of responses. Confidentiality and anonymity of all information gathered were strictly observed throughout the conduct of the study.

The extent of utilization of media skills in teaching TLE was interpreted using a four-point Likert scale with corresponding descriptive equivalents ranging from Very Low to High. Meanwhile, students' academic performance was interpreted based on the transmuted grading scale provided in Department of Education Order No. 8, s. 2015, with descriptive ratings ranging from Outstanding to Did Not Meet Expectations. The data gathered were analyzed using descriptive and inferential statistical tools. Frequency, percentage, mean, and standard deviation were used to describe the respondents' profile, extent of media skills utilization, and students' academic performance. Pearson Product-Moment Correlation was utilized to determine the relationship between media skills utilization and students' academic performance, while Analysis of Variance (ANOVA) was employed to determine significant differences in media skills utilization when respondents were grouped according to age, highest educational attainment, and years of teaching experience. All hypotheses were tested at the 0.05 level of significance.

Ethical considerations were strictly observed throughout the study. Participation was voluntary, and respondents were informed of their right to withdraw from the study at any time. The survey questionnaires did not require the respondents' names to ensure anonymity and confidentiality. All data gathered were treated with utmost confidentiality and were used solely for academic and research purposes.

Results and Discussion

This section presents the findings of the study on the utilization of media skills in teaching Technology and Livelihood Education (TLE) and students' academic performance among Junior High School TLE teachers in the Division of Camiguin. The presentation of data follows the sequence of the research problems and includes the interpretation and discussion of the findings supported by related literature and studies.

Problem 1. What is the profile of the respondents in term of:

- 1.1 Age;
- 1.2 Highest Educational Attainment; and
- 1.3 Number of Years in Teaching?

Table 1 . *Profile of the Respondents (n=45)*

Variable	Frequency	Percentage (%)
Age (years)		
25 years old and under	1	2.22
26-35 years old	21	46.67
36-45 years old	14	31.11
46 years old and above	9	20.00
Total	45	100.00
Highest Educational Attainment		
	3	6.67
Bachelor's degree	20	44.44
With Master's Units	17	37.78
Master's degree	3	6.67
With Doctoral Units	2	4.44
Doctoral Degree		
Total	45	100.00
Number of Years in Teaching		
	7	15.56
1-3 years	22	48.89
4-10 years	3	6.67
11-15 years	8	17.78
16-20 years	5	11.11
21 years and above	45	100.00
Total		

Table 1 presents the demographic profile of the respondents in terms of age, highest educational attainment, and number of years in teaching. Results showed that most respondents belonged to the 26–35 years old age bracket (46.67%), followed by those aged 36–45 years old (31.11%). Only a few respondents were 25 years old and below (2.22%), while 20% were 46 years old and above. In terms of educational attainment, most teachers had earned master's units (44.44%) or completed a master's degree (37.78%), indicating a strong inclination toward professional growth and postgraduate education. Regarding teaching experience, the majority



had 4–10 years of teaching experience (48.89%), suggesting that most respondents already possessed moderate professional experience in TLE instruction.

The findings indicate that the respondents were generally within the productive and professionally active age group, which may contribute to adaptability and openness to media integration in teaching. Previous studies noted that teachers within this age range are more likely to adopt innovative instructional strategies and integrate technology effectively in classroom instruction (Tahir, 2024). Moreover, postgraduate education among teachers reflects commitment to professional development and improved pedagogical competence (Vural & Basaran, 2021).

Problem 2. What is the extent of utilization of media skills in teaching TLE among students?

Table 2 presents the extent of utilization of media skills in teaching TLE. The overall mean score of 3.32 (SD = 0.19) indicated a high extent of media skills utilization among teachers. The highest-rated indicator was the use of multimedia presentations, instructional videos, and online resources to enhance lessons (M = 3.73), followed by confidence in integrating ICT and media-based tools in instruction (M = 3.58). However, lower mean scores were observed in the use of mobile applications and online forums, indicating moderate utilization of more advanced digital tools.

Table 2

Extent of Utilization of Media Skills in Teaching TLE (N = 45)

Indicators	Mean	Qualitative Description
I used multimedia presentations, instructional videos, and online resources to enhance lessons.	3.73	High Extent
I feel confident in integrating ICT and media-based tools in daily instruction.	3.58	High Extent
I designed to utilize both traditional and digital media in explaining TLE concepts.	3.53	High Extent
I possess sufficient skills in using media editing tools (e.g. canva, powerpoint presentation, video editing apps) in my hands-on TLE lessons.	3.42	High Extent
Administrative and peer support encourage my continued use of media in teaching.	3.38	High Extent
I continuously improve their digital literacy to meet modern teaching standards.	3.36	High Extent
I regularly update instructional materials to include relevant media content.	3.33	High Extent



I have an adequate access to media tools and digital resources in school.	3.33	High Extent
I monitor how media-based activities affect student's learning outcomes.	3.33	High Extent
I encourage students to create digital projects such as videos, infographics, blogs related to TLE topics.	3.22	Moderate Extent
I designed creative and innovative instructional materials using media application.	3.22	Moderate Extent
I assess student's performance using digital rubrics/online evaluation tool.	3.13	Moderate Extent
Technical issues, limited access to digital tools, and/or lack of training affect my media integration.	3.11	Moderate Extent
I used social media or online forums for class discussions and resource sharing.	3.09	Moderate Extent
I incorporate mobile applications or software relevant to TLE subjects.	3.02	Moderate Extent
Total Average Weighted Mean	3.32	High Extent

The results suggest that teachers actively integrate multimedia and ICT resources in TLE instruction. This finding supports the Cognitive Theory of Multimedia Learning of Richard E. Mayer, which emphasizes that combining visual and verbal information enhances student learning and comprehension. Despite the generally high utilization, challenges related to limited access to digital resources and insufficient training continue to affect the integration of more advanced media tools.

Problem 3. What is the level of academic performance of students in TLE during the S.Y 2024-2025?

Table 3 presents the academic performance of students in TLE during School Year 2024–2025. Results revealed that most students achieved Outstanding (35.56%) and Very Satisfactory (33.33%) ratings, indicating generally high academic performance.

Table 3

Academic Performance of TLE Students During S.Y. 2024–2025

Description	Range	Frequency	Percentage (%)	Average
Outstanding	90-100	16	35.56	92.25
Very Satisfactory	85-89	15	33.33	86.87
Satisfactory	80-84	11	24.44	82.36
Fairly Satisfactory	75-79	3	6.67	78.67
Total		45		

The findings imply that students generally performed well in TLE, which may be attributed to effective instructional practices, practical learning experiences, and the integration of media-based instruction. Previous studies showed that media-enhanced instruction improves learner engagement, understanding, and retention of technical concepts in vocational subjects (Arroz, 2024).

Problem 4. Is there a significant relationship between utilization of media skills in teaching TLE and students' academic performance?

Table 4 presents the relationship between media skills utilization and students' academic performance. The computed Pearson correlation coefficient revealed a weak positive relationship ($r = 0.26$); however, the obtained p-value of 0.08 was greater than the 0.05 level of significance, indicating no significant relationship between the variables.

Table 4

Relationship Between Media Skills Utilization and Academic Performance

r	Pearson p=0.05)	p value	Remarks	Decision
Academic Performance and Media skills utilization	0.26	0.08	Not Significant	Failed to reject H_0

The result suggests that although media integration may contribute positively to instruction and student engagement, it does not solely determine students' academic performance in TLE. Only 6.76% of the variance in academic performance could be explained by media utilization, indicating that other factors such as motivation, learning environment, teaching strategies, and parental support may significantly influence student achievement. Similar findings were reported by Peggy A. Ertmer and Anne T. Ottenbreit-Leftwich, who emphasized that technology integration alone does not automatically guarantee improved academic outcomes.

Problem 5. Is there a significant difference in the extent of utilization of media skills in teaching TLE when grouped according to age, highest educational attainment, and number of years in teaching?

Table 5 presents the analysis of variance on media skills utilization when respondents were grouped according to profile variables. Significant differences were found only when grouped according to age ($p = 0.04$), while no significant differences were observed based on educational attainment and years of teaching experience.

Table 5

Analysis of Variance on Media Skills Utilization

Variables	<i>F</i>	<i>P-value</i>	<i>F crit</i>	Statistical Decision
Age	2.9	0.04	2.8	Reject Ho
Highest educational attainment	0.86	0.49	2.6	Failed to reject Ho
Number of Years in Teaching	1.8	0.15	2.6	Failed to reject Ho

Table 6

Post-hoc Analysis

Comparison Groups	Mean Difference	p-value	Interpretation	Decision
46 years old vs. 36–45 years old	0.36455	0.127531	Not Significant	Failed to Reject Ho
46 years old vs. 26–35 years old	0.435979	0.030556	Significant	Reject Ho
46 years old vs. 25 years old and below	0.474074	0.639737	Not Significant	Failed to Reject Ho
36–45 years old vs. 26–35 years old	0.071429	0.947271	Not Significant	Failed to Reject Ho
36–45 years old vs. 25 years old and below	0.109524	0.992322	Not Significant	Failed to Reject Ho
26–35 years old vs. 25 years old and below	0.038095	0.999657	Not Significant	Failed to Reject Ho

Post hoc analysis revealed that teachers aged 46 years old and above significantly differed from those aged 26–35 years old in terms of media skills utilization. This finding suggests that younger teachers may be more comfortable and familiar with digital tools and media integration compared to older teachers. Studies indicate that age may influence teachers' confidence and adaptability in using technology in classroom instruction (Ertmer & Ottenbreit-Leftwich, 2010).



Overall, the findings indicate that TLE teachers in the Division of Camiguin demonstrate high utilization of media skills and that students generally perform well academically in TLE. However, media integration alone does not significantly predict academic performance, highlighting the importance of other instructional and contextual factors in achieving positive learning outcomes.

The findings of the study revealed that Junior High School TLE teachers in the Division of Camiguin demonstrated a high extent of media skills utilization in teaching. Teachers frequently integrated multimedia presentations, instructional videos, and other ICT-based resources in classroom instruction, which contributed to more engaging and interactive learning experiences. Likewise, students generally achieved very satisfactory to outstanding academic performance in TLE, indicating that learners were able to attain the expected competencies in the subject. Despite these positive findings, statistical analysis showed that the utilization of media skills did not significantly correlate with students' academic performance. This implies that although media integration supports instruction and learner engagement, academic achievement in TLE may still be influenced by other factors such as learner motivation, teacher competence, parental support, availability of resources, and learning environment.

Problem 6. What action plan can be proposed from the study?

PROPOSED ACTION PLAN

Rationale:

This action plan is formulated based on the findings and recommendations of the study to improve the teaching-learning process in Technology and Livelihood Education (TLE) through the integration of media-based instructional strategies in public schools in the Schools Division of Camiguin. The School Heads, in coordination with the Schools Division Office of Camiguin, shall oversee the implementation and monitoring of this action plan.

Objectives	Activities	Persons Involved	Timeline	Resources Needed	Success Indicators
Strengthen teachers' media integration skills	Conduct ICT training workshops	SDO, School Heads, ICT Coordinators	2026	ICT tools, trainers, computer lab	All TLE teachers trained; improved competency
Address age-related gaps in media use	Implement peer mentoring program	School Heads, Master Teachers	2026–2027	Mentoring guides, monitoring forms	Improved confidence among senior teachers
Improve use of mobile and interactive apps	Integrate mobile/simulation activities in TLE	TLE Teachers	2026	Apps, internet access	Increased use of digital tools
Enhance monitoring of media integration	Develop lesson observation tool	School Heads, Department Heads	2026–2027	Observation checklist	Regular classroom observations conducted

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