

Suitability of Learning Resources Used by Teachers in Teaching Technology and Livelihood Education (TLE)

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Abstract:

Learning resources, no matter their nature and composition, constitute important and relevant components of successful teaching and learning. The key purpose of this study is to find out the level of suitability of learning resources used by teachers in teaching TLE in a municipality in the Negros Island Region for School Year 2024-2025 as the basis for an action plan. Descriptive research was conducted and used a 30-item survey questionnaire as a tool to gather data from forty-seven (47) TLE teachers. The results revealed that the level of suitability of learning resources used by teachers in teaching TLE in the areas of printed and digital resources was high. When grouped according to four variables, the level of suitability of learning resources used by teachers in teaching TLE in two areas was also high. Moreover, a significant difference was found in the level of suitability of learning resources used by teachers in teaching TLE when compared according to civil status. The result of this study serves as a basis for TLE teachers to improve themselves in the utilization of learning resources in teaching. This calls education planners and decision makers to allocate more funds, comprehensive support systems from stakeholders, policies to foster professional development, and enhance the quality of TLE education in Philippine public schools.

Keywords: Learning resources, teaching technology and livelihood education, teachers

Introduction:

Nature of the Problem

Technology and Livelihood Education (TLE) is one of the academic disciplines taught in Philippine secondary schools under the K-12 Basic Education Curriculum. As a high school subject, TLE teaches the fundamental principles of technicalities encountered in people's daily lives (Ramel, 2020). It emphasizes mastering each life skill included in the subject's framework through acquiring competency by practically realizing the learning (Darsih, 2018). Thus, the absence of suitable learning resources such as books, manuals, facilities, and laboratory equipment would become detrimental to TLE learning inside the classroom.

Suitable learning resources play an important role in overcoming an individual's learning problems. Learning resources are anything that educators can use separately or in combination for teaching and learning to increase the effectiveness and efficiency of learning objectives (Wahyuningsih et al., 2021). Pardillo (2021) opined that effective usage of suitable learning resources helps students construct more than superficial knowledge that builds in-depth knowledge on a particular subject and develops their individual learning strategies, values, attitudes, and generic skills. Using suitable learning resources in the teaching process will help build a solid foundation for lifelong learning. Thus, suitable learning resources must always be adequate and available in every educational institution.

In the present research locale, there was some confusion among TLE teachers in choosing the appropriate printed/digital learning materials and equipment for instruction. Hence, some teachers prefer to use learning resources that are readily available online rather than making their own more suitable for their needs. However, students' learning needs are sometimes not fulfilled, and there are constraints if the teacher does not use these learning resources wisely. In addition, the teachers feel they cannot effectively deliver the knowledge and skills in the four components of TLE subjects because of the insufficient suitable and appropriate learning resources.

Based on the aforementioned scenario, the researcher was motivated and prompted to conduct a study to assess the level of suitability of learning resources used by teachers in teaching TLE. The result of this study will give the researcher vital information on the basis for the proposed enhancement plan.

Current State of Knowledge

Learning resources, whether digital or non-digital, play a crucial role in enhancing learning effectiveness and efficiency by improving teacher morale and student outcomes (Wahyuningsih, 2021; Kigotho, 2015). Properly designed and utilized materials shape the learning experience, making content more meaningful and reinforcing actual learning (Smaldino et al., 2015; Onyilagha & Nnajoifir, 2016). Hands-on and multimedia resources further improve comprehension and engagement (Albarico, 2015). However, inadequate learning resources in Philippine schools, particularly in remote areas, force teachers to use personal funds, negatively impacting both teaching quality and student learning. This scarcity contributes to high dropout rates and limits employment opportunities for disadvantaged students (Quejada, 2018; DepEd Portal, 2019).

Printed and non-printed learning resources, such as textbooks, magazines, newspapers, slides, and electronic media, play a vital role in enhancing the educational process by clarifying abstract concepts, preventing rote memorization, and enriching students' vocabulary through hands-on interaction (Bukoye, 2019; Njogore, 2019). Properly utilized, these materials improve comprehension, retention, and engagement, making learning more effective (Ajoke, 2017; Bashir, 2018). However, inadequate resources can lead to stress, burnout, and reduced teaching effectiveness, particularly in underfunded schools (Bottiani, 2019). The availability of appropriate printed materials is crucial in reinforcing classroom instruction and developing practical skills, as hands-on experiences in fields like cooking or carpentry are more effective when students have access to necessary equipment rather than relying solely on theory (Adeniran, 2020; Tan, 2021).

Digital learning resources, including hardware, software, interactive media, and online tools, enhance education by improving accessibility, engagement, and interactivity (Wahyuningsih, 2021; Fatima et al., 2017; Munir, 2016). They offer personalized learning experiences, diverse content formats, and multimedia integration, fostering 21st-century skills and extending education beyond the classroom (Bernacki et al., 2021; Lagos & Nabos, 2023). However, effective implementation requires teacher confidence, curriculum compatibility, sufficient infrastructure, and reliable digital access (Özdemir, 2017; Ahmadi & Reza, 2018). Challenges such as unstable internet, power outages, device incompatibility, and limited training hinder full utilization, especially in rural areas where teachers lack resources (Ansayam, 2021; Azarcon, Guanzon, & Bagundol, 2023). Despite these barriers, digital tools reduce repetitive tasks, promote critical thinking, and facilitate collaboration, making digital literacy essential in modern education (Anton-Sancho et al., 2021; Mudra, 2020; Lestani & Santoso, 2016). Schools must integrate technology effectively to maximize its benefits and ensure equitable access for all learners.

Studies on the availability and utilization of suitable learning resources reveal varying impacts on education. Isma'il (2022) found that while some learning resources were available in Talata Mafara Town, their usage was inconsistent due to inadequate funding, large class sizes, and insufficient teacher training. Similarly, Odo and Ezeudu (2018) observed disparities in the availability of instructional materials, recommending improved facility provision and in-service training for teachers. Aba (2020) demonstrated that adequate learning resources significantly enhance student academic performance, advocating for increased government support and parental involvement in resource provision. However, Mang'uu et al. (2020) found no significant relationship between learning resources and teacher performance in Kitui County, suggesting that improving teacher workload balance and collaboration with school administrators could enhance resource utilization.

Studies on learning resources in Technology and Livelihood Education (TLE) highlight their adequacy, effectiveness, and impact on academic performance. Pardillo (2021) found that while facilities and audio-visual materials were highly adequate, equipment availability was only moderate, with no significant differences based on teachers' demographics. Niebres (2019) emphasized that localized learning materials enhance instructional competency, aligning with the Department of Education's pedagogy and improving teacher effectiveness. Roble (2021) revealed that learning resources were generally insufficient, with only teaching aids being widely utilized. The study found a significant relationship between the sufficiency and utilization of instructional materials and student performance, though challenges such as a lack of textbooks and facilities persisted, underscoring the need for improved resource provision and teacher training.

Theoretical Underpinnings

The study is anchored to the Sociocultural Theory of Teaching, Learning, and Development by Lev Vygotsky (1978). The theory focuses on the suitability of learning resources in the teaching-learning process and the cognitive development of a learner. It is said that the suitability of learning resources inside the classroom posits human mind development as a result of constant interactions with social learning materials. Constant interaction and the experiences learners gain from adequate and suitable learning resources with the help of teachers will lead to new and more elaborate forms of mental functioning. Likewise, suitable learning resources would lead to cognitive development because they mediate learners' thinking through the learning tools, constituting the cornerstone of mental development (Tety, 2016).

In addition, according to Vygotsky, the human mind develops through interaction with materials in the learning process, where people learn from each other and use their experiences to make sense of the materials they interact with successfully. These experiences are crystallized in 'cultural tools,' and the learners have to master such tools in order to develop specific knowledge and skills in solving specific problems and, in the process, become competent in a specific profession. In the classroom, these tools can be a picture, a model, or a pattern for solving a problem. Learning by using such tools is not something that helps the mind to develop. Instead, this kind of learning leads to new, more elaborated forms of mental functioning.

This theory is linked to the present study since the suitability of learning resources leads to cognitive development and mediates learners' thinking through the tools. Such mediation constitutes the very cornerstone of mental development. In the same way, it would also develop the teaching skills of TLE teachers by using suitable learning resources in the classroom. The theory mentioned above is very important as the basis for the framework of the study. It helps the researcher understand the essence of the study as learning resources enhance the teaching/learning process by exhibiting information necessary to acquire knowledge and skills of the learners and, likewise, teaching skills of TLE teachers.

Objectives

This study aimed to determine the level of suitability of learning resources used by teachers in teaching TLE in a municipality in the Negros Island Region for School Year 2024-2025 as the basis for an action plan. Specifically, this sought to answer the following questions: 1) the level of suitability of learning resources used by teachers in TLE in terms of printed resources and digital resources; 2) the level of suitability of learning resources used by teachers in teaching TLE when grouped according to the aforementioned variables; and 3) the significant difference in the level of suitability of learning resources used by teachers in TLE when grouped and compared according to the aforementioned variables.

Methodology

This section presents a discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, and the statistical tools and procedures for data analysis.

Research Design

This study employed a descriptive research design to determine the level of suitability of learning resources used by teachers in teaching TLE in a municipality in the Negros Island Region for School Year 2024-2025 as the basis for an action plan. Descriptive research is a methodology that shows design through the analysis of numeric data. It describes data that has been collected and analyzed. It can be used for major qualitative and quantitative research studies (Creswell, 2015). Using the descriptive design, the researcher will describe the situation or condition of a particular phenomenon as it exists at the time of study. It is the most common means of obtaining information from the data using questionnaires, interviews, and observation. A descriptive research design is appropriate since the present study also aimed to determine the prevalent conditions and gather information about the suitability of learning resources used by teachers in teaching TLE.

Study Respondents

The respondents of the study were the 47 TLE teachers of the municipality. Purposive sampling was used. Purposive sampling is a form of non-probability sampling in which researchers rely on their judgment when choosing population members to participate in the study. Researchers use purposive sampling to access a particular subset of people, as all survey participants are selected because they fit a specific profile (Ames et al., 2019).

Instruments

The study utilized a researcher-made questionnaire. The researcher made a questionnaire that has two parts. The first part comprises the personal profile of the respondents in terms of age, civil status, highest educational attainment, and length of service. The second part of the questionnaire answers the level of suitability of learning resources used by teachers in teaching TLE. The level of suitability of learning resources is split into the areas of printed resources and digital resources. It was composed of 15 items per area, comprising 30 items. The respondents were asked to rate each item using the five-point Likert scale, which contains the following scores: 5 – Always; 4 – Often, 3 – Sometimes, 2 – Rarely, and 1 – Almost Never. It was subjected to validity (4.83-excellent) and reliability (0.962-excellent). All of them were interpreted as worthy and good; respectively.

Data Gathering Procedure

For the smoother conduct of the study, the researcher employed the following procedures: The researcher sent a letter of request for the conduct of the study to the Office of Schools Division Superintendent. Upon approval, a separate letter was also sent to the school heads of all component schools, which is attached to the approved letter from the superintendent. After securing approval for the second request, the school heads of every school sent the research instrument to their TLE teachers electronically. At the same time, a hard copy was provided to teachers with no internet connection in their area. The researcher also included his contact number and Messenger account in the research instrument in case some teachers encounter difficulty answering the instrument.

Data Analysis and Statistical Treatment

Objective No. 1 used the descriptive analytical scheme and mean to determine the level of suitability of learning resources used by teachers in teaching TLE.

Objective No. 2 used the descriptive analytical scheme and mean to determine the level of suitability of learning resources used by teachers in teaching TLE when grouped according to the aforementioned variables.

Objective No. 3 used the comparative analytical scheme and Mann-Whitney U test to determine the significant difference in the level of suitability of learning resources teachers use in teaching TLE when grouped and compared according to the aforementioned variables.

Ethical Consideration

To ensure no human rights are violated during research, the researcher emphasized the respondents' voluntary participation, informed consent, risk of harm, confidentiality, and anonymity. Participation in the study was voluntary, and the respondents could withdraw without consequences. They were informed about the academic purpose of the study. Confidentiality was ensured as only the researcher/s had access to the research data. Moreover, during the study, the researcher strictly observed the governing guidelines and policies of the Data Privacy Act of 2012 to ensure security measures are in place to protect personal and sensitive information.

Results and Discussion

This section presents, analyzes, and interprets the data that were gathered consistent with its predetermined objectives.

Table 1

Level of Suitability of Learning Resources Used by Teachers in TLE in Printed Resources

Items	Mean	Interpretation
As a TLE teacher, I observed that the printed resources...		
1. Show a comprehensive plan of the course content and learning activities.	4.36	High Level
2. Align content and discussion to suit learners' capability to understand activities better.	4.23	High Level
3. Provide an accurate industry context to suit future work environments.	4.19	High Level
4. Are suitable and consistent with topics/skills found in the DepEd Learning Competencies for the TLE subject and grade level intended for.	4.26	High Level
5. Are suited and fitted the field of specialization in TLE.	4.28	High Level
6. Are relevant to real-life situations.	4.45	High Level
7. stimulate and promote critical thinking for students.	4.28	High Level
8. Contain lessons and learning activities to promote positive values that support the formative growth of the learners.	4.32	High Level
9. Contain pictures and illustrations contributing to the acquisitions of concepts, understanding, and skills in TLE.	4.34	High Level
10. Include assessment strategies and performance tasks that are relevant to the objectives of lessons in TLE.	4.43	High Level
11. Emphasize the purpose of learning in terms of employment opportunities.	4.38	High Level
12. Are suitable for the target group in addressing the expected outcomes of learning.	4.21	High Level
13. Are flexible enough to accommodate the varying abilities and backgrounds of the learners (e.g., socio-economic status, religion, etc.).	4.30	High Level
14. Include teacher's manual/guide that is user friendly.	4.19	High Level
15. Are affordable in terms of purchase price/ procurement.	4.21	High Level
Overall Mean	4.30	High Level

The study found that TLE teachers perceived printed learning resources as highly suitable, with an overall mean score of 4.30. The highest-rated aspect (4.45) was the relevance of printed materials to real-life situations, while the lowest-rated aspects (4.19) were their accuracy in representing industry contexts and the usability of teacher manuals. These findings suggest that some printed resources do not fully align with future work environments, and certain manuals are not user-friendly. Additionally, mismatches between curriculum guidelines, teaching practices, and time constraints were noted. To address these issues, teachers should possess the necessary skills, knowledge, and adaptability to modify or enhance learning materials. This aligns with Victorini and Wambiya's (2016) study, which highlighted the inadequacy of learning resources and the need for greater government support in improving educational materials and teacher training.

Table 2

Level of Suitability of Learning Resources Used by Teachers in TLE in Digital Resources

Items	Mean	Interpretation
As a TLE teacher, I observed that digital resources,		
1. Provide excitement in the entire activities in TLE to energize the technology of learning.	4.55	Very High Level
2. Motivate students to feel comfortable in the classroom and participate in the learning activities worthy of the educational goal in TLE.	4.62	Very High Level
3. Help teachers improve their way of delivering the entire coverage of the lessons and activities in TLE.	4.53	Very High Level
4. Contain videos and animations from websites like YouTube help explain topics.	4.47	High Level
5. Offer academic software applications and websites to engage students in learning activities.	4.21	High Level
6. Can be used and accessed in different technological devices.	4.26	High Level
7. Contain digital graphics to help better comprehension of concepts.	4.19	High Level
8. Contribute to the development of the teaching and learning process in TLE.	4.45	High Level
9. Provides an equitable learning experience because students can access them anywhere.	4.13	High Level
10. Enhances the pedagogical skills of TLE teachers in the use of ICT in teaching.	4.30	High Level
11. Can be easily accessed in the LRMS or DepEd portal.	4.13	High Level
12. provide the student with the opportunity for self-learning according to his personal potential and tendencies.	4.28	High Level
13. Improve references and citations in teaching TLE.	4.21	High Level
14. Increase the educational and academic process of TLE teachers through subscriptions to journals and local and international exchange of knowledge and research.	4.19	High Level
15. Easy to monitor, communicate, and provide feedback on students' performance in TLE.	4.19	High Level
Overall Mean	4.31	High Level

The study found that TLE teachers perceived digital learning resources as highly suitable, with an overall mean score of 4.31. The highest-rated aspect (4.62) was that digital resources motivate students to participate actively in class, while the lowest-rated aspects (4.13) were accessibility issues, particularly on platforms like the DepEd website. Limited internet connectivity, especially in remote areas, hindered students from accessing lessons independently, causing them to struggle in keeping up with the curriculum. These challenges emphasize the need for increased digital learning resources and improved internet infrastructure to ensure equitable learning opportunities. This aligns with Bernacki et al. (2021), who emphasized that digital learning resources enhance education by facilitating information access, improving academic outcomes, and addressing instructional challenges through efficient organization, retrieval, and dissemination of learning materials.

Table 3

Level of Suitability of Learning Resources Used by Teachers in TLE in Printed Resources When Grouped According to Age

Items	Younger		Older	
As a TLE teacher, I observed that the printed resources...	Mean	Interpretation	Mean	Interpretation
1. Show a comprehensive plan of the course content and learning activities.	4.30	High Level	4.42	High Level

2. Align content and discussion to suit learners' capability for better understanding of activities.	4.22	High Level	4.25	High Level
3. Provide an accurate industry context to suit future work environments.	4.22	High Level	4.17	High Level
4. Are suitable and consistent with topics/skills found in the DepEd Learning Competencies for the TLE subject and grade level intended for.	4.17	High Level	4.33	High Level
5. Are suited and fitted the field of specialization in TLE.	4.17	High Level	4.38	High Level
6. Are relevant to real-life situations.	4.52	Very High Level	4.38	High Level
7. Stimulate and promote critical thinking for students.	4.35	High Level	4.21	High Level
8. Contain lessons and learning activities to promote positive values that support the formative growth of the learners.	4.35	High Level	4.29	High Level
9. Contain pictures and illustrations contributing to the acquisitions of concepts, understanding, and skills in TLE.	4.39	High Level	4.29	High Level
10. Include assessment strategies and performance tasks that are relevant to the objectives of lessons in TLE.	4.48	High Level	4.38	High Level
11. Emphasize the purpose of learning in terms of employment opportunities.	4.39	High Level	4.38	High Level
12. Are suitable for the target group in addressing the expected outcomes of learning.	4.22	High Level	4.21	High Level
13. Are flexible enough to accommodate the varying abilities and backgrounds of the learners (e.g., socio-economic status, religion, etc.).	4.26	High Level	4.33	High Level
14. Include teacher's manual/guide that is user friendly.	4.26	High Level	4.13	High Level
15. Are affordable in terms of purchase price/procurement.	4.13	High Level	4.29	High Level
Overall Mean	4.30	High Level	4.30	High Level

The study found that both younger and older TLE teachers rated the suitability of printed learning resources as high, with an overall mean of 4.30. Younger teachers gave the highest rating (4.52) to the relevance of printed resources to real-life situations but noted affordability issues (4.17), often resorting to personal funds to purchase materials due to time constraints. Older teachers rated course content comprehensiveness highest (4.42) but observed that some printed resources lacked user-friendly teacher guides (4.13) or were misaligned with the curriculum, leading to instructional gaps. As a result, teachers often had to create their own teaching aids, adding to their workload. These findings align with Quejada (2018), who highlighted the scarcity of learning materials in remote schools, forcing teachers to use personal funds, which negatively impacts access to quality education and contributes to high dropout rates and limited employment opportunities.

Table 4

Level of Suitability of Learning Resources Used by Teachers in TLE in Digital Resources When Grouped According to Age

Items	Younger		Older	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that digital resources,				
1. Provide excitement in the entire activities in TLE to energize the technology of learning.	4.52	Very High Level	4.58	Very High Level
2. Motivate students to feel comfortable in the classroom and participate in the learning activities worthy of the educational goal in TLE.	4.65	Very High Level	4.58	Very High Level
3. Help teachers improve their way of delivering the entire coverage of the lessons and activities in TLE.	4.57	Very High Level	4.50	Very High Level
4. Contain videos and animations from websites like YouTube help explain topics.	4.57	Very High Level	4.38	High Level
5. Offer academic software applications and websites to engage students in learning activities.	4.30	High Level	4.13	High Level
6. Can be used and accessed in different technological devices.	4.22	High Level	4.29	High Level

7. Contain digital graphics to help better comprehension of concepts.	4.22	High Level	4.17	High Level
8. Contribute to the development of the teaching and learning process in TLE.	4.57	Very High Level	4.33	High Level
9. Provides an equitable learning experience because students can access them anywhere.	4.17	High Level	4.08	High Level
10. Enhances the pedagogical skills of TLE teachers in the use of ICT in teaching.	4.39	High Level	4.21	High Level
11. Can be easily accessed in the LRMDs or DepEd portal.	4.17	High Level	4.08	High Level
12. Provide the student with the opportunity for self-learning according to his personal potential and tendencies.	4.48	High Level	4.09	High Level
13. Improve references and citations in teaching TLE.	4.22	High Level	4.21	High Level
14. Increase the educational and academic process of TLE teachers through subscriptions to journals and local and international exchange of knowledge and research.	4.22	High Level	4.17	High Level
15. Easy to monitor, communicate, and provide feedback on students' performance in TLE.	4.18	High Level	4.21	High Level
Overall Mean	4.36	High Level	4.27	High Level

The study found that both younger and older TLE teachers rated the suitability of digital learning resources as high, with younger respondents scoring an overall mean of 4.36 and older respondents 4.27. Younger teachers gave the highest rating (4.65) to the ability of digital resources to motivate student participation, while older teachers rated both student motivation and learning excitement highest (4.58). However, both groups identified accessibility issues as a concern, with the lowest ratings (4.17 and 4.08) given to the availability of digital resources on platforms like LRMDs and DepEd portals. Limited gadget access, poor internet connectivity, and infrastructure challenges hinder students' ability to use digital tools effectively. These findings align with Ansayam (2021), who highlighted barriers such as unstable internet, device incompatibility, lack of training, and financial constraints. Addressing these challenges through better infrastructure and training could significantly improve digital learning outcomes in TLE.

Table 5

Level of Suitability of Learning Resources Used by Teachers in TLE in Printed Resources When Grouped According to Civil Status

Items	Single		Married	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that the printed resources...				
1. Show a comprehensive plan of the course content and learning activities.	4.46	High Level	4.32	High Level
2. Align content and discussion to suit learners' capability for better understanding of activities.	4.46	High Level	4.15	High Level
3. Provide an accurate industry context to suit future work environments.	4.23	High Level	4.18	High Level
4. Are suitable and consistent with topics/skills found in the DepEd Learning Competencies for the TLE subject and grade level intended for.	4.23	High Level	4.26	High Level
5. Are suited and fitted the field of specialization in TLE.	4.38	High Level	4.24	High Level
6. Are relevant to real-life situations.	4.62	Very High Level	4.38	High Level
7. Stimulate and promote critical thinking for students.	4.54	Very High Level	4.18	High Level
8. Contain lessons and learning activities to promote positive values that support the formative growth of the learners.	4.46	High Level	4.26	High Level
9. Contain pictures and illustrations contributing to the acquisitions of concepts, understanding, and skills in TLE.	4.46	High Level	4.29	High Level
10. Include assessment strategies and performance tasks that are relevant to the objectives of lessons in TLE.	4.54	Very High Level	4.38	High Level
11. Emphasize the purpose of learning in terms of employment opportunities.	4.62	Very High Level	4.29	High Level
12. Are suitable for the target group in addressing the expected outcomes of learning.	4.38	High Level	4.15	High Level

13. Are flexible enough to accommodate the varying abilities and backgrounds of the learners (e.g., socioeconomic status, religion, etc.).	4.31	High Level	4.29	High Level
14. Include teacher's manual/guide that is user friendly.	4.46	High Level	4.09	High Level
15. Are affordable in terms of purchase price/procurement	4.31	High Level	4.18	High Level
Overall Mean	4.43	High Level	4.24	High Level

The study found that unmarried TLE teachers rated the suitability of printed learning resources higher (4.43) than married teachers (4.24). Unmarried respondents gave the highest rating (4.62) to printed resources' relevance to real-life situations and employment opportunities, while married respondents rated course content planning and assessment strategies highest (4.38). However, both groups identified shortcomings, with unmarried teachers noting misalignment of learning competencies and industry context (4.23) and married teachers finding some teacher's manuals not user-friendly (4.09). These findings suggest the need for better-aligned, more practical teaching materials to prepare students for future careers. Bottiani (2019) similarly emphasized that inadequate printed resources can cause stress for both students and teachers, negatively affecting learning outcomes and instructional effectiveness.

Table 6

Level of Suitability of Learning Resources Used by Teachers in TLE in Digital Resources When Grouped According to Civil Status

Items	Single		Married	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that digital resources,				
1. Provide excitement in the entire activities in TLE to energize the technology of learning.	4.77	Very High Level	4.47	High Level
2. Motivate students to feel comfortable in the classroom and participate in the learning activities worthy of the educational goal in TLE.	4.77	Very High Level	4.56	Very High Level
3. Help teachers improve their way of delivering the entire coverage of the lessons and activities in TLE.	4.69	Very High Level	4.47	High Level
4. Contain videos and animations from websites like YouTube help explain topics.	4.62	Very High Level	4.41	High Level
5. Offer academic software applications and websites to engage students in learning activities.	4.54	Very High Level	4.09	High Level
6. Can be used and accessed in different technological devices.	4.46	High Level	4.18	High Level
7. Contain digital graphics to help better comprehension of concepts.	4.46	High Level	4.09	High Level
8. Contribute to the development of the teaching and learning process in TLE.	4.77	Very High Level	4.32	High Level
9. Provides an equitable learning experience because students can access them anywhere.	4.38	High Level	4.03	High Level
10. Enhances the pedagogical skills of TLE teachers in the use of ICT in teaching.	4.62	Very High Level	4.18	High Level
11. Can be easily accessed in the LRMS or DepEd portal.	4.08	High Level	4.15	High Level
12. Provide the student with the opportunity for self-learning according to his personal potential and tendencies.	4.62	Very High Level	4.15	High Level
13. Improve references and citations in teaching TLE.	4.31	High Level	4.18	High Level
14. Increase the educational and academic process of TLE teachers through subscriptions to journals and local and international exchange of knowledge and research.	4.46	High Level	4.09	High Level
15. Easy to monitor, communicate, and provide feedback on students' performance in TLE.	4.31	High Level	4.15	High Level
Overall Mean	4.52	Very High Level	4.23	High Level

Unmarried TLE teachers rated the suitability of digital learning resources higher (4.52) than married teachers (4.23). Unmarried respondents gave the highest rating (4.77) to digital resources' ability to energize learning, motivate students, and enhance teaching, while their lowest rating (4.08) was for accessibility through LRMS or the DepEd

portal. Married respondents rated student motivation highest (4.56) but found digital resources less equitable (4.03) due to accessibility issues. These findings suggest a need for improved digital infrastructure and broader resource accessibility, particularly in remote areas. Wahyuningsih (2021) similarly highlighted digital learning's potential to enhance interactivity, personalization, and multimedia integration in education.

Table 7

Level of Suitability of Learning Resources Used by Teachers in TLE in Printed Resources When Grouped According to Highest Educational Attainment

Items	Lower		Higher	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that the printed resources...				
1. Show a comprehensive plan of the course content and learning activities.	4.57	Very High Level	4.19	High Level
2. Align content and discussion to suit learners' capability for better understanding of activities.	4.43	High Level	4.08	High Level
3. Provide an accurate industry context to suit future work environments.	4.33	High Level	4.08	High Level
4. Are suitable and consistent with topics/skills found in the DepEd Learning Competencies for the TLE subject and grade level intended for.	4.29	High Level	4.23	High Level
5. Are suited and fitted the field of specialization in TLE.	4.33	High Level	4.23	High Level
6. Are relevant to real-life situations.	4.71	Very High Level	4.23	High Level
7. Stimulate and promote critical thinking for students.	4.38	High Level	4.19	High Level
8. Contain lessons and learning activities to promote positive values that support the formative growth of the learners.	4.43	High Level	4.23	High Level
9. Contain pictures and illustrations contributing to the acquisitions of concepts, understanding, and skills in TLE.	4.43	High Level	4.27	High Level
10. Include assessment strategies and performance tasks that are relevant to the objectives of lessons in TLE.	4.62	Very High Level	4.27	High Level
11. Emphasize the purpose of learning in terms of employment opportunities.	4.33	High Level	4.42	High Level
12. Are suitable for the target group in addressing the expected outcomes of learning.	4.38	High Level	4.08	High Level
13. Are flexible enough to accommodate the varying abilities and backgrounds of the learners (e.g., socioeconomic status, religion, etc.).	4.33	High Level	4.27	High Level
14. Include teacher's manual/guide that is user friendly.	4.29	High Level	4.12	High Level
15. Are affordable in terms of purchase price/procurement	4.29	High Level	4.15	High Level
Overall Mean	4.41	High Level	4.20	High Level

TLE teachers with lower educational attainment rated the suitability of printed resources higher (4.41) than those with higher attainment (4.20). Lower-educated respondents rated real-life relevance the highest (4.71) but noted issues with misaligned topics, confusing manuals, and affordability. Higher-educated respondents valued the emphasis on employment opportunities (4.42) but found some content misaligned with students' capabilities, work environments, and learning outcomes (4.08). These findings highlight the need for more adaptable and accessible learning materials. Ajoke (2017) emphasized that suitable printed resources enhance learning, and teachers should supplement textbooks with additional instructional materials to engage students effectively.

Table 8

Level of Suitability of Learning Resources Used by Teachers in TLE in Digital Resources When Grouped According to Highest Educational Attainment

Items	Lower		Higher	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that digital resources,				
1. Provide excitement in the entire activities in TLE to energize the technology of learning.	4.48	High Level	4.62	Very High Level

2. Motivate students to feel comfortable in the classroom and participate in the learning activities worthy of the educational goal in TLE.	4.67	Very High Level	4.58	Very High Level
3. Help teachers improve their way of delivering the entire coverage of the lessons and activities in TLE.	4.71	Very High Level	4.38	High Level
4. Contain videos and animations from websites like YouTube help explain topics.	4.48	High Level	4.46	High Level
5. Offer academic software applications and websites to engage students in learning activities.	4.19	High Level	4.23	High Level
6. Can be used and accessed in different technological devices.	4.33	High Level	4.19	High Level
7. Contain digital graphics to help better comprehension of concepts.	4.19	High Level	4.19	High Level
8. Contribute to the development of the teaching and learning process in TLE.	4.52	Very High Level	4.38	High Level
9. Provides an equitable learning experience because students can access them anywhere.	4.29	High Level	4.00	High Level
10. Enhances the pedagogical skills of TLE teachers in the use of ICT in teaching.	4.48	High Level	4.15	High Level
11. Can be easily accessed in the LRMS or DepEd portal.	4.10	High Level	4.15	High Level
12. Provide the student with the opportunity for self-learning according to his personal potential and tendencies.	4.33	High Level	4.23	High Level
13. Improve references and citations in teaching TLE.	4.19	High Level	4.23	High Level
14. Increase the educational and academic process of TLE teachers through subscriptions to journals and local and international exchange of knowledge and research.	4.33	High Level	4.08	High Level
15. Easy to monitor, communicate, and provide feedback on students' performance in TLE.	4.33	High Level	4.08	High Level
Overall Mean	4.37	High Level	4.26	High Level

TLE teachers with lower educational attainment rated digital resources slightly higher (4.37) than those with higher attainment (4.26). Lower-educated respondents valued digital resources for improving lesson delivery (4.71) but faced difficulties accessing materials in the LRMS (4.10). Higher-educated respondents found digital resources engaging (4.62) but noted inequitable access for students (4.00). These findings highlight the need for more accessible digital resources to ensure equitable learning experiences. Lagos and Nabos (2023) emphasized that digital resources enhance cognitive skills, allowing learning to extend beyond the classroom through accessible online platforms and digital tools.

Table 9

Level of Suitability of Learning Resources Used by Teachers in TLE in Printed Resources When Grouped According to Length of Service

Items	Shorter		Longer	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that the printed resources...				
1. Show a comprehensive plan of the course content and learning activities.	4.29	High Level	4.47	High Level
2. Align content and discussion to suit learners' capability for better understanding of activities.	4.25	High Level	4.21	High Level
3. Provide an accurate industry context to suit future work environments.	4.21	High Level	4.16	High Level
4. Are suitable and consistent with topics/skills found in the DepEd Learning Competencies for the TLE subject and grade level intended for.	4.21	High Level	4.32	High Level
5. Are suited and fitted the field of specialization in TLE.	4.25	High Level	4.32	High Level
6. Are relevant to real-life situations.	4.54	Very High Level	4.32	High Level
7. Stimulate and promote critical thinking for students.	4.43	High Level	4.05	High Level

8. Contain lessons and learning activities to promote positive values that support the formative growth of the learners.	4.32	High Level	4.32	High Level
9. Contain pictures and illustrations contributing to the acquisitions of concepts, understanding, and skills in TLE.	4.39	High Level	4.26	High Level
10. Include assessment strategies and performance tasks that are relevant to the objectives of lessons in TLE.	4.50	Very High Level	4.32	High Level
11. Emphasize the purpose of learning in terms of employment opportunities.	4.46	High Level	4.26	High Level
12. Are suitable for the target group in addressing the expected outcomes of learning.	4.29	High Level	4.11	High Level
13. Are flexible enough to accommodate the varying abilities and backgrounds of the learners (e.g., socioeconomic status, religion, etc.).	4.29	High Level	4.32	High Level
14. Include teacher's manual/guide that is user friendly.	4.32	High Level	4.00	High Level
15. Are affordable in terms of purchase price/procurement.	4.18	High Level	4.26	High Level
Overall Mean	4.33	High Level	4.25	High Level

TLE teachers with shorter service years rated printed resources slightly higher (4.33) than those with longer service (4.25). Less experienced teachers valued real-life relevance (4.54) but struggled with affordability (4.18), while more experienced teachers appreciated comprehensive planning (4.47) but found some teacher's manuals confusing (4.00). These challenges highlight the need for accessible, well-structured printed resources to support effective teaching. Bottiani (2019) emphasized that inadequate learning materials contribute to teacher stress and hinder both instructional quality and student learning outcomes.

Table 10

Level of Suitability of Learning Resources Used by Teachers in TLE in Digital Resources When Grouped According to Length of Service

Items	Shorter		Longer	
	Mean	Interpretation	Mean	Interpretation
As a TLE teacher, I observed that digital resources,				
1. Provide excitement in the entire activities in TLE to energize the technology of learning.	4.61	Very High Level	4.47	High Level
2. Motivate students to feel comfortable in the classroom and participate in the learning activities worthy of the educational goal in TLE.	4.64	Very High Level	4.58	Very High Level
3. Help teachers improve their way of delivering the entire coverage of the lessons and activities in TLE.	4.61	Very High Level	4.42	High Level
4. Contain videos and animations from websites like YouTube help explain topics.	4.54	Very High Level	4.37	High Level
5. Offer academic software applications and websites to engage students in learning activities.	4.21	High Level	4.21	High Level
6. Can be used and accessed in different technological devices.	4.18	High Level	4.37	High Level
7. Contain digital graphics to help better comprehension of concepts.	4.07	High Level	4.37	High Level
8. Contribute to the development of the teaching and learning process in TLE.	4.46	High Level	4.42	High Level
9. Provides an equitable learning experience because students can access them anywhere.	4.04	High Level	4.26	High Level
10. Enhances the pedagogical skills of TLE teachers in the use of ICT in teaching.	4.36	High Level	4.21	High Level
11. Can be easily accessed in the LRMDs or DepEd portal.	4.18	High Level	4.05	High Level
12. Provide the student with the opportunity for self-learning according to his personal potential and tendencies.	4.43	High Level	4.05	High Level
13. Improve references and citations in teaching TLE.	4.14	High Level	4.32	High Level
14. Increase the educational and academic process of TLE teachers through subscriptions to journals and	4.18	High Level	4.21	High Level

local and international exchange of knowledge and research.

15. Easy to monitor, communicate, and provide feedback on students' performance in TLE. 4.21 High Level 4.16 High Level

Overall Mean 4.32 High Level 4.30 High Level

TLE teachers, regardless of service length, rated digital resources highly, with shorter-tenured teachers giving a mean of 4.32 and longer-tenured ones 4.30. Both groups valued the role of digital resources in motivating student participation (4.64 and 4.58, respectively). However, teachers with shorter service found digital resources lacking in equitable accessibility (4.04), while those with longer service noted difficulties in accessing materials via LRMS or DepEd portals (4.05). These findings underscore the need for improved accessibility and self-learning opportunities. Wahyuningsih (2021) emphasized that digital resources enhance interactivity, engagement, and diverse learning experiences through multimedia integration.

Table 11

Difference in the Level of Suitability of Learning Resources Used by Teachers in TLE in Printed Resources When Grouped and Compared According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	Sig. level	Interpretation
Age	Younger	23	23.83	272.000	0.932		Not Significant
	Older	24	24.17				
Civil Status	Single	13	27.92	170.000	0.223		Not Significant
	Married	34	22.50				
Highest Educational Attainment	Lower	21	27.12	207.500	0.159	0.05	Not Significant
	Higher	26	21.48				
Length of Service	Shorter	28	24.64	248.000	0.695		Not Significant
	Longer	19	23.05				

Table 13 summarizes the comparative analysis of the level of suitability of learning resources used by teachers in TLE in the area of printed resources according to profile variables.

The computed *p*-values are 0.932, 0.223, 0.159, and 0.695, respectively, which are all greater than the 0.05 level of significance and thus interpreted as not significant. Therefore, the hypothesis stating there is no significant difference in the level of suitability of learning resources used by teachers in TLE in the area of printed resources when compared according to age, civil status, highest educational attainment, and length of service is accepted.

This would mean that the level of suitability of learning resources used by teachers in TLE in the area of printed resources when they are grouped and compared according to age, civil status, highest educational attainment, and length of service do not vary. The respondents, regardless of their profile background, perceived a common understanding of the status of printed learning resources in their schools. The findings are supported by the study conducted by Pardillo (2021), wherein there was no significant difference in the adequacy of learning resources as perceived by TLE teachers when compared according to age, highest educational attainment, and length of service.

Table 12

Difference in the Level of Suitability of Learning Resources Used by Teachers in TLE in Digital Resources When Grouped and Compared According to Variables

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	Sig. level	Interpretation
Age	Younger	23	25.57	240.000	0.443		Not Significant
	Older	24	22.50				
Civil Status	Single	13	30.46	137.000	0.045		Significant
	Married	34	21.53				
Highest Educational Attainment	Lower	21	25.95	232.000	0.379	0.05	Not Significant
	Higher	26	22.42				
Length of Service	Shorter	28	24.25	259.000	0.879		Not Significant

Table 14 reviews the comparative analysis of the level of suitability of learning resources used by teachers in TLE in the area of digital resources according to profile variables.

The computed p -values for variables age, civil status, highest educational attainment, and length of service are 0.443, 0.045, 0.379, and 0.879, respectively, which are all greater than the 0.05 level of significance and thus interpreted as not significant. Therefore, the hypothesis stating there is no significant difference in the level of suitability of learning resources used by teachers in TLE in the area of digital resources when compared according to age, highest educational attainment, and length of service is accepted.

However, for the variable civil status, the computed p -value is 0.045, which is less than 0.05 level of significance and thus interpreted as significant. Therefore, the hypothesis stating there is no significant difference in the level of suitability of learning resources used by teachers in TLE in the area of digital resources when grouped and compared according to civil status is rejected.

The finding implies the level of suitability of learning resources used by teachers in TLE in the area of digital resources when compared according to civil status varies. This is because unmarried respondents have more time to spend looking for suitable digital resources that can be used in teaching TLE than those married respondents, who prefer to spend their time with their children and families.

The result is supported by the study conducted by Isma'il (2022), revealing that some of the required learning resources are fairly available but are not regularly used by teachers. Laboratories and instructional materials relating to multimedia are lacking in most schools.

Conclusions

The study concluded that teachers' demographic factors influence the suitability of learning resources in teaching TLE. Despite challenges such as erroneous content and confusing manuals, teachers demonstrated resilience by improvising printed materials to align with real-life applications. Digital resources were generally accessible, though variations in their suitability were noted based on teachers' civil status. Overall, learning resources for TLE were perceived as relatively suitable, regardless of background. To address gaps, the study recommended increased funding for TLE materials, support from local government and stakeholders, better utilization and improvisation of resources, periodic training on resource management, curriculum and manual revisions, enhanced digital resource development, and the creation of a pool of experts to improve digital learning materials.

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