Implementation and Utilization of DepEd Computerization Program and IPCRF Rating among Public Secondary TLE Teachers

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Abstract

This research study titled "Implementation and Utilization of DepEd Computerization Program and IPCRF Rating among Public Secondary TLE Teachers, aimed to determine the Implementation and Utilization of DepEd Computerization Program and IPCRF Rating among of Public Secondary TLE Teachers". Specifically it focuses on the determination of the level of computer implementation and utilization of the program in relation to teaching-learning, instructional planning, and SMEPA/LIS/BEIS; the challenges faced by teachers in implementing the program in terms of security and safety, laboratory activity monitoring, learning environment, and computer functionality; the level of performance rating of teachers in IPCRF, focusing on teaching-learning process, pupil outcomes, professional development, and curriculum implementation and evaluation; and the relationship between teachers' utilization of the DepEd Computerization Program and their IPCRF performance.

The research employed a descriptive-correlative method, with sixty (60) secondary TLE teachers as participants of the study, selected through purposive sampling. Questionnaires were used as the research instrument. The findings indicated a high level of computer implementation and utilization of the DepEd Computerization Program in teaching-learning and instructional planning. The challenges faced by teachers varied in terms of security and safety, laboratory activity monitoring, learning environment, and computer functionality. The IPCRF performance ratings of teachers were very satisfactory in teaching-learning process, pupil outcomes, professional development, and curriculum implementation and evaluation. It appears that the factors are related to the Curriculum Implementation and Evaluation and Instructional Planning, Pupils out-comes, Instructional Planning and Curriculum Implementation and Evaluation, SMEPA/LIS/BEIS and Pupils out-comes and SMEPA/LIS/BEIS and Curriculum Implementation and Evaluation.

The weaker correlations observed between the other factors and the "computer implementation and utilization performance rating" indicate that these factors may have a less direct impact on teachers' ability to integrate technology effectively into their teaching practices.

Keywords: Computerization Program, Implementation, Utilization, Performance Rating, Teachers

1. Introduction

It has been stipulated in the Philippine Constitutions Article IVX, Section 1, that: The state shall protect the rights of all citizens to quality education at all levels and shall take appropriate steps to make such education accessible to all. Prior to the 1987 Constitution, the Batas Pambansa Bilang 232 likewise known as "Education Act of 1982".

This goal has been supported by modern trends in technology in pedagogy to deliver the K to 12 curriculum through the use of technology. Thus, the use of technology and teaching students has become a

high priority in the public schools. Presidential Decree No. 480, likewise known as Education for All (EFA) andates the government to provide every Filipino Children the rights and privilege to enroll and acquire free education and to be literate.

In the Philippine education system this technology has been an opportunity to educational planners and institution to adapt the curriculum into something new and add spice to the system of Deped. Using of e-tv classrooms and Deped Computerization Program made a remarkable change to the learners. The vision of Deped is to make the present generation a 21st century learners is paving its way to achieve the goals. More audio-visual equipment was funded to reach the public schools across the country. Electronic data and resources using videos and multimedia presentations have been present as part of the DCP program under K-12 curriculum.

The importance of Instructional Materials or Educational resources is to improve students' knowledge, abilities, and skills, to monitor their assimilation of information, and to contribute to their overall development and upbringing.

Information and communications technology (ICT) has a vital role to play in our education system. People are living in a digital world wherein the importance of ICT will continue to grow as part of 21st century education. The use of ICT really changed the way the teachers teach their lessons. Teachers should be equipped with ICT skills and be more innovative for them to be a 21st century educators that will teach 21st century learners. Therefore, the Department of Education implemented the Deped Computerization Program (DCP) last 2010 as part of the Basic Education Reform Program, the K to 12 BEP. One of the objectives of the Deped Computerization Program is to deploy computer packages to all public elementary and secondary schools nationwide to support the teaching and learning process. Thus, it is imperative for the research to conduct further studies the level of Implementation and Utilization of DepEd Computerization Program and IPCRF Rating among Public Secondary TLE Teachers

1.1. Background of the Study

Effective integration of ICT in education system will enhance the learning among students. In the digital world, Department of Education implemented ICT program to revolutionize the learning and teaching experiences to achieve the goals of the K to 12 curriculum.

It is also emphasized in Article II, Section 24 "the State recognizes the vital role of Communication and Information in nation building." With these legal bases, the DepEd is geared towards the transformation of education through the DepEd Computerization Program (DCP).

Year 2010, the District of Calauag West started to implement DepEd Computerization Program (DCP)- a program that provides ICT infrastructures among secondary schools.

Education Secretary Leonor Briones said that we have to train the learners in the use of ICT systems so that it will sharpen their analytical capacities, help them solve problems and keep up with the demands of world outside, whether it is university studies or the world of work. According to Secretary Briones, DepEd aims to distribute the equipment to all public schools and to far-flung areas as well.

The RPMS is being implemented in consonance with the Civil Service Commission's (CSC) Strategic Performance Management System (SPMS). It follows the four-phase cycle of SPMS prescribed in CSC Memorandum Circular No. 6, s. 2012 and aims to ensure that both teaching and non-teaching personnel focus work efforts toward achieving the Department's vision, mission, values, and strategic priorities. As stipulated in DepEd Order No. 2, s. 2015 (Guidelines on the Establishment and Implementation of RPMS in DepEd), RPMS is a systemic mechanism to manage, monitor and measure performance, and identify human resource and organizational development needs to enable continuous work improvement and individual growth. Furthermore, the changes introduced by various national and global frameworks such as the K to 12 law, ASEAN integration, globalization, and other changing character of the 21st century learners necessitate

the improvements and call for the rethinking of the National Competency-Based Teacher Standards (NCBTS) which resulted in the development of the PPST. This is enclosed in the DepEd Order No. 42, s. 2017, otherwise known as National Adoption and Implementation of the Philippine Professional Standards for Teachers.

Thus, the researcher opted to conduct study about the level on the Implementation and Utilization of DepEd Computerization Program and IPCRF Rating among Public Secondary TLE Teachers. Considering the current and demands of this study it is hoped that the study could generate technological literacy training program with the as an output for Calauag West District.

1.2. Theoretical Framework

Every study has to be strengthened with knowledge and facts substantiated by the result of research the foregoing theories from varied sources. These are the theories where the study is grounded: Constructivist theory, System's Theory Technology-Organization Environment, and Technological Pedagogical Content Knowledge (TPACK) theory.

The Constructivist theory, in the new paradigm of education wherein technology is getting integrated, construction of knowledge gets promoted. The learner constructs knowledge through his/her own efforts rather than being fed with fixed information from an outside agency. Intimately related to constructivist approach is the 'Humanistic approach' which places the learner at the center stage and allows learning at one's own pace and style. There is faith in the learner's potential and allows the learner to fully exercise and use the potential.

The theory of work attitudes and performance (Hackman & Oldham, 1975, 1980) states that employee job satisfaction, intrinsic work motivation, and productivity are a function of the characteristics of a job. The central characteristics are skill-variety, task identity, task significance, autonomy, and feedback. The theory also states that employee attitudes and because employees with low growth need strength are less responsive to job characteristics than employees with high growth need strength. Results obtained from studies designed to test the theory showed that the propositions related to job satisfaction and intrinsic motivation were weakly supported. Propositions relating to productivity were not supported. Furthermore, the moderating effects of growth need strength on the relationships between job characteristics and outcome measures were overstated.

The System's Theory, (Kast & Rosenweig, 1970). This theory believes that the unit like a school receives input from the environment which processes the input then produces a finished product called output. This theory is related to the present study because just like the Department of Education, personnel and officials exist through a system in which everyone interacts and adjusts to the needs of the policies implemented.

Technological Pedagogical Content Knowledge (TPACK) theory, Mishra and Koehler (2006) posit that a teacher depends on three domains of knowledge for effective integration of ICT into teaching and learning (IITL). The domains are content knowledge (CK), pedagogical knowledge (PK) and technological knowledge (TK). Mishra and Kohler (2006) defined CK as knowledge about the actual subject matter that is to be learned or taught.

Mishra and Koehler observed that a teacher must know and understand the subject that he/ she teaches, including knowledge of central facts, concepts, theories, and procedures if the teacher is to integrate technology in teaching. Mishra and Koehler (2006) defined PK as the deep knowledge about the processes or methods of teaching and learning (e.g. values and aims, classroom management, lesson planning, and student evaluation). They argued that a teacher with deep PK is likely to integrate technology in his or her teaching considering how students can best learn in a given classroom context and nature of learners. Mishra and Kohler defined TK as knowledge about standard technologies, such as books, chalkboard, and more advanced technologies such as the Internet and digital video and how to operate those technologies.

1.3. Statement of the Problem

The study aimed to determine the level of Implementation and Utilization of DepEd Computerization Program and IPCRF Rating among of Public Secondary TLE Teachers

Specifically, it sought answers the following questions:

1. What is the level of computer implementation and utilization of DepEd Computerization Program of teachers along the following areas:

1.1 Teaching- Learning;

1.2 Instructional Planning; and

1.3 SMEPA/LIS/BEIS?

2. What are the challenges faced by the teachers in the implementation of DepEd Computerization Program in terms of the following:

2.1 Security and Safety;

2.2 Laboratory Activity Monitoring;

2.3 Learning Environment; and

2.4 Computer Functionality?

3. What is the level of performance rating of teachers in IPCRF along the following areas:

3.1 Teaching-Learning process;

3.2 Pupils out-comes;

3.3 Professional Development; and

3.4 Curriculum Implementation and Evaluation?

4. Is the respondents' level of implementation and utilization of DCP significantly related to the level of IPCRF performance of teachers?

1.4. Results and Discussion

Table 1. Level of Computer Implementation and Utilization of DepEd Computerization Program in terms of Teaching-Learning

Indicators As a teacher I…	Mean	SD	Remarks
1. uses DCP equipment in motivating the pupils	3.57	0.98	Highly Implemented
2. Utilizes in presenting the lesson.	3.78	1.03	Highly Implemented
3. Uses DCP equipment as spring board of the lesson.	3.62	1.06	Highly Implemented
4. Allows the pupils to manipulate the computer and have independent moment to utilize it.	3.42	1.03	Moderately Implemented
5. Teachers integrates ICT lesson to other learning areas with aid of computer equipment.	3.85	1.02	Highly Implemented

The Table 2 reveals that in terms of Teaching-Learning, Technology and Livelihood Education teachers' level of computer implementation and utilization of DCP was highly implemented as evidenced by the overall (M= 3.65, SD=0.91).

Presented in the table that the respondents highly implemented   the integration of ICT lesson to other learning areas with aid of computer equipment obtaining the highest (M=3.85, SD=1.02). However, the

respondents moderately implemented the the pupils' manipulation of the computer and have independent moment to utilize it bearing the lowest (M= 3.42, SD=1.03). Based on the observed data, the statement suggests that the use of computer equipment to integrate ICT (Information and Communication Technology) lessons into other learning areas can yield positive outcomes in teaching – learning process of the TLE teachers. It can result in more engaging lessons, improved student learning outcomes, and better preparation for future job demands. Additionally, it can play a significant role in bridging the digital divide by equipping students with essential digital skills. The locally observed results indicate that incorporating ICT into various subjects enhances the educational experience and equips students with the necessary skills for the digital age.

This result was supported by the findings of Sharma and Pratibha (2013) conducted a study to explore how interactive multimedia can improve student achievement and retention. The study aimed to establish the effectiveness of multimedia in promoting better learning outcomes for students.

Ifeoma and Olibie (2013) conducted a study to investigate the impact of computer-assisted language learning on student achievement in English language. The study focused on the global basic education context and aimed to determine the effectiveness of technology in improving student learning outcomes.

Dar Saleh (2012) conducted a study to identify the effect of computerized lessons on Arabic language learning for first-grade students in Nablus city. The study used a quasi-experimental research method and a sample of 313 students to determine the impact of computerized lessons on student achievement. Kim and Gilman (2014) conducted a study to explore the effectiveness of using multimedia components such as visual and spoken text in a self-learning program to improve English vocabulary skills of 172 middle school students in Seoul, South Korea. The study aimed to determine whether multimedia components can enhance student learning outcomes in a self-learning context.

Table 2. Level of Computer Implementation and Utilization of DepEd Computerization Program in terms of Instructional Planning

Indicators As a teacher I…	Mean	SD	Remarks
1. Integrates ICT in lesson planning	3.88	1.04	Highly Implemented
2. Uses the ICT room for crafting lesson plan and other instructional materials	3.38	1.06	Moderately Implemented
3. Utilizes ICT equipment in remedial activities in learning areas.	3.48	1.05	Moderately Implemented
4. Uses ICT equipment to aid pupils' assessment and classroom performance	3.55	1.02	Highly Implemented
5. Gives instructional time for the computer activity and computer laboratory.	3.40	1.12	Moderately Implemented

Table 2 reveals that in terms of instructional planning, Technology and Livelihood Education teachers' level of computer implementation and utilization of DCP was moderately implemented as evidenced by the overall (M= 3.54, SD=0.94). This means that the respondents viewed instructional planning as a need to enhance their competency in technology use. The implication of this is that improving TLE teachers' use of DCP is crucial for enhancing students' learning outcomes and digital literacy skills.

The table presented that the respondents highly implemented to all the statements pertaining to the instructional planning. The statement pertaining to "integrates ICT in lesson planning" obtained the highest (M=3.88, SD=1.04.33). Also, the result shows that the respondents highly implemented the uses ICT equipment to aid pupils' assessment and classroom performance obtaining the second highest (M= 3.55, SD=1.05). Based on the observed result, the use of ICT equipment to aid learners' assessment and classroom performance has shown promising results. The observed data suggests that integrating ICT tools in assessment practices and classroom activities can lead to improved learning outcomes, increased student engagement, and enhanced digital literacy skills among the students in Calauag West District. Students benefit from interactive and multimedia-rich learning experiences, allowing for better comprehension and retention of knowledge.

Furthermore, ICT-based assessment methods provide timely feedback and personalized learning opportunities, facilitating students' academic growth. These observed results highlight the potential of ICT integration in promoting effective teaching and learning practices of the TLE teachers. Herron (2012) conducted a study that examined the impact of pre-service teachers implementing computer utilization in science lessons, which resulted in a positive effect on student learning. Similarly, Solomo's (2013) study revealed the power of ICT as a tool in improving students' academic performance, indicating the need for subject teachers and educators to utilize these technologies to empower both students and themselves. To ensure the total integration of ICT in their lessons, educators should maintain a positive attitude towards these technologies and continuously acquire ICT skills. It is essential for subject teachers and educators to embrace these technologies and continuously develop their ICT skills, ultimately leading to better career opportunities and economic growth for individuals and society as a whole.

Additionally, Ritcher (2017) mentioned that through aids such as projectors and presentation software, teachers can now make learning a multi-sensory experience through the use of photographs, diagrams, videos, and sound files. This not only diversifies the learning experience for learners, especially those with short attention spans, but it also keeps them on their toes.

Table 3. Level of Computer Implementation and Utilization of DepEd Computerization Program in terms of SMEPA/LIS/BEIS

Indicators As a teacher I…	Mean	SD	Remarks
1. Utilizes the ICT equipment in presenting the SMEPA Report	3.92	1.04	Highly Implemented
2. Uses the ICT equipment in preparing the report in SMEPA	4.02	1.06	Highly Implemented
3. Uses the ICT equipment to facilitate the enrolment and other necessary task for LIS.	4.02	1.05	Highly Implemented
4. Gives priority to the utilization and implementation in SIP/AIP with budget allocation.	3.82	1.02	Highly Implemented
5. Uses the ICT equipment to facilitate the validation and finalization of BEIS of the school	4.00	1.12	Highly Implemented

Table 3 reveals that in terms of SMEPA, LIS, or BEIS Technology and Livelihood Education teachers' level of computer implementation and utilization of DCP was highly implemented as evidenced by the overall (M= 3.95, SD=1.09). This means that the respondents viewed that using the DCP and computer available in the school have been very useful to perform their tasks as teachers and advisers of the students.

This manifests that if the ICT equipment are available in the school operation concerning SMEPA, LIS, or BEIS can be done easily.

The table presented that the respondents highly implemented to all the statements pertaining to the SMEPA/LIS/BEIS. The statement pertaining to "uses the ICT equipment in preparing the report in SMEPA and uses he ICT equipment to facilitate the enrolment and other necessary task for LIS" obtained the highest (M=4. 02, SD=1.05 and SD=1.17).

Based on the locally observed data from TLE (Technology and Livelihood Education) teachers in Calauag West District, it has been observed that utilizing Digital Content Packages (DCP) and computers in performing their tasks as teachers and advisers has yielded positive outcomes. The availability of ICT equipment in schools has greatly facilitated the implementation of various operations such as SMEPA (School Monitoring, Evaluation, and Planning Application), LIS (Learners Information System), or BEIS (Basic Education Information System). These observations highlight the significance of providing schools with sufficient ICT resources to enhance the quality of education and improve overall school operations. The integration of ICT tools not only supports teaching and learning activities but also streamlines administrative processes, leading to increased efficiency and effectiveness in education management. Tinio (2017) highlights that in 2011, the Department of Education introduced the Learners' Information System (LIS) - an online platform that enables the registration of learners enrolled in public schools. The LIS has revolutionized the Department's ability to generate accurate public-school enrolment data based on actual registrations.

The LIS is an innovative tool that promotes transparency, informed decision-making, and empowerment at different levels of the organization. Despite being a technology-based solution, the LIS is a community-driven process that leverages the active engagement and participation of teachers, principals, planning officers, and other DepEd personnel throughout the Philippines.

Table 4. . Summary Table of Computer Implementation and Utilization of DepEd Computerization Program

Variables	Mean	SD	VI
1. Teaching Learning	3.65	0.91	Highly Implemented
2. Instructional Planning	3.54	0.94	Highly Implemented
3. SMEPA/LIS/BEIS	3.95	1.09	Highly Implemented
Overall	3.71	0.98	Highly Implemented

Table 4 gives the summary of the computer implementation and utilization of the DepEd (Department of Education) Computerization Program. The overall rating was 3.71 with 0.98 as SD and interpretation of Highly Implemented.

Teaching Learning indicates that the program is highly implemented, suggesting that computers are effectively utilized as tools for instruction and learning within the educational context. The rating for instructional planning is 3.54, with a standard deviation of 0.94, indicating that the implementation of computer technology in this area is highly implemented. Based on the observed data from TLE teachers in Calauag West District, it is evident that computer-based tools and resources have been successfully integrated

into the process of designing and organizing instructional materials and strategies. The rating for SMEPA/LIS/BEIS stands at 3.95, with a standard deviation of 1.09, indicating a high level of implementation. This implies that the teaching and learning process, instructional planning, and potentially a specific program or initiative have all been effectively implemented, showcasing the TLE teachers' adept utilization of computer resources to enhance the educational experience and improve learning outcomes. The integration of ICT tools in TLE classrooms has been locally observed to result in engaging and interactive learning experiences, enabling students to develop crucial digital literacy skills and fostering their overall growth and success.

Table 5. Challenges Faced by the Teachers in the Implementation of DepEd Computerization Program in terms of Security and Safety

Indicators	Mean	SD	Remarks
I, as a teacher experienced the following:			
1. The Computer laboratory has open electrical routing of wires that are exposed to the teachers and students.	2.65	1.33	Moderate Extent
2. The electrical outlet are damaged and no protective parts.	2.28	1.28	Lesser Extent
3. There are some chemical that are not secured and not properly stored like: ink, computer cleaner, screen cleaner.	2.10	1.22	Lesser Extent
4. The computer unit are exposed to sunlight and damaged caused by the open window.	2.12	1.25	Lesser Extent
5. The room is not properly ventilated. There is no enough space for the students to sit.	2.35	1.27	Lesser Extent
6. The computer room is dirty and not properly maintained.	2.10	1.24	Lesser Extent
7. The computer room is prone to flood and vulnerable to some natural calamities.	2.08	1.28	Lesser Extent
8. The computer parts and equipment are not properly kept in a storage *where water can't reach* when it overflows.	2.08	1.32	Lesser Extent
9. The wires are tangled and found on the floor.	2.10	1.24	Lesser Extent
10. Table and chairs are not suitable for the size of the learners	2.13	1.29	Lesser Extent
Overall	**2.20**	**1.10**	**Lesser Extent**

Table 5 reveals that in terms of security and safety, the extent of the challenges faced by TLE teachers was lesser as evidenced by the overall (M=2.20, SD = 1.10). The table presented that the respondents faced challenges on moderate extent regarding the statement "the Computer laboratory has open electrical routing of wires that are exposed to the teachers and students" obtaining the highest (M=2.65, SD=1.33). However, the respondents faced challenges on lesser extent regarding the statement "The computer

room is dirty and not properly maintained" and "The wires are tangled and found on the floor" bearing the lowest (M= 2.08, SD=1.24 and 1.32). TLE teachers in Calauag West District consider addressing the issue of open electrical routing of wires as a top priority for improving the safety and working conditions in the computer laboratory. They recognize the potential hazards and risks it poses to both students and the functionality of the laboratory. Taking appropriate measures to rectify this issue is crucial in creating a safe and conducive learning environment for students.

This was further claimed by Görling (2014), people who have virus scanners may actually pose a greater threat to their own security. This is because they may feel a false sense of security and believe that they can click on anything that appears on their screen without consequences. Srikwan and Jakobsson (2013) further argue that the average consumer has only a basic understanding of online threats, and may be more susceptible to phishing attacks because they want to trust what they see.

Table 6. Challenges Faced by the Teachers in the Implementation of DepEd
Computerization Program in terms of Laboratory Activity Monitoring

Indicators I, as a teacher, experienced the following:	Mean	SD	Remarks
1. Conflicts on class schedules	2.28	1.09	Lesser Extent
2. Deadlines for activities were not met	2.27	1.06	Lesser Extent
3. DCPs are insufficient to accommodate all learners	2.70	1.15	Moderate Extent
4. Guidelines are not posted in visible area	2.37	1.12	Lesser Extent
5. Class schedules for ICT activity are consulted to the level adviser	2.87	1.14	Moderate Extent
Overall	**2.50**	**0.93**	**Low**

The above table 6 reveals that in terms of laboratory activity monitoring, the extent of the challenges faced by TLE teachers was moderate as evidenced by the overall (M=2.50, SD= 0.93).

The table presented that the respondents faced challenges on moderate extent regarding the statement "Class schedules for ICT activity are consulted to the level adviser" obtaining the highest (M=2.87, SD=1.14). However, the respondents faced challenges on lesser extent regarding the statement Deadlines for activities were not met bearing the lowest (M= 2.27, SD=1.06). TLE teachers in Calauag West District, the results suggest that the respondents faced moderate challenges in consulting their class schedules for ICT activities with their level adviser. This implies that there may be some room for improvement in terms of communication and coordination between TLE teachers and their level advisers regarding scheduling ICT activities for their classes. However, the data also indicates that the respondents did not face significant challenges in meeting deadlines for activities. This suggests that TLE teachers in the district have been able to effectively manage and fulfill their responsibilities within the given timeframes. These insights highlight the need for enhanced collaboration and communication between TLE teachers and level advisers to ensure efficient scheduling of ICT activities and maximize instructional opportunities for students.

This was supported by San Diego (2012) that students highly valued education and believed that the use of computers could enhance their learning and academic achievements. They also expressed a desire to have more control and responsibility over their own learning. However, many students faced challenges in

accessing computers, internet, software, and managing their time effectively. The study also found that students were aware of the importance of ICT in their future employment.

Table 7. Challenges Faced by the Teachers in the Implementation of DepEd Computerization Program in terms of Learning Environment

Indicators I, as a teacher experienced the following:	Mean	SD	Remarks
1. The students cannot concentrate on the lessons due to insufficient light and ventilation	2.40	1.17	Lesser Extent
2. Noises and other forms of destruction that affects students learning	2.40	1.12	Lesser Extent
3. The computer laboratory cannot accommodate the number of students	2.63	1.21	Moderate Extent
4. Students having a hard time to stand all throughout the class hour due to insufficient number of chairs for the class	2.47	1.26	Lesser Extent
5. Provision of one is to one student-computer ratio is still conditional.	2.75	1.22	Moderate Extent
Overall	**2.53**	**1.07**	**Moderate Extent**

Table 7 shows the Table 7 reveals that in terms of learning environment, the extent of the challenges faced by TLE teachers was moderate as evidenced by the overall (M=2.53, SD=1.07). The table presented that the respondents faced challenges on moderate extent regarding the statement "Provision of one is to one student-computer ratio is still conditional" obtaining the highest (M=2.75, SD=1.22). However, the respondents faced challenges on lesser extent regarding the statement "The students cannot concentrate on the lessons due to insufficient light and ventilation and Noises and other forms of destruction that affects students learning" bearing the lowest (M= 2.40, SD=1.17 and 1.12). TLE teachers in Calauag West District observed that while there were some challenges related to light, ventilation, and noise in the learning environment, these factors were not considered significant barriers to learning by most respondents.

The studies by Schrum (2015), Mäkitalo-Siegl (2010), and Nadayag (2011) all discuss the importance of designing learning environments that integrate technology in a way that is both functional and effective. They emphasize the need for flexibility and adaptability in classroom spaces to accommodate different learning styles and teaching methods.

Schrum (2015) specifically mentions the use of interactive whiteboards as a tool for engaging students and encouraging collaboration. Mäkitalo-Siegl (2010) stresses the importance of designing spaces that integrate technology seamlessly and are not limited by traditional classroom settings. Nadayag (2011) adds that the focus should be on creating balanced learning environments that integrate technology while still maintaining human interaction and development.

Table 8. Challenges Faced by the Teachers in the Implementation of DepEd Computerization Program in terms of Computer Functionality

Indicators I, as a teacher experienced the following:	Mean	SD	Remarks
1. Computers are not functioning well	2.55	1.23	Moderate Extent
2. Difficulty in operating computer	2.42	1.17	Lesser Extent
3. Printers are not functioning well.	2.35	1.23	Lesser Extent
4. Computers in work stations are not properly connected.	2.20	1.25	Lesser Extent
5. Network cables and electric wires are not properly tied and destructive	2.20	1.25	Lesser Extent
Overall	**2.34**	**1.13**	**Lesser Extent**

Table 8 reveals that in terms of computer functionality, the extent of the challenges faced by TLE teachers was lesser extent as evidenced by the overall (M=2.34, SD=1.13). This means that the respondents viewed that the challenges in computer functionality are controllable and adaptable. This implies that teacher are knowledgeable in troubleshooting and problems can be easily overcome.

The table presented that the respondents faced challenges on moderate extent regarding the statement "Computers are not functioning well" obtaining the highest (M=2.55, SD=1.23). However, the respondents faced challenges on lesser extent regarding the statement "Computers in work stations are not properly connected and Network cables and electric wires are not properly tied and destructive" bearing the lowest (M= 2.20, SD=1.25). This means that either the computers and network cables/electric wires are indeed properly connected and tied, or that the respondents did not encounter significant issues related to this statement. Alternatively, it's possible that respondents may not have given this statement as much importance as the other statements or may have had different experiences or perceptions of the issue.

The response of TLE teachers in Calauag West District indicates that there may be concerns regarding the connectivity and organization of computer systems, cables, and wires in the workplace. This suggests potential problems such as connectivity issues, equipment damage, safety hazards, and reduced productivity. Addressing these issues is crucial to ensure a well-functioning and safe working environment for the TLE teachers in the district.

According to Azlan's study in 2018, starting teachers' ability to integrate computers into their teaching practices was significantly influenced by two variables: perceived competence in computer integration and pedagogical knowledge. Therefore, it is crucial for teachers to possess integrated ICT skills to facilitate effective teaching and learning using technology.

Table 9. Summary Table of Challenges Faced by the Teachers in the Implementation of DepEd Computerization Program

Variables	Mean	SD	VI
1. Security and safety	2.20	1.10	Lesser Extent
2. Laboratory Activity Monitoring	2.50	0.93	Low extent
3. Learning Environment	2.53	1.07	Moderate Extent
4 Computer functionality	2.34	1.13	Lesser Extent
Overall	2.39	1.06	Lesser Extent

Table 9 shows the summary table of Challenges Faced by the Teachers in the Implementation of DepEd Computerization Program that got the overall mean of 2.39 and SD of 1.06interpreted as Lesser extent. Security and Safety - This challenge is rated 2.20, with a standard deviation of 1.10, indicating a lesser extent of impact. It suggests that teachers face some difficulties in ensuring the security and safety of the computerized systems and resources. This may include concerns regarding data privacy, cybersecurity, and the physical safety of the equipment. The rating for Laboratory Activity Monitoring challenge is 2.50, with a standard deviation of 0.93, indicating a low extent of impact. It suggests that teachers face some challenges in monitoring and supervising laboratory activities involving computer technology. This may include issues such as managing student behavior, ensuring proper usage of equipment, and addressing technical glitches during lab sessions. The rating for Learning Environment thi challenge is 2.53, with a standard deviation of 1.07, indicating a moderate extent of impact.

It suggests that teachers face moderate difficulties in creating an optimal learning environment within the context of the computerized program. This may include factors such as limited access to computers for all students, lack of necessary software or resources, or adapting teaching methods to effectively incorporate computer technology. This challenge Computer Functionality is rated 2.34, with a standard deviation of 1.13, indicating a lesser extent of impact. It suggests that teachers face some difficulties related to the functionality of computers used in the program. This may include issues such as hardware malfunctions, software compatibility problems, or inadequate technical support, which can hinder the smooth implementation of the program.

Overall, the interpretations The TLE teachers in Calauag West District face challenges in the security and safety of computerized systems, monitoring laboratory activities, creating an optimal learning environment, and ensuring the functionality of computers in the DepEd Computerization Program. Additional support, resources, and training are needed to overcome these challenges and enhance the implementation of the program. These challenges vary in their extent of impact, ranging from lesser to moderate, highlighting the areas where additional support, resources, and training may be needed to overcome the obstacles teachers face in utilizing computer technology effectively.

Table 10. Level of Teachers performance in IPCRF along Teaching–Learning Process

Range	Frequency	Percent	Adjectival Rating
4.50-5.00	12	20	Outstanding
3.50-4.49	46	77	Very Satisfactory
2.50-3.49	2		Satisfactory
1.50-2.49	--	--	Unsatisfactory
1.49 & below	--	--	Poor
Total	60	100	

The result shows the level of performance rating of teachers in IPCRF based on the Teaching-Learning process. Out of the total 60 teachers evaluated, 12 or 20% received an "Outstanding" rating, which is the highest rating possible with a range of 4.50-5.00. 46 teachers or 77% were rated as "Very Satisfactory," with a range of 3.50-4.49. Only 2 teachers or 3% received a "Satisfactory" rating, falling under the range of 2.50-3.49. No teacher was rated as "Unsatisfactory" or "Poor" in this particular area.

The observed data from TLE teachers in Calauag West District implies that the majority of teachers evaluated have demonstrated strong performance in the Teaching-Learning process, with a high percentage of them receiving ratings of "Very Satisfactory" or "Outstanding." However, it is important to note that a small percentage of teachers received a "Satisfactory" rating. These findings underscore the significance of continuous professional development initiatives to further enhance the quality of teaching and learning within the school.

According to a study by Pajarillo (2019), performance ratings are essential in assessing the effectiveness of teachers in the classroom. It helps identify areas for improvement and provides a basis for professional development.

In a research article by Villones (2020), it was found that continuous professional development plays a crucial role in enhancing the quality of teaching and learning. It helps teachers improve their knowledge and skills, which in turn leads to better performance ratings.

Table 11. Level of performance Rating of Teachers in IPCRF along Pupils Out-come.

Range	Frequency	Percent	Adjectival Rating
4.50-5.00	10	17	Outstanding
3.50-4.49	48	80	Very Satisfactory
2.50-3.49	2	3	Satisfactory
1.50-2.49	--	--	Unsatisfactory
1.49 & below	--	--	Poor
Total	60	100	

The data above shows the assessment of pupils' outcomes with corresponding frequency, percent, and adjectival rating. Out of the 60 pupils evaluated, 10 or 17% received an "Outstanding" rating, falling under the range of 4.50-5.00. 48 pupils or 80% were rated as "Very Satisfactory," with a range of 3.50-4.49. Only 2 pupils or 3% received a "Satisfactory" rating, falling under the range of 2.50-3.49. No pupil was rated as "Unsatisfactory" or "Poor" in this particular area.

The observed data from TLE teachers in Calauag West District suggests that the majority of pupils evaluated have achieved commendable performance, with a significant percentage receiving a "Very Satisfactory" or "Outstanding" rating. However, it is noteworthy that a small portion of pupils obtained a "Satisfactory" rating, indicating the potential need for additional support or interventions to enhance their performance. These findings highlight the importance of targeted strategies and instructional approaches to address the specific learning needs of these students and further promote their academic success.It is essential to note that pupil outcomes are a crucial indicator of the effectiveness of teaching and learning. As highlighted by Hattie (2009), focusing on pupil outcomes allows educators to identify effective teaching practices and improve student achievement. Therefore, continuous monitoring and assessment of pupil outcomes are necessary to ensure that all students receive quality education and reach their full potential.

Table 12. Level of performance Rating of Teachers in IPCRF along Professional Development

Range	Frequency	Percent	Adjectival Rating
4.50-5.00	10	17	Outstanding
3.50-4.49	48	80	Very Satisfactory
2.50-3.49	2	3	Satisfactory
1.50-2.49	--	--	Unsatisfactory
1.49 & below	--	--	Poor
Total	60	100	

Table 12 shows that majority of teachers (97%) in the study received a rating of either outstanding or very satisfactory in the area of professional development. This suggests that the teachers were able to engage in meaningful and effective professional development opportunities that enhanced their knowledge and skills. It implies that it is important for teachers to continuously engage in professional development opportunities as it allows them to stay up-to-date with the latest teaching strategies and technologies, as well as to continuously improve their teaching practices. This can lead to improved student learning outcomes, as effective teaching practices have been shown to positively impact student achievement. However, it is worth noting that the small number of teachers (3%) who received a satisfactory rating in the area of professional development may require additional support to engage in more meaningful and effective professional development opportunities. Providing ongoing support and opportunities for professional growth can help ensure that all teachers are able to continuously improve their skills and knowledge, and ultimately enhance student learning outcomes.

Curriculum implementation and evaluation is crucial in ensuring that students receive quality education. As stated by Black and Wiliam (2021), teachers' effectiveness in implementing and evaluating the curriculum is essential in improving student outcomes. Therefore, continuous monitoring and assessment of teachers' performance in this area are necessary to ensure that all students receive quality education and reach their full potential.

Table 13. Level of performance Rating of Teachers in IPCRF along Curriculum Implementation and Evaluation

Range	Frequency	Percent	Adjectival Rating
4.50-5.00	8	13	Outstanding
3.50-4.49	50	83	Very Satisfactory
2.50-3.49	2	3	Satisfactory
1.50-2.49	--	--	Unsatisfactory
1.49 & below	--	--	Poor
Total	60	100	

Table 13 presents that the majority of the respondents (83%) rated the curriculum implementation as "very satisfactory" with a score ranging from 3.50-4.49. Eight respondents (13%) rated it as "outstanding" with a score ranging from 4.50-5.00. Only two respondents (3%) rated it as "satisfactory" with a score ranging from 2.50-3.49. There were no respondents who rated it as "unsatisfactory" or "poor."
It implies that the curriculum implementation has been received positively by the respondents, with the majority rating it as "very satisfactory" or "outstanding." It is important to note that this evaluation is based on the perceptions of the respondents and may not necessarily reflect the actual effectiveness of the curriculum. It would be beneficial to gather additional data and conduct further evaluations to determine the actual impact

of the curriculum on student learning outcomes.

Table 14. Summary of Level of performance Rating of Teachers in IPCRF

Performance Rating of Teachers in IPCRF	Mean	Std. Deviation	Adjectival Rating
Teaching-Learning process	4.09	0.42	Very Satisfactory
Pupils out-comes	4.00	0.49	Very Satisfactory
Professional Development	4.04	0.43	Very Satisfactory
Curriculum Implementation and Evaluation	4.01	0.38	Very Satisfactory
Overall	4.04	0.38	Very Satisfactory

The table shows the mean, standard deviation, and adjectival rating of teachers' performance in the IPCRF across four areas and overall. The teaching-learning process received the highest mean score of 4.09 and a standard deviation of 0.42, which falls under the "Very Satisfactory" rating. Pupils' outcomes received a mean score of 4.00 and a slightly higher standard deviation of 0.49, also falling under the "Very Satisfactory" rating. Professional development and curriculum implementation and evaluation received similar mean scores of 4.04 and 4.01, respectively, both falling under the "Very Satisfactory" rating. The overall mean score across all areas is 4.04, with a standard deviation of 0.38, also falling under the "Very Satisfactory" rating.

   The evaluation of teachers in Calauag West indicates that they have generally performed well across all areas assessed. However, there is still room for improvement, as evidenced by the standard deviations, which suggest some variability in performance. To ensure that all students receive a quality education and reach their full potential, it is crucial to maintain ongoing monitoring and assessment of teacher performance. This will help identify areas that require additional support, training, or professional development opportunities to further enhance teaching effectiveness and improve overall educational outcomes.

   According to a study by Smith et al. (2018), effective teacher performance evaluations should be based on multiple measures of teaching effectiveness.

Table 15. Relationship Between the Level of Teachers Performance in IPCRF and Level of Utilization of DCP

Computer implementation and utilization	Performance Rating of Teachers in IPCRF			
	Teaching-Learning process	Pupils out-comes	Professional Development	Curriculum Implementation and Evaluation
Teaching-Learning	.149	.134	.107	.272*
Instructional Planning	.326*	.287*	.217	.405**
SMEPA/LIS/B EIS	.212	.260*	.026	.280*

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 15 shows the Teaching-Learning process, Pupils out-comes, Professional Development, and Curriculum Implementation and Evaluation. Under each factor, there are several sub-factors that are being measured. The "computer implementation and utilization performance rating" appears to be a metric for evaluating how well teachers are incorporating technology into their teaching practices. It is likely that this rating is part of a larger evaluation process that is used to assess the overall performance of teachers. Looking at the correlations in the table, it appears that the factors that are most strongly related to the "computer implementation and utilization performance rating" are   Curriculum Implementation and Evaluation (correlation of .272*) and Instructional Planning (correlation of .326*), Pupils out-comes (correlation of .287*), Instructional Planning and Curriculum Implementation and Evaluation (correlation of . 405*) , SMEPA/LIS/BEIS and Pupils out-comes (correlation of .260*) and SMEPA/LIS/BEIS and Curriculum Implementation and Evaluation (correlation of .280*).   This suggests that teachers who are more effective at planning and implementing the curriculum and instruction are also more likely to effectively use technology in their teaching practices. More so, the provided statements highlight several significant relationships in the education context. The interpretation of these relationships reveals the importance of various factors such as teachers' performance in IPCRF, utilization of computerization programs, curriculum implementation and evaluation, instructional planning, pupils' outcomes, and school monitoring combined with the Learners Information System (LIS) and Basic School Information System (BSIS). Effective utilization of technology tools and the integration of information systems can enhance teaching practices, curriculum implementation, evaluation, and overall student outcomes. Additionally, monitoring practices and the use of data-driven systems play a crucial role in evaluating curriculum effectiveness and improving educational processes. These interconnected relationships underscore the significance of continuous improvement and strategic decision-making in education to enhance student achievement and create a more effective learning environment.

The correlations between the other factors and the "computer implementation and utilization performance rating" in the IPCRF are significant, although they exhibit weaker associations compared to the Curriculum Implementation and Instructional Planning factors. These weaker relationships imply that these factors may still have some influence on the performance rating, albeit to a lesser extent. The table provides valuable insights into the key factors that are most strongly associated with the computer implementation and utilization performance of teachers, which is essential for identifying areas of improvement in integrating technology effectively into teaching practices. While the correlations for the other factors are less pronounced, their significance at the 0.01 or 0.05 level suggests that they should not be disregarded as they may still play a role in shaping the performance rating.

The observed data from TLE teachers and learners in Calauag West suggests that while factors such as Curriculum Implementation and Instructional Planning have stronger correlations with the "computer implementation and utilization performance rating," other factors show weaker but still significant correlations. This implies that these other factors may have a less direct impact on teachers' ability to effectively integrate technology into their teaching practices. However, it is important to recognize that these weaker correlations still indicate a meaningful relationship with the performance rating. Therefore, to successfully promote technology integration in teaching practices, it is essential to address both the strongly related factors and the factors with weaker correlations. By considering a comprehensive range of factors, educators and policymakers can develop strategies that enhance teachers' proficiency in utilizing technology in the classroom, ultimately improving educational outcomes in Calauag West.

1.5. Summary of Findings

The findings of the study are summarized under the following orders of the specific problems.
1. Teaching-Learning.

Teaching-Learning of Technology and Livelihood Education teachers' level of computer implementation and utilization of DCP was highly implemented. This means that the high utilization of

computer equipment in the teaching-learning process by teachers can lead to more engaging and interactive lessons, improved student learning outcomes, and better preparation for the demands of the modern workforce. It can also help to bridge the digital divide and ensure that students have the necessary digital skills to succeed in the 21st century.

2.   Instructional Planning.

In terms of instructional planning, Technology and Livelihood Education teachers' level of computer implementation and utilization of DCP was moderately implemented. This means that the respondents viewed instructional planning as a need to enhance their competency in technology use. The implication of this is that improving TLE teachers' use of DCP is crucial for enhancing students' learning outcomes and digital literacy skills.

3.   SMEPA/LIS/BEIS

In terms of SMEPA, LIS, or BEIS Technology and Livelihood Education teachers' level of computer implementation and utilization of DCP was highly implemented as evidenced by the overall (M= 3.95, SD=1.09). This means that the respondents viewed that using the DCP and computer available in the school have been very useful to perform their tasks as teachers and advisers of the students. This manifests that if the ICT equipment are available in the school operation concerning SMEPA, LIS, or BEIS can be done easily.

The challenges faced by the teachers in the implementation of DepEd Computerization Program.

4.   Security and Safety

The extent of the challenges faced by teachers in the implementation of DepEd Computerization is lesser. In terms of Laboratory Activity Monitoring, the extent of the challenges faced by teachers in the implementation of DepEd Computerization is low.

5.   Learning Environment

The extent of the challenges faced by teachers in the implementation of DepEd Computerization is moderate. In terms of Computer Functionality, the extent of the challenges faced by teachers in the implementation of DepEd Computerization is less.

The level of performance rating of teachers in IPCRF was described along the following:

6.   Teaching-Learning process

The level of performance of teachers in IPCRF is very satisfactory. In terms of Pupil out-comes, the level of performance of teachers in IPCRF is very satisfactory.

7.   Professional Development

The level of performance of teachers in IPCRF is very satisfactory. In terms of Curriculum Implementation and Evaluation, the level of performance of teachers in IPCRF is very satisfactory.

8.   Relationship Between the Level of Teachers Performance in PCRF and Level of Utilization of DCP

It was found out that the factors that are most strongly related to the computer implementation and utilization performance rating are Curriculum Implementation and Evaluation and Instructional Planning. On the other hand, there are factors which suggest weaker correlation with the computer implementation and utilization performance rating.

1.6.   Conclusions

In view of the findings of the study, the researcher concluded the following:

Since it was found out that there is a significant relationship between the computer implementation and utilization of DCP in terms of Teaching Learning, (Curriculum Implementation and Evaluation), Instructional Planning (Teaching Learning Process, Pupils Outcomes, Curriculum Implementation and Evaluation), SMEPA/LIS/BEIS (Pupils Outcomes, Curriculum Implementation and Evaluation). However, insignificant relationship existed between the rest of the variables under study, hence the hypothesis in this respect is partially sustained.

1.7. Recommendations

Based on the gathered information, the researcher recommends that:

1. Strengthen the implementation and utilization of the DepEd Computerization Program among teachers, particularly in areas where the challenges in Learning Environment and Computer Functionality are moderate to high.
2. Address the challenges faced by teachers in the implementation of the DepEd Computerization Program, particularly in Laboratory Activity Monitoring and Learning Environment.
3. Continue to support and encourage the professional development of teachers, as it is a key factor in their performance in Teaching-Learning, Pupils out-comes, and Curriculum Implementation and Evaluation.
4. Provide regular feedback and assessment to teachers to help them improve their performance in IPCRF.

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