

The Influence of Technology Integration on Senior High School Curriculum in relation to Students' Academic Achievement

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Abstract: *This study delves into the influence of technology integration on the Senior High School Curriculum on learners' academic achievement. The study aims to assess the perception of learners and educators on the use of technology as part of the teaching-learning process. The learners' academic achievement, particularly the general weighted average for a specific semester, is evaluated further to assess the influence of technology on the curriculum. This study proposes an intervention to improve both learner's and teachers' ICT integration, skills, and literacy. The study concentrates on students and teachers from Private Senior High School Institutions in the Municipality of Plaridel, Bulacan. The use of standardized questionnaires is evident in the data collection process, whereas it consists of questions about perceptions of learners and teachers on technology integration. Data on semestral general average are obtained to correlate the influence of technology on students' academic achievement. Previous studies reveal no substantial relationship between technology integration and academic achievement, while some studies contradict this statement. This urges the researcher to investigate this research gap further. The results and findings of the study show that the learners and teachers positively perceive technology integration in the teaching-learning process. Based on the semestral grades obtained by this research, there is a correlation between the two research concepts presented in this paper. Therefore, it rejected the null hypothesis and proved that technology integration significantly affects the student's academic achievement. This study proposes a technology literacy program for private SHS schools in Plaridel, Bulacan.*

Keywords: Academic Achievement, Technology Integration, Technology Literacy

INTRODUCTION

The classrooms of today's era have significantly changed, especially in delivering lessons in various learning modalities. Because of these modifications in our education system, many educators need to innovate and create ways to provide learning effectively and efficiently. Educators opened themselves to embrace technology as it grows its roots in the community. The advent of technology integration unfolds new opportunities for teaching and learning.

Furthermore, it unlocks another door on how the learning process becomes more advantageous, interactive, and fruitful for teachers and students. Educators adhered to produce technology-enhanced learning experiences that are vertically articulated in the context of the curriculum.

In response, a growing number of educators are now exposing themselves to the technological infusion that can support their performance in teaching. Moreover, technology integration in education plays a vital role in attaining a significant improvement in the productivity and performance of teachers and students inside the classroom.

The new learning setup that the nation is currently facing is a big challenge for schools, teachers, parents, and students. Technology has existed in different private institutions used to teach and learn in a face-to-face classroom setup. Still, due to the current situation, there is a need to adopt technology integration in delivering education and developing skills that will meet the learning competencies of the K-12 Curriculum.

Private schools crafted learning continuity plans that are suitable and fit to their available resources to respond to the needs of their learners. This is the first time to implement distance learning that will allow the schools and students to maximize other learning resources, mainly using technology as an avenue of learning. It was a problem faced by the schools due to the availability of resources on the side of the learners, and there is a need to make adjustments that are necessary to meet the demands of this learning setup.

In line with this, technology integration must be assessed to know which platforms, tools, gadgets, software applications, and other resources are best to incorporate into the learning modality to assure quality education. Teachers and students are essential to the success of the learning continuity plan and its implementation for the current school year.

Magulod (2017) emphasized that quality education is the need of modern societies. The capacity of an educational enterprise to provide the relevant learning experiences for learners in the dynamic and ever-changing world has driven schools to become responsive since 21st-century education demands better preparation of learners in primary education to be equipped with the necessary knowledge, skills, values, and attitudes. Suppose learners in primary education have a strong foundation for learning. In that case, when they get to higher education, they will become innovative and competitive, and ultimately, they will become successful contributors to national development.

About the above statement, Hirschman and Wood (2018) stated that the term "21st Century Learner" emerged at the turn of the

millennium and evoked a specific type of learner who possesses "new" 21st century skills that are immensely directed to digital technology, digital communication, and notions of flexible approaches to knowledge. There are changes in how we view the students based on the three shifts in ideas of 21st-century learners. It emerges as an autonomous, self-determining, 21st-century learner and patriotic citizen. The 21st-century learner has become, in many ways, a catch cry to the changes some say are needed in schools to meet the demands of a rapidly changing globalized and digital society. New ways of learning, skills, approaches to knowledge, and the changes bring strategies.

According to Abao (2015), education in the 21st century highlights globalization and internationalization. Any advancement of technology presents theoretical constructs and realistic insights into developing and enhancing knowledge, skills, and attitudes among students and teachers.

The new K-12 curriculum incorporates Technical and Livelihood Education (TLE) and I.C.T. learning onto national standards without much consideration for the realities of suburban and partially rural settings, much of which constitutes the Philippines' population. TLE was designed to address the growing livelihood-specific needs of Filipinos who might not find much practicality in pursuing further education. Although the end goal of pragmatic equity is inherently considerate, the means toward that path is still rough-edged. The political realities point toward the unsustainability of big-scale projects. Much of the new curriculum will theoretically push for the international competitiveness of Filipino students to those in the region. Still, it will also inevitably contribute towards the deepening disparities between the privileged and the underprivileged.

Thus, Asuncion (2021) pointed out that in our current situation, teaching is hard. We need to find alternative ways and solutions that will help us deliver quality education and overcome these trials posed by the pandemic.

Due to the COVID-19 pandemic, traditional face-to-face learning in the classroom is not allowed. Therefore, different learning delivery modalities were introduced so that schools have options depending on the COVID-19 restriction and particular context of learners in the school or locality.

RA 10533, "Enhanced Basic Education Act of 2013", an act enhancing the Philippine Basic Education System by strengthening curriculum and increasing the number of years for Basic Education, presents different approaches that could be utilized in other subjects, most especially in T.L.E./ These are 1. Constructive Approach 2. Collaborative approach 3. Integrative approach 4. Inquiry-based approach 5. Reflective approach. In terms of academic achievement, Cheng (2019) referred to it as an individual's academic performance and is classified as low achievement and high achievement. Low achievement refers to the lower-than-expected standard of student achievement, such as high-intelligence students. When academic achievement is in the middle or even lower levels, there is a gap between expected achievements and natural status, with "high intelligence but low achievement" often mentioned on campuses being a typical example. On the other hand, high achievement refers to students with higher academic achievement than expected.

Thus, technology should be used regularly—preferably daily—and for a variety of purposes, ideally in the context of collaborative, project-based learning activities; rather than building a lesson around a specific technological tool, teachers should identify the content and skills they want students to learn, and then identify the tools which will help students achieve these learning outcomes. Ultimately, technology integration aims to transform how learning occurs in the classroom, allowing students to learn and solve problems in ways that would not be possible without technology.

Prensky (2010) noted that learning with the support of Information and Communication Technologies (I.C.T.) has constantly been evolving, having come to generalize the idea that the generation of today's young people is surrounded and immersed in technology, such as smartphones, computers, tablets, game consoles, among others. Consequently, this generation has proven to be more experienced in the use of Technology (Palfrey and Gasser, 2013; Prensky, 2010).

Based on the given information about how technology integration impacts students' academic achievement, the researcher is encouraged to know how the learners and the teachers perceive technology integration and what could be the impact of technology on academic achievement.

METHODOLOGY

Research Design

This study used descriptive - correlational research methods to assess the impact of technology integration on the students' academic achievement. The descriptive method was used to explore the effects of technology integration on students' academic achievement and describe various aspects concerning the research variables. The study determined the implications of technology integration to academic achievement. Correlational research is a systematic investigation of the relationship present between two or more variables. In this study, the purpose of the correlational method was to find out the relationship between students' and teachers' perceptions of the use of technology in the classroom and how it impacts academic achievement. This quantitative research used a formal, objective, empirical, and systematic process where numerical data were utilized in statistical operations to arrive at valid and reliable general claims. Standardized questionnaires on learner use of technology were used as primary data gathering tools.

This study utilized a standardized instrument to assess Technology-Enabled Learning (Kirkwood and Price, 2016) environment and enabling policies, including learners' access to media and technology, and their nature of use and preferences for adopting technologies for learning in an educational institution.

The instrument includes the following areas of assessment:

• Access to and Use of Information and Communication Technologies

Close-ended questions were used to gather data on the following: Ownership of and Access to I.C.T.s (items 1.1 – 1.2), Internet Access (2.1 – 2.8), Use of I.C.T.s (3.1), and Technology-Enabled Learning (6.1).

• Perceptions of Use of Technology-Enabled Learning

This area is a 25-point Likert-type questionnaire that ranges from 1 (strongly agree), 2 (agree), 3 (disagree), and 4 (strongly disagree). On the other hand, a Technology Implementations standardized questionnaire for teachers was used to measure the extent of the use of educational technology in the classroom. The instrument is a 40-point Likert-type questionnaire that ranges from 1 (Strongly Disagree), 2 (Disagree), 3 (Moderately Disagree), 4 (Moderately Agree), 5 (Agree), and 6 (Strongly Agree).

Respondents of the Study

The populations of interest in this research were the senior high school students and teachers of private schools in the Municipality of Plaridel. They have used technology in teaching and learning. Random sampling was used to determine the sample size from the total population. The researchers resorted to using Slovin's formula to calculate the appropriate sample size for the population, which allowed the generalization of research findings, and the researcher to save time and time resources. A confidence level of 95% ($e = 0.05$) was used. Table 1 summarized the sizes of the population and the sub-population.

Research Instruments

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Data Gathering Procedure

The questionnaire method served as a way of data gathering. All respondents were given a structured set of questions. In gathering the data, the researcher observed the following procedures:

1. A letter of request was sent to the District Supervisor of Plaridel and President of Plaridel Private Schools Association to approve the data gathering from S.H.S. Private Schools in Plaridel.
2. The approved letter of request and the permission letter addressed to school principals were sent to the school heads of S.H.S. private schools in the Municipality of Plaridel, where data/information was gathered. This served as a permission letter to conduct the data gathering among their teachers and students.
3. Given the approval, the researcher communicated to the school's key person and asked for assistance distributing the questionnaire to the respondents via online platforms for both teachers and students.
4. The researcher collected the data through online platforms from the respondents and checked if all the items were answered. The researcher used google forms in collecting data. All information was automatically recorded through google forms and was monitored by the researcher from time to time.

Statistical Treatment

The gathered data from the respondents was presented through the use of tables to simplify the information and to understand better how the data were analyzed and evaluated. Through the use of Statistical Packages for Social Sciences (SPSS), the data were measured and quantified through the following:

- 1st Semester Average of Learners
- Students' Perception in Technology Integration
- Teachers' Perception in Technology Integration
- Impact of Technology Integration on Academic Achievement

The impact of technology integration on students' academic achievement was computed by using correlation and regression analyses.

RESULTS AND DISCUSSIONS

Rating Scale	Range	Descriptive Evaluation
1	1.00-1.49	Strongly Disagree
2	1.50-2.49	Disagree
3	2.50-3.49	Agree
4	3.50-4.00	Strongly Agree

Perception of Students in Integrating Technology

The perception of students in integrating technology is measured through a Likert scale. Students were asked how technology would influence their knowledge and deep understanding of the subject, enthusiasm, motivation to study, preparedness, and ability to collaborate and connect with others. Each item was based on a 4 point scale, wherein "1" strongly disagreeing, "2" disagreeing, "3" agreeing, and "4" strongly agreeing. The data is considered an ordinal scale because there are many dimensions included in the questionnaire, and the exact differences between the items aren't evenly spaced or clearly defined. Descriptive statistics such as frequency and median to find the central tendency will be used to analyze ordinal data.

Table 2

Perception of Students in Integrating Technology

Statements	Mean	Interpretation
1. It will help me get better results in my subjects.	3.32	Agree
2. It will help me understand the subject material more deeply.	3.30	Agree
3. It makes completing work in my subjects more convenient.	3.25	Agree
4. It motivates me to explore many topics I may not have seen before.	3.32	Agree
5. It allows me to collaborate with others easily, both on and outside of the campus.	3.23	Agree
6. It will improve my IT/information management skills in general	3.24	Agree
7. I get more actively involved in my subjects that use technology.	3.06	Agree
8. When I entered senior high school, I was adequately prepared to use the technology needed in my subjects.	2.92	Agree
9. Technology makes me feel connected to what is going on at school.	3.16	Agree
10. Technology makes me feel connected to other students.	3.17	Agree
11. Technology makes me feel connected to teachers.	3.15	Agree
12. In-class use of mobile devices is helpful to me.	3.21	Agree
13. In-class use of mobile devices is helpful to my teacher.	3.20	Agree
14. The use of tablets/laptops in class improves my engagement with the content and course.	3.13	Agree
15. I wish my teachers in school would use and integrate more technology into their teaching.	3.15	Agree
Over-all Mean	3.19	Agree

Based on the descriptive statistics, students appear to be leaning towards using technology in their studies. Among all the questions asked, the median is equivalent to a descriptive evaluation of Agree. Results show that technology has an overall positive impact on the actions and behavior of the students. The use of technology was viewed to aid in getting better outcomes, motivation, improvement, preparedness, involvement, and connection to others. The majority of the students see in-class use of mobile devices as helpful and wish technology will be more used and integrated into the teacher's thinking. Having access to materials other than textbooks allows students to explore many different concepts and aspects other than limited. Moreover, having an online community enables both the students to build, share and support collaboration with one another.

Davies, Lavin, and Korte conducted a research where students were asked how technology would impact their learning. The results

of the study suggest that using technology in education has a positive impact on students. Behaviors such as students' attentiveness and appreciation of the instructor's effort to teach the class have also increased between the students. Overall, it is suggested that technology creates a more student-centered learning environment.

Table 3

Perception of Teachers in Integrating Technology

Statements	Mean	Interpretation
1. The use of computer technology in the classroom increases academic achievement (e.g., grades).	3.16	Agree
2. Computer technology in the classroom results in students neglecting necessary traditional learning resources (e.g., library books).	3.08	Agree
3. The use of computer technology in the classroom is effective because I believe I can implement it successfully.	3.11	Agree
4. The use of computer technology in the classroom promotes student collaboration.	3.05	Agree
5. The use of computer technology in the classroom makes classroom management more difficult.	2.59	Agree
6. The use of computer technology in the classroom promotes communication skills (e.g., writing and presentation skills).	3.07	Agree
7. The use of computer technology in the classroom is a valuable instructional tool.	3.23	Agree
8. The use of computer technology in the classroom is too costly in terms of resources, time, and effort	2.90	Agree
9. Computer technology in the classroom is successful only if teachers have access to a computer at home.	3.03	Agree
10. The use of computer technology in the classroom makes teachers feel more competent as educators.	3.03	Agree
11. The use of computer technology in the classroom is successful only if there is adequate teacher training in technology for learning.	3.08	Agree
12. The use of computer technology in the classroom allows teachers to be learning facilitators instead of information providers.	3.03	Agree
13. Computer technology in the classroom is successful only if technical staff regularly maintains computers and technology tools.	3.03	Agree
14. The use of computer technology in the classroom demands that too much time be spent on technical problems	2.79	Agree
15. The use of computer technology in the classroom is successful only if there is the support of parents.	2.98	Agree
16. The use of computer technology in the classroom is an effective tool for students of all abilities.	2.98	Agree
17. The use of computer technology in the classroom is unnecessary because students will learn computer skills on their own, outside of school.	2.74	Agree
18. The use of computer technology in the classroom enhances my professional development.	3.20	Agree
19. The use of computer technology in the classroom eases the pressure on me as a teacher.	2.92	Agree
20. The use of computer technology in the classroom is effective if teachers participate in selecting computer technologies to be integrated.	3.10	Agree
21. The use of computer technology in the classroom helps accommodate students' learning styles.	3.05	Agree
22. The use of computer technology in the classroom motivates students to get more involved in learning activities.	3.10	Agree
23. The use of computer technology in the classroom could reduce the number of teachers employed in the future.	2.70	Agree
24. The use of computer technology in the classroom limits my choices of instructional materials	2.64	Agree
25. The use of computer technology in the classroom requires software-skills training that is too time-consuming.	2.75	Agree

26. The use of computer technology in the classroom promotes students' interpersonal skills (e.g., ability to relate or work with others).	3.07	Agree
27. The use of computer technology in the classroom will increase the amount of stress, and anxiety students experience.	2.79	Agree
28. The use of computer technology in the classroom is effective only when extensive computer resources are available.	3.02	Agree
29. Computer technology in the classroom is problematic because some students know more about computers than many teachers do.	2.72	Agree
30. The use of computer technology in the classroom is only successful if computer technology is part of the students' home environment	2.97	Agree
31. The use of computer technology in the classroom requires extra time to plan learning activities.	3.10	Agree
32. The use of computer technology in the classroom improves student learning of critical concepts and ideas.	3.10	Agree
33. Computer technology in the classroom becomes more important to me if the student does not have access to a computer at home.	2.72	Agree
34. The use of computer technology in the classroom is permanently integrated into my lessons.	2.87	Agree
35. The use of computer technology in the classroom is always accessible to my students during classes.	2.69	Agree
Over-all Mean	2.95	Agree

Most of the teachers agree with the statements regarding their perception of integrating technology. Most teachers adopted new teaching methods to make learning more engageable and more accessible for students to learn. Teachers agree that the use of technology helps the students in their academics in terms of grades, development of communication skills, engagement in learning activities, development of students' interpersonal skills, and critical concepts and ideas. Most teachers also agree that using computer technology is a valuable instructional tool, makes teachers feel more competent as educators, allows teachers to be learning facilitators instead of information providers, enhances their professional development, and eases the pressure on them as a teacher. However, there are specific barriers and conditions wherein most teachers agreed to. Most teachers agree that the use of computer technology is too costly in terms of resources, time, and effort, demands that too much time be spent on technical problems, limits their choices of instructional materials, requires software-skills training that is too time-consuming, difficult because some students know more about computers than many teachers do, unnecessary because students will learn computer skills on their own, outside of school, increase the amount of stress and anxiety students experience, requires extra time to plan learning activities.

Moreover, most of the teachers agree that for the use of computer technology to be successful and effective, teachers must have access to a computer at home, adequate teacher training in the benefits of technology for learning is provided, there is the support of parents to the students, teachers participate in the selection of computer technologies to be integrated, extensive computer resources are available, computer technology is part of the students' home environment.

However, teachers agree that there is an effect in traditions and the future using computer technology. Such results in students neglecting necessary traditional learning resources (e.g., library books) could reduce the number of teachers employed in the future. Most of the teachers disagree that computer technology in the classroom makes classroom management more difficult. For items 17 and 24, wherein the median is 3 (agree). Still, the distribution of the answers is higher for the (2) disagree - this is because the median is the middle number of the solutions wherein the percentage of distribution measures the frequency of the respondents. These results suggest that the comfortableness and involvement of an instructor in using technology in their education matters, and this should be taken into consideration during implementation by both the teacher and school. Nowadays, teachers are more tech-savvy and visually adept as they rely on technology for various things. Teachers seek new ways to gain a better understanding of something when it comes to academics. Digital technology perhaps brings about large-scale improvements in student-teacher learning and professional development. As technology has become an integral part of life, teachers seek more innovative ways to a better classroom experience. These results are consistent with some of the previous studies conducted in the world of research. Atkins-Sayre et al. (1998) discovered that technology elevates an instructor's delivery in teaching and increases trustworthiness. According to Daniels (1999) and Mantei (2000), lectures may flow better. Class time is managed more efficiently as the teachers have less time spent preparing teaching materials, e.g., creating PowerPoint materials instead of writing notes on the blackboard or whiteboard.

Academic Achievement of Students in the 1st Semester

To assess how well a student performed in academics using technology integration, 1st-semester general average grades were collected among respondents.

Table 4

Distribution of Academic Achievement of Students in the 1st Semester

Grades	Frequency	Percentage
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98 – 100	11	2.01
95 – 97	113	20.70
92 – 94	188	34.43
89 – 91	98	17.95
86 – 88	63	11.54
83 – 85	47	8.61
80 – 82	26	4.76
Total	546	100.0

Tables 4 describe the general average obtained by students in the 1st Semester of S.Y. 2020-2021 in all academic subjects. The grades range from 80 being the lowest to 99 being the highest recorded among the students. The mean or the average of the steps is 91.18, which is in the upper percentile, and the median is 92. Most of the students obtained an average of 94 (67 out of 546 students) and only 6 out of 546 students got 80. These results may imply that most students are doing well in their academic subjects based on their numerical grades.

Studies about the academic achievement of students in ICT are minimal. Back et al. (2010) verified that higher levels of ICT literacy positively impact the students' good school performance. Huang and Leung (2009) state that high proficiency in ICT means having the competence to solve academic problems quickly; thus, it may lead to better academic performance.

Influence of Technology Integration on Students' Academic Achievement

Table 5

Regression analysis of Technology Integration on Students' Academic Achievement

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	71.915	.566		127.071	0.000
Technology Integration	6.008	.173	.829	34.640	0.000

R-squared = .688

F-value = 1199.917

p-value = .000

alpha = 0.05

In the investigation, the study hypothesized that technology integration does not significantly influence students' academic achievement. A regression analysis was employed to determine the possible relationship between the variables.

As can be gleaned from the results, the obtained Beta coefficient of .829 suggests that the technology integration contributes significantly to their academic achievement.

The B coefficient results indicate that technology integration will mean a 6.008 addition to students' academic achievement in every unit increase in the predictor variable.

Also, R-Square is the proportion of variance in the dependent variable (students' academic achievement) predicted from the independent variable (technology integration). This value indicates that 68.8% of students' theoretical achievement variance can be expected from the variable technology integration.

Further analysis of Table 5 reveals an F-value of 1199.917 with the associated p-value of 0.000. Since the associated probability does not exceed .05 alpha, it is, therefore, safe to conclude that the technology integration forms a set of significant predictors on students' academic achievement. Hence, the decision is to reject the null hypothesis, which implies that the integration of technology does significantly affect students' academic achievement.

This is consistent with the findings in a study conducted by Basri et al., whose research concentrated on determining the impact of ICT adoption on students' academic performance in Saudi universities. Results from their research show that there is a relationship between ICT adoption and academic performance. The majority of the respondents find incorporating ICT in academics more valuable, and each of them feels that they should have the respective gadgets needed to adopt ICT fully.

Proposed Intervention in Technology Integration

Technology has been widely used in all disciplines and industries across the globe. It has become ingrained into personal, professional, and social aspects of life. The study explored and analyzed the impact of technology integration on students' academic achievement. The perception of students and teachers on technology in the classroom was highly considered to further how technology affects classroom discussions and academic achievement. Educational institutions must have programs on technology that will equip the teachers and students with literacy skills to become productive and innovative individuals, through this action, it can serve as an advantage for the entire school community.

Based on the gathered data and results of the study, it is necessary to develop an educational intervention for private schools that will benefit the teachers and students. The intervention is a technology literacy program that will enhance the skills of learners and educators in using technology as a tool for teaching and learning. For this purpose, an outline of the Technology Literacy Program that suggests critical areas to improve the technology integration in schools is provided and will be further developed based on every educational institution's locality, culture, and practices to make it an outstanding and well-rounded program.

Technology Literacy Program (Outline)

This proposed program aims to provide training, seminars, and workshops for the teachers and students in the following areas:

- Development of understanding of the characteristics and scope of technology.
- Awareness of the core concepts of technology.
- They understand the relationships of technologies and their connection to other fields of study.
- Hands-on workshop on the use of software or programs that are commonly used in classroom discussions. (Microsoft Office)
- Hands-on workshop on the use of video and photo editing software or programs that can advance outputs in different disciplines or academic subjects.
- Professional training and seminars for teachers on the role and use of technology in the classroom.
- Role of technology in developing lifelong learners and careers.
- Developing critical thinking skills using technology.
- Technology Literacy as a tool for differentiated instruction and learning.
- Identifying competencies on the use of technology in the classroom.
- Use of technology in all subject areas to engage teachers and students in more profound levels of learning and teaching.

Table 6

Technology Literacy Program on Core Concepts of ICT

Rationale	The Learning Continuity Plan of private schools is mainly focused on various learning modalities that require technology as an avenue to deliver lessons and process learning among students. Integration of technology is evident in the new learning setup where teachers and students interact during discussions and where most performances and learning outputs are based.
Program Title	Digital Literacy – Concepts of ICT
Objectives	<ul style="list-style-type: none"> • To have in-depth knowledge about the basic concepts of ICT • To become familiar with the technicalities of ICT • To grasp the advantages & disadvantages of using ICT • To equip skills in operating a computer/laptop
Activities	<ul style="list-style-type: none"> • Seminar – A comprehensive talk that will be given by an expert in the field of ICT. • Workshop – Basic computer/application functions and uses. Hands-on or practical tests will be facilitated to assess the participant's acquisition of learning.
Person(s) Responsible	<ul style="list-style-type: none"> • School Head / Administrators • Teachers • Office Personnel
Schedule/Venue	<ul style="list-style-type: none"> • April/May (InSeT-In Service Training) – 8:00am – 12:00nn • Computer Laboratory

Budget	Php 5,000 (School fund for faculty development)
Expected Output	Participants will be equipped with essential concepts about ICT and the use of basic computer applications. Participants are expected to exhibit progress in using desktop computers and laptops, including all their features and functions.

Table 7

Technology Literacy Program on Computer Applications and Software

Rationale	Technology integration serves an essential role in today's education. The teachers and learners need to understand the purpose of technology in teaching and learning. Developing knowledge and skills in using various computer applications and software is a key to make education meaningful and innovative.
Program Title	Digital Applications – Software Applications (Microsoft Office & Video Conference Platforms)
Objectives	<ul style="list-style-type: none"> • To have profound knowledge about the typical applications and software • To become fully aware of the functions and uses of the computer applications/software • To develop skills in using office applications and video conferencing platforms • To demonstrate skills in applying the use of standard computer applications in an actual class discussion
Activities	<ul style="list-style-type: none"> • Seminar – A comprehensive talk that will be given by an expert in the field of ICT. • Workshop <ul style="list-style-type: none"> -Uses and functions of Word, Excel, & Powerpoint -Uses and functions of Zoom and Google Meet -Hands-on or practical tests will be facilitated to assess the participant's acquisition of learning.
Person(s) Responsible	<ul style="list-style-type: none"> • School Head / Administrators • Teachers • Office Personnel • Students
Schedule/Venue	<ul style="list-style-type: none"> • April/May (InSeT-In Service Training) – Teachers 8:00am – 5:00pm Computer Laboratory • June (Class orientations) – Students TLE/Computer Period Online Session
Budget	Php 10,000 (School fund for faculty/student development)
Expected Output	Participants will be equipped with skills in using office applications and video conferencing platforms. Participants are expected to exhibit progress in using Word, PowerPoint, Excel, Zoom, and Google Meet, including all their features and functions.

Discussions, Conclusion, Future Research

The study's objective is to determine if the null hypothesis "The integration of technology does not significantly affect students' academic achievement" is to be rejected at a 0.05 level of significance. The researcher utilized a study with 546 students and 61 teachers from four private senior high schools in Plaridel, Bulacan. The results were then analyzed and interpreted using descriptive analysis through Microsoft Excel in creating charts and graphs and regression analysis through the use of Statistical Package for the Social Sciences. Descriptive statistics were used to assess the basic features of the data, such as measures and their other characteristics. On the other hand, regression analysis was used to determine the relationship between technology integration and students' academic achievement.

Technology helps to integrate the learning experience of students. Engaging technology in learning has not only helped the students learn better, but it also allowed them to multi-task. Students perceive the use of education positively. Collaboration has also been observed increasing between the students with the use of technology. Technology has been an integral key to achieving significant improvements wherein a student can be more actively involved in his/her learning. Teachers believed that technology increases students' engagement which may lead to better work produced by the students. They find the classroom more manageable with the aid of technology. However, the usage of technology in the classroom directly correlates with teachers' comfort level in technology and the availability of technology. The additional cost of acquiring technology is still a challenge for some students and teachers. Other risks teachers see in integrating technology include additional charges regarding resources, time, effort, and maintenance. They are afraid that it may cause anxiety and stress over their students. Grades are a good measure to assess the literacy of students in technology. High levels of proficiency in ICT may lead to better academic performance. The students realized that integration of technology is a good source of academic information to improve academic achievement.

From the results and conclusions obtained, the following recommendations are proposed by the researcher:

1. Teachers must continue to be learners by being digitally literate and trained to use ICT to assess if using technology is the best teaching method and the most appropriate method to be used in the classroom. They must find the balance between the costs and benefits of utilizing technology in their classes.
2. All the parties (students, teachers, parents, school) should have involvement and complete understanding of ICT components before, during, and after implementing technology in education.
3. For technology to be effective in education, an individual must be guided appropriately on using these. Suppose too much time is being spent on technology without incorporating the true meaning of using technology in education. In that case, the benefits of using technology in education will be canceled out. Moreover, if ICT tools will be used to entertain rather than to educate, these tools will be inconsistent with the primary objective of improving learning.
4. Private schools must implement the technology Literacy Program to strengthen and improve technology as a tool for learning and teaching.
5. Future researchers may delve more into this topic by determining if gender affects the perception of students and teachers in integrating technology in their learning/teaching.

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