

Learning Action Cell Engagement and Technology Integration Effectiveness on the Instructional Delivery Practices of Teachers

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Abstract

The study intended to explore the relationship between Learning action cell (LAC) engagement, technology integration, and instructional delivery practices among the 312 public school teachers in the 3 districts of Kitaotao, Division of Bukidnon during the school year 2024–2025. Through a descriptive-correlational research design, teachers were assessed on their levels of engagement in LAC, technology integration effectiveness, and instructional delivery practices. The results revealed that teachers were highly engaged in LAC and technology effectiveness, and the instructional delivery were very highly practiced. Correlation analysis showed that technology integration significantly correlated with instructional delivery practices, especially the elements of ICT in teaching and learning, while LAC showed no significant correlation. Regression results indicated that elements in ICT in teaching and learning is the best predictor of instructional delivery practices of teachers. This result suggests that prioritizing the integration of technology will lead to enhanced instructional delivery practices of teachers. Supporting teachers' instructional delivery practices will ultimately contribute to improved student outcomes. Suggestions for future directions include a need to establish quantitative or qualitative designs to support the study's findings across several teachers' practices and engagement and for general professional empowerment.

Keywords: Elements, Coaching, Support, Personal Growth, Opportunities.

1. Introduction

Education is a lifelong process that shapes an individual's quality of life (Smith, 2018). It is also considered a weapon for improving one's knowledge and skills, as well as for developing one's personality and attitude. The school plays a vital role in comprehensive education, providing a structured environment where foundational knowledge is imparted across subjects. On the other hand, administrators and teachers are the primary agents in the educational process, significantly impacting students' learning and development. To provide a quality education, the school systems committed to continuous improvement of the teaching and learning process developed a comprehensive curriculum management plan. However, according to Toquero and Morales (2019), implementing the curriculum is a complex process in which teachers often face significant challenges in delivering it in their classrooms.

One challenge observed is that teachers often struggle with limited instructional materials and resources, as well as large class sizes and heavy teaching loads, making it more difficult for them to provide individualized attention and support to students. Combalicer (2016) found that in the Philippine educational context, teachers lack seminars and training related to their area of specialization. Furthermore, according to Uchang's (2022) research, there are pressing issues and concerns regarding teachers' instructional delivery, such as insufficient resources due to

poverty. Students in low-income areas often lack access to essential learning materials, including textbooks, technology, and even basic classroom supplies. This resource gap not only hampers teachers' ability to provide high-quality instruction but also contributes to widening achievement gaps between students. Many teachers must address the shortage of teaching materials, especially in rural areas.

According to a study, many teachers, particularly in underfunded schools, face significant obstacles in accessing essential instructional resources such as updated textbooks, digital tools, and interactive learning aids. Inadequate funding and inability to secure necessary materials limit teachers' ability to create equitable and effective learning environments, thereby hindering both student performance and teacher effectiveness (Darling-Hammond, 2020). A shortage of resources forced teachers to rely on outdated materials, limiting their ability to engage students and provide a well-rounded education effectively. Student learning engagement is directly affected by the lack of well-maintained facilities, such as adequate lighting, ventilation, and space for group activities. Working in less ideal settings makes it difficult for teachers to provide high-quality education, which, in turn, makes it difficult for students to concentrate and achieve academic success (Brown, 2019).

Many teachers lack access to continuous professional development opportunities that are crucial for enhancing their instructional skills. A study by Alonzo and Tiongson (2019) found that insufficient training programs limit teachers' ability to implement innovative teaching methods and adapt to changing educational demands, affecting overall instructional quality. While technology has the potential to enhance instructional delivery, Dela Cruz (2021) suggests that many teachers feel unprepared to use online tools and platforms effectively, hindering the transition to digital learning environments. There are other pressing problems, such as scarcity of modules and books, limited reading materials, no library, inadequate seminar-workshops, and lack of technology. These limitations make it more difficult for teachers to deliver instruction and provide students with compelling and rewarding learning opportunities (Jones & Williams, 2018).

To address these significant challenges, it is important to understand the problems teachers face and explore strategies and interventions that can support them in implementing the curriculum effectively. There are two significant views we can investigate: the Learning Action Cell, or LAC, and Technology integration. The Department of Education issued the policy on the Learning Action Cell, in line with the implementation of the Enhanced Basic Education Act of 2013, as a K-12 Basic Education Program School-Based Continuing Professional Development Strategy for the Improvement of Teaching and Learning.

With constant changes to the basic education curriculum, teachers need to keep up with these changes to implement them properly. According to Silva (2017), in her research, the diverse needs of learners and the quest to make schools more learning-friendly require regular and special education teachers to consult and collaborate with families and communities to strategize effective teaching and learning. By providing a structured environment for teachers to share best practices and teaching strategies, LAC promotes a community of learning that directly impacts student outcomes. School learning action cells improve the teaching-learning process that will lead to improved learning among the students, to nurture successful teachers, to enable teachers to support each other to continuously improve their content and pedagogical knowledge, practice, skills, and attitudes, and to foster a professional collaborative spirit among school heads, teachers, and the community.

On the other hand, by leveraging technology, schools and districts can empower teachers to deliver more effective, engaging, and personalized instructional experiences for their students.

According to Ghavifekr and Rosdy (2015), the use of technology helps improve classroom management, as students are better behaved and more focused, and students learn more effectively, as lessons are more engaging and interesting. The integration of technology fosters a positive attitude among teachers when delivering the curriculum.

This research study investigates two key strategies that can address the challenges teachers face in instructional delivery and enhance the overall quality of instructional practices in schools: engagement in Learning Action Cells (LACs) and the integration of technology. First, Learning Action Cells, which are reflective, cooperative group sessions for teachers, promote professional growth and assist teachers in resolving issues in the classroom as they may reflect on their strategies, exchange best practices, and work together to identify solutions to issues, including low resource availability, packed classrooms, and low student engagement (Williams, 2019). On the other hand, the integration of technology into teaching is increasingly recognized as an essential tool for improving instructional delivery. Technology can bridge resource gaps, provide access to a wide range of learning materials, and enhance interactive, personalized learning experiences for students (Smith & Jones, 2020).

This study aims to offer practical insights for overcoming common barriers in instructional delivery, ultimately leading to improved teaching practices and better student outcomes. This approach can empower teachers to respond more effectively to the complex demands of modern education, while also fostering a more innovative and collaborative teaching environment.

2. Statement of the Problem

This study aimed to determine the relationships among learning action cell engagement, technology integration effectiveness, and instructional delivery practices of public school teachers. Specifically, it wanted to answer the following questions:

1. What level of learning action cell do teachers engage in the following areas:
 - a) Lectures and orientation;
 - b) Coaching, development, and usage of instructional materials; and
 - c) Group discussion?
2. What level of effectiveness in technology integration do teachers portray in terms of:
 - a. ICT integration in teaching
 - b. ICT integration for students' learning; and
 - c. Elements in ICT integration in teaching and learning?
3. What level of instructional delivery do teachers practice in the following aspects:
 - a. Instructional planning;
 - b. Instructional delivery; and
 - c. Instructional assessment?
4. What relationship exists between the instructional delivery practices of the teachers and:
 - a. Learning action cell engagement; and
 - b. Technology integration?
5. Which variable, singly or in combination, best predicts the instructional delivery practices of the teachers?

3. Methodology

This chapter presents the methods used in conducting the study. It describes the research design, research locale, and respondents, data-gathering procedure, research instrument, and data analysis.

3.1. Research Design

This study employed a quantitative research design, specifically a descriptive- correlational design, to assess relationships among two or more variables. The descriptive design helps describe the levels of Learning Action Cell, Technological leadership, and Curriculum delivery management among teachers.

Correlational design was used to examine the relationship between the independent variables, Learning Action Cell and Technological Leadership, and the dependent variable, Curriculum Delivery Management of Teachers.

3.2. Locale of the Study

This study was conducted in Kitaotao District, Bukidnon, Philippines. This district is part of the Division of Bukidnon in Region X and encompasses a variety of public elementary and secondary Schools. The study focused specifically on three hundred and twelve (312) public elementary and secondary school teachers within this municipality for the academic year 2024-2025. The purpose of the research at this location is to gather information that will be useful to both the local school community and to further understanding of instructional delivery practices and teacher management.

3.3. Respondents of the Study

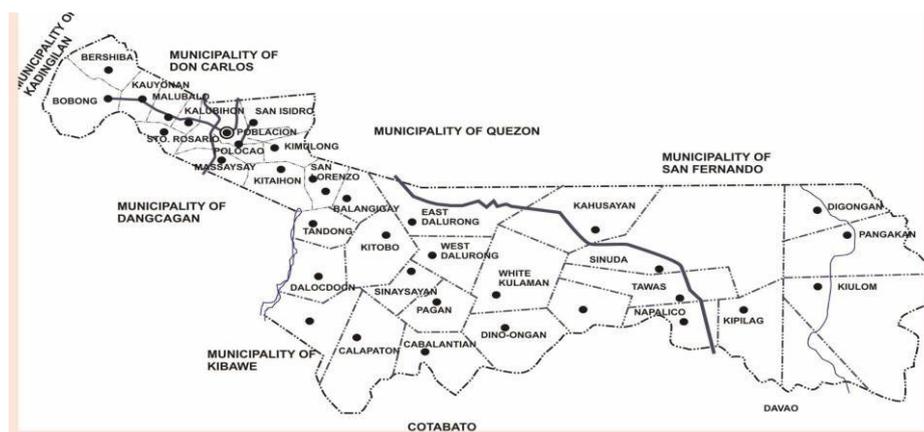
The respondents of this study were randomly selected, three hundred and twelve (312) elementary and secondary public-school teachers of Kitaotao District, Division of Bukidnon. Regardless of their specialization during the school year 2024-2025. The respondents rate themselves in their learning action cell engagement, technology integration effectiveness, and instructional delivery practices.

Table 1. Distribution of respondents within the locale of the study

Name of District	Number of Respondents	Percentage
1. District of Kitaotao I	107	45%
2. District of Kitaotao II	51	25%
3. District of Kitaotao III	154	30%
TOTAL	312	100%

3.4. Data Gathering Procedure

The data collection process of the study took place in July of July–August 2025. Teachers from the districts in Kitaotao were approached to participate in the research through a Google Forms and printed survey questionnaires. Each teacher was given detailed explanations of the study, the purposes of the study and the role that each teacher would play in the research. Prior to participating, the teachers were reminded of the strict confidentiality of the result, ensuring that they will understand the objectives of the research and willingly agreed to participate. The Google Forms served as a convenient and efficient method for gathering responses from the teachers. After that, the questionnaires were retrieved, and then the data were tabulated and analyzed statistically to properly analyze and interpret the results. Lastly, the findings were communicated back to the participants and stakeholders to provide insights and contribute to the educational community in Kitaotao.



3.5. Research Instrument

A structured survey comprised three (3) parts from an adapted questionnaire distributed to respondents to collect data for the study. Part 1 of the instrument measures teachers' engagement in the learning action cell. The questionnaires were adapted from Beverly Sales in 2024. It consists of 3 aspects: teacher's level of engagement in lac during lectures and orientation; teacher's level of engagement in lac during coaching, development, and the use of instructional materials; and teacher's level of engagement in LAC during group discussion. This instrument was content validated and pilot tested with a Cronbach Alpha reliability of 0.86. This part was described in the following descriptors below:

Scale	Mean Interval	Descriptive Rating	Qualitative Interpretation
5	4.51 – 5.00	Strongly Agree	Very Highly Engaged
4	3.51 – 4.50	Agree	Highly Engaged
3	2.51 – 3.50	Undecided	Moderately Engaged
2	1.51 – 2.50	Disagree	Less Engaged
1	1.0 – 1.50	Strongly Disagree	Not Engaged at all

Part 2 of the instrument measures the effectiveness of technology integration among public-school teachers. The questionnaire indicators were adapted from Ghavifekr & Rosdy (2015). This instrument consists of three (3) aspects: Teacher's perception of ICT integration in teaching, Effectiveness of ICT integration for students' learning, and Elements in ICT integration in teaching and learning with a Cronbach Alpha of 0.91.

Scale	Mean Interval	Descriptive Rating	Qualitative Interpretation
5	4.51 – 5.00	Strongly Agree	Very Highly Effective
4	3.51 – 4.50	Agree	Highly Effective
3	2.51 – 3.50	Undecided	Moderately Effective
2	1.51 – 2.50	Disagree	Less Effective
1	1.0 – 1.50	Strongly Disagree	Not Effective at all

Part 3 of the instrument was developed by Bibon in 2022 to assess teachers' instructional delivery practices. Consisting of three parts: instructional planning, instructional delivery, and instructional assessment with a Cronbach Alpha of 0.96. The scoring procedure for this instrument will be on a Likert scale and observed as follows:

Scale	Mean Interval	Descriptive Rating	Qualitative Interpretation
5	4.51 – 5.00	Strongly Agree	Very Highly Practiced
4	3.51 – 4.50	Agree	Highly Practiced
3	2.51 – 3.50	Undecided	Moderately Practiced

2	1.51 – 2.50	Disagree	Less Practiced
1	1.0 – 1.50	Strongly Disagree	Not Practiced at all

3.6. Ethical Considerations

In this study the researcher maintained ethical standards and ethical concerns which included anonymity, confidentiality and informed consent. To conduct the research using humans as respondents in an ethical and responsible manner, the researcher obtained a permit from the Research Ethics Committee (REC) at the University. Also, the researcher asked for formal permission to conduct the study from the Schools Division Superintendent of the Division of Bukidnon and from the District Offices of Kitaotao 1, 2 and 3, distributing the survey questionnaires to the respondents. The researcher's procedures followed all applicable laws, regulations and ethical standards so that the findings of the research are available to the general public in a clear and open format.

3.7. Statistical Technique

The researcher statistically analyzes the data in accordance with the study's requirements. Descriptive statistics, such as mean, percentage, and standard deviation, were used to determine the level of engagement in learning action cells, the effectiveness of technology integration, and the instructional delivery practices of the teachers. Meanwhile, to examine the relationship between the learning action cell and teachers' technology integration in instructional delivery practices, the researcher used the Pearson Product-Moment Correlation Coefficient at the 0.05 level of significance. Furthermore, regression analysis was used to identify the variables that best predict instructional delivery practices of the teachers.

4. Results and Discussion

This chapter presents the analysis and interpretation of the data gathered. This include the discussion on the influence of LAC, technology integration and instructional delivery practices of teachers.

Learning Action Cell Engagement

Table 2-5 reveal the engagement of teachers in LAC in terms of the following: Lectures and orientation; coaching, development, and usage of instructional materials: and group discussion.

Lectures and Orientation

Table 2 presents the mean scores for teachers' engagement in the learning action cell, including lectures and orientation, across four indicators.

Table 2. Mean scores of teachers' engagement in LAC, along with Lectures and Orientation

Indicators	Mean	Descriptive Rating	Qualitative Interpretation
Actively participates in the LAC session by sharing assignments and insights, asking questions, and giving feedback on what colleagues shared during the lectures.	4.52	Strongly Agree	Very Highly Engaged
Comfortably demonstrates work to others during the lectures	4.50	Strongly Agree	Very Highly Engaged
Attentively listens to the speaker during the lectures	4.50	Strongly Agree	Very Highly Engaged
Prepares the materials needed to achieve the SLAC targets during the lectures	4.49	Agree	Highly Engaged
OVERALL MEAN	4.50	Agree	Highly Engaged

Legend:	Descriptive Rating:	Qualitative Interpretation:
4.51 – 5.00	Strongly Agree	Very Highly Engaged
3.51 – 4.50	Agree	Highly Engaged
2.51 – 3.50	Undecided	Moderately Engaged
1.51 – 2.50	Disagree	Less Engaged
1.0 – 1.50	Strongly Disagree	Not Engaged at all

This score indicates strong agreement among respondents, suggesting a very high level of engagement in LAC sessions, including Lectures and orientation. The indicator "prepares the materials needed to achieve the LAC targets during lectures" had the lowest mean score of 4.49, yet it still falls within the highly engaged range. The overall mean score of 4.50 indicates a high level of engagement in the LAC session across Lectures and Orientation.

The results show that teachers have a high level of active participation during LAC sessions, underscoring the importance of designing learning experiences that foster active engagement and promote a sense of community among students. The high degree of active engagement demonstrates that the teachers were dedicated to both their own and the success of others. It also reveals that the respondents answered well to the dynamic learning environment and flourished in an atmosphere that promoted cooperation, dialogue, and idea exchange.

The findings aligned with Hargreaves and Fullan (2015), who stated that participation in teacher orientations and lectures has a significant impact on student outcomes and instructional effectiveness. In collaborative settings, teachers improve their teaching and professional learning strategies. Gonzalez (2023) added that when teachers create opportunities for Filipino students to actively engage with the material and learn from one another, it can foster a strong sense of investment and ownership in the learning process. This means that, with high levels of active participation in LAC sessions, teachers were able to tap into that culture, thereby thriving in a learning environment that encouraged discussion, collaboration, and the exchange of ideas.

Coaching, development, and usage of instructional materials

Table 3 provides an overview of the mean scores, descriptive ratings, and qualitative interpretations for each indicator under engagement in LAC, along with coaching, development, and the use of instructional materials.

Table 3: Mean scores of teachers' engagement in lac along coaching, development, and usage of instructional materials

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Prepares the materials needed to achieve the LAC targets during coaching, Development, and Usage of Instructional materials	4.53	Strongly Agree	Very Highly Engaged
Actively participates in the LAC session by sharing assignments and insights, asking questions, and giving feedback on what colleagues shared during the coaching, Development, and Usage of Instructional materials	4.52	Strongly Agree	Very Highly Engaged
Comfortably demonstrates work to others during the coaching, and the Development of Instructional materials			4.33 Agree
Attentively listens to the speaker during the coaching, Development, and Usage of Instructional materials.			Highly Engaged
	4.21	Agree	Highly Engaged
OVERALL MEAN	4.40	Strongly Agree	Very Highly Engaged
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very Highly Engaged	
3.51 – 4.50	Agree	Highly Engaged	
2.51 – 3.50	Undecided	Moderately Engaged	
1.51 – 2.50	Disagree	Less Engaged	
1.0 – 1.50	Strongly Disagree	Not Engaged at all	

The indicator "prepares the materials needed to achieve the learning targets during coaching, development, and usage of instructional materials" got the highest score of 4.53 and falls under the "strongly agree" descriptive rating. This shows that teachers are very highly engaged in preparing the necessary materials to support the goals of the lac sessions in these areas. The indicator "attentively listens to the speaker during the coaching, development, and usage of instructional materials" had a mean score of 4.21, which still falls within the highly engaged range, indicating that teachers actively listen to the speaker during coaching sessions. The ratings reflect a generally positive perception of these indicators, with participants showing a favorable attitude and finding them relevant and practical. The findings reveal that participants show a high level of engagement across all indicators.

The overall mean score of 4.40 falls within the "Strongly Agree" descriptive rating, suggesting that teachers are highly engaged in this aspect. The results reveal that teachers are attentive during LAC sessions, well-prepared, actively involved, and at ease showcasing their work. Fostering a cooperative environment where teachers can share knowledge, hone their teaching strategies, and enhance student learning results requires this kind of active involvement. The data indicate a very positive and productive engagement of teachers in the coaching, development, and usage of instructional materials during the LAC sessions, which is an excellent foundation for continued professional growth and the ongoing enhancement of teaching and learning in the school.

These findings align with Tomlinson (2014), who suggests that facilitating teacher adoption of educational resources and allowing instructors to share their views on how to use them effectively improve student engagement. In addition, Reyes (2018) noted that the impact of collaborative lesson planning and materials development enables teachers not only to develop a deeper understanding of the content but also to gain confidence in their ability to use classroom resources effectively.

Group discussion

Table 4 presents the nine indicators, including respondents' engagement and attitudes towards various activities.

Table 4: Mean scores of teachers' engagement in LAC in terms of Group Discussion.

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Collaborates with co-participants to achieve the LAC goals	4.51	Strongly Agree	Very Highly Engaged
Actively listens to understand the LAC goals during the group discussion.	4.54	Strongly Agree	Very Highly Engaged
Interacts well in the Group Discussion	4.55	Strongly Agree	Very Highly Engaged
Established good collaboration with the LAC leaders	4.43	Agree	Highly Engaged
Contributes important work by sharing work and observations, posing inquiries, and commenting on the information that colleagues have shared in achieving the LAC goals.	4.54	Strongly Agree	Very Highly Engaged
Sharing of work and observations, posing inquiries, and comments on the information that colleagues have shared	4.48	Agree	Highly Engaged
Collaborating on ideas and insights with other participants	4.54	Strongly Agree	Very Highly Engaged
Giving suggestions that are helpful in the Individual and group Action Planning.	4.49	Agree	Highly Engaged
Actively contributing during action planning.	4.48	Agree	Highly Engaged
OVERALL MEAN	4.51	Strongly Agree	Very Highly Engaged
Legend: 4.51 – 5.00 3.51 – 4.50 2.51 – 3.50 1.51 – 2.50 1.0 – 1.50	Descriptive Rating: Strongly Agree Agree Undecided Disagree Strongly Disagree	Qualitative Interpretation: Very Highly Engaged Highly Engaged Moderately Engaged Less Engaged Not Engaged at all	

The table shows that the indicator with the highest mean rating is item 3, "interacts well in the group discussion," with a mean rating of 4.55. This suggests that the respondents actively participate in group discussions during LAC sessions. Following that, item 7, "collaborating ideas and insights with other participants," received a mean rating of 4.54, suggesting that respondents were actively collaborating on their ideas and insights. The overall mean rating for all indicators combined is 4.51, falling within the "strongly agree" range. This indicates a generally positive attitude towards engagement in lac session in terms of group discussion.

This high level of overall engagement suggests that the participants were deeply invested in the LAC activities, collaborating well, actively listening, contributing their work and ideas, and

actively participating in the action planning process. This level of engagement indicates the success of the LAC program and the effectiveness of the group discussion activities.

These findings aligned with Feria (2018), who identified several key elements that contribute to high levels of teacher engagement, including opportunities for collaboration. Structured group discussions and activities that enable teachers to share ideas, solve problems, and learn from each other are crucial for engagement. Additionally, Gunter (2020) asserted that participating in group discussions enables teachers to exchange experiences and ideas in a collaborative environment, encouraging them to evaluate their approaches and make necessary adjustments. Hill (2020) emphasized that teachers who regularly participate in group discussions build stronger relationships with one another, which builds cooperation. Through the exchange of best practices and methods, group discussions lead to significant changes in teaching practices.

Summary of the level of learning action cell engagement of the teachers

Table 5 summarizes the level of engagement of teachers in learning action cell (LAC) sessions across lectures and orientation, coaching and development, and the use of instructional materials, and group discussion.

Table 5: Summary of the mean scores of the level of learning action cell engagement of the teachers

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Engagement in LAC in terms of Group Discussion	4.51	Strongly Agree	Very Highly Engaged
Engagement in LAC along with Lectures and Orientation	4.50	Agree	Highly Engaged
Engagement in LAC along with Coaching, Development, and Usage of Instructional materials	4.40	Agree	Highly Engaged
OVERALL MEAN	4.47	Agree	Highly Engaged
Legend:		Descriptive Rating:	Qualitative Interpretation:
4.51 – 5.00		Strongly Agree	Very Highly Engaged
3.51 – 4.50		Agree	Highly Engaged
2.51 – 3.50		Undecided	Moderately Engaged
1.51 – 2.50		Disagree	Less Engaged
1.0 – 1.50		Strongly Disagree	Not Engaged at all

The item on "engagement in LAC along lectures and orientation" received an average score of 4.50, indicating a high level of agreement and engagement among the participants. The item on "Engagement in LAC along Coaching, Development and Usage of Instructional materials" scored an average of 4.40, which falls under the Highly Engaged interpretation. The highest-scoring indicator, with a mean score of 4.51, is engagement in group discussion. This means that teachers were very highly engaged in collaborative sessions.

The data presented in the table suggests a very positive and engaged attitude of the teachers towards the learning action cell activities. The high overall mean score of 4.47, along with the "Strongly Agree" and "Agree" descriptive ratings, indicates that the teachers willingly participated in and collaborated during the various LAC sessions. Strong engagement during group discussions reveals that the teachers are actively working together with their peers to achieve their goals and objectives. This mindset is a crucial strength of the LAC program, as it allows the teachers to learn from one another, share best practices, and collectively find ways to enhance the quality of instruction and support student learning. The consistently high levels of engagement across indicators, such as lectures, orientation, coaching, development, and the use of instructional materials, further underscore the teachers' deep commitment to making the most of the LAC opportunities. Overall, the data reveal a very positive attitude among teachers

and enthusiasm for the LAC program, which is likely to impact its effectiveness and success significantly.

The results of this study demonstrate that the LAC program effectively encourages high levels of instructor participation, especially during group discussion exercises. The results are also consistent with Tan's (2019) study, which indicated that teachers are more likely to be actively involved and invested in the activities when they feel camaraderie, mutual trust, and joint responsibility within their professional learning community. Additionally, Castillo (2018) stated that when teachers feel a strong sense of camaraderie over the learning process, they become more motivated to contribute, share, and support one another's growth. The LAC sessions foster this crucial professional community, which in turn encourages teachers to learn and improve their practice together.

Technology Integration Effectiveness

Table 6-9 reveals the level of effectiveness in technology integration in terms of the following: Teachers' perceptions on ICT integration in teaching; ICT integration for student's learning; and elements of ICT integration in teaching and learning.

Teachers' perception of ICT integration in teaching

The data in Table 6 focus on respondents' perceptions of their technological integration. It provides insights into the level of agreement among respondents regarding various statements related to the use of technology in their instructional practices.

Table 6: Mean scores of teachers' perceptions on ICT integration in teaching

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
I am aware of the great opportunities that ICT offers for effective teaching.	4.76	Strongly Agree	Very High
The use of ICT enables the students to be more active and engaged in the lesson.	4.72	Strongly Agree	Very High
I think the use of ICT improves the quality of teaching.	4.56	Strongly Agree	Very High
I feel confident learning new computer skills	4.50	Agree	High
I have more time to cater to students' needs if ICT is used in teaching	4.50	Agree	High
The use of ICT helps teachers to improve teaching with more updated materials	4.50	Agree	High
I think the use of ICT helps to prepare teaching resources and materials.	4.50	Agree	High
I think that ICT supported teaching makes learning more effective.	4.46	Agree	High
I find it easier to teach by using ICT	4.35	Agree	High
OVERALL MEAN	4.54	Strongly Agree	Very High
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very High	
3.51 – 4.50	Agree	High	
2.51 – 3.50	Undecided	Moderate	
1.51 – 2.50	Disagree	Low	
1.0 – 1.50	Strongly Disagree	Very low	

The indicator "I am aware of the great opportunities that ICT offers for effective teaching", with a mean score of 4.76, indicates that teachers strongly agree with this statement.

The next indicator, with a mean score of 4.72, "The use of ICT enables the students to be more active and engaging in the lesson," suggests that, when technology is used in the classroom, students become more active and engaged, leading to academic success. The next indicator, "I

think the use of ICT improves the quality of teaching," with a mean score of 4.56, indicates that teachers believe that using technology in their lessons would most improve the quality of teaching. Making the lesson more proactive and motivating for students fosters better classroom interaction.

The findings reveal that teachers have a high level of perception of ICT integration in teaching, with an overall mean score of 4.54, which falls in the "Strongly Agree" and "Very High" range. This means teachers have a very positive attitude towards integrating technology into teaching. With proper training, support, and resources, teachers can overcome challenges and more easily incorporate technology into their teaching.

By incorporating technology, teachers can create an engaging learning environment that meets the needs of digital-native students and prepares them for future professional roles. Chien, Wu, and Hsu (2014) argued that the younger generation is raised in a technologically advanced world and that students have high expectations for ICT integration in the classroom. Additionally, Hernandez-Ramos (2020) argued that the strategic use of digital tools and platforms can enable teachers to design learner-centered, personalized instruction that addresses the diverse needs of 21st-century students. Hence, using ICT in the classroom is crucial in developing inclusive, productive, and engaging learning environments. By leveraging technology, teachers can improve learning, encourage teamwork, and prepare students for new challenges.

Effectiveness of ICT integration for students' learning

Table 7 presents data on respondents' perceptions of the effectiveness of ICT in students' learning.

Table 7: Mean scores of the effectiveness of ICT integration for students' learning

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
ICT allows students to be more creative and imaginative.	4.58	Strongly Agree	Very High
The use of ICT helps students to find related knowledge and information for learning	4.55	Strongly Agree	Very High
The use of ICT encourages students to communicate more with their classmates	4.54	Strongly Agree	Very High
The use of ICT promotes active and engaging lessons for students' best learning experience.	4.52	Strongly Agree	Very High
I think the use of ICT helps to broaden students' knowledge paradigm.	4.50	Agree	High
I think the use of ICT helps to improve students' ability, specifically in reading and writing	4.50	Agree	High
The use of ICT increases students' confidence to participate actively in the class.	4.50	Agree	High
The use of ICT enables students to express their ideas and thoughts better	4.49	Agree	High
OVERALL MEAN	4.52	Strongly Agree	Very High
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very High	
3.51 – 4.50	Agree	High	
2.51 – 3.50	Undecided	Moderate	
1.51 – 2.50	Disagree	Low	
1.0 – 1.50	Strongly Disagree	Very Low	

The following indicator, "The use of ICT helps students to find related knowledge and information for learning," with a mean score of 4.55, underscores the immense value of ICT in providing students with access to a wealth of information and resources to support their studies.

Expanding access to knowledge is a key advantage of technology integration. The lowest indicator, "The use of ICT enables students to express their ideas and thoughts better," had a mean score of 4.49, suggesting that technology improves students' critical thinking skills. Generally, the table shows a positive overall mean score of 4.52, firmly in the "Strongly Agree" and "Very High" range. This suggests that teachers have an overwhelmingly favorable view of the impact of technology on student learning and the teaching process. Technology is a powerful tool for enhancing education. Features like online discussions and shared digital workspaces can foster this active engagement, which is so important for learning. It also helps to broaden students' knowledge, improve their skills, boost their confidence, and enable better self-expression. This paints a very compelling picture of the perceived benefits of integrating technology into teaching.

The use of technology in the classroom helps prepare students for the demands of the 21st-century workforce and society. Iftakhar (2016) emphasizes that exposing students to various digital tools and applications allows them to develop essential skills like digital literacy, critical thinking, and collaboration - competencies that are highly valued in today's technology-driven world. Hwang and Chang (2020) argued that incorporating engaging materials, such as interactive software and multimedia, can stimulate students' curiosity and motivate them to participate fully in the educational process, thereby boosting student enthusiasm and engagement. Embracing and adapting to technological advancements can significantly enhance professional growth and classroom effectiveness.

Elements in ICT integration in teaching and learning

Table 8 presents the results of the various elements that contribute to the effective integration of Information and Communication Technology (ICT) into teaching and learning processes.

Table 8: Mean scores of elements of ICT integration in teaching and learning

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Teachers are given the freedom to design their own teaching with the help of ICT	4.52	Strongly Agree	High
The technical supports are provided if teachers are faced with difficulties	4.51	Strongly Agree	Very High
Teachers are given more time to learn and be comfortable with the use of ICT in teaching.	4.05	Agree	High
Little access to ICT prevents me from using it in teaching	4.48	Agree	High
There is enough training and professional development provided for teachers about ICT use in teaching.	4.37	Agree	High
The ICT facilities in my school are well-functioning and can be used	4.36	Agree	High
Lack of supports from the school top management discourages me from using ICT.	1.70	Disagree	Low
OVERALL MEAN	4.00	Agree	High
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very High	
3.51 – 4.50	Agree	High	
2.51 – 3.50	Undecided	Moderate	
1.51 – 2.50	Disagree	Low	
1.0 – 1.50	Strongly Disagree	Very Low	

The overall mean score of 4.00, corresponding to a "Agree" descriptive rating, suggests that teachers perceive ICT integration as highly effective across these dimensions. Teachers felt that the use of these technological tools and approaches within the classrooms was impactful. The rating implies that the teachers recognized significant benefits from ICT integration, including

improvements in student engagement, teaching effectiveness, learning outcomes, and alignment of technology with the curriculum.

The data reveal a positive view of how teachers use ICT in the classroom. Teachers understand the importance of technology and how it can improve their students' learning experiences, as evidenced by excellent ratings across several categories. These findings align with those of Al-Muhtaseb and al-Fraihat (2021), who claimed that technology could enhance the relevance of educational content and foster competencies. Additionally, Ng (2018) emphasized digital literacy as an essential instrument for students' success. In today's modern world, students' engagement is enhanced by interactive tools enabled by technology. By continuing to empower teachers, provide essential support, and address barriers, schools can further optimize the integration of ICT and unlock its full potential to transform education.

Summary of the level of technology integration effectiveness

The table below summarizes the mean scores for the level of effectiveness of Technology integration, focusing on the three indicators: perception of ICT integration in teaching, Effectiveness of ICT integration for students' learning, and elements of ICT integration in teaching and learning. The mean scores, descriptive ratings, and qualitative interpretations are provided.

Table 9: Summary of the Level of Technology Integration Effectiveness

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Perception of ICT integration in teaching	4.54	Strongly Agree	Very High
Effectiveness of ICT integration for students' learning	4.52	Strongly Agree	Very High
Elements of ICT integration in teaching and learning	4.00	Agree	High
OVERALL MEAN	4.35	Agree	High
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very High	
3.51 – 4.50	Agree	High	
2.51 – 3.50	Undecided	Moderate	
1.51 – 2.50	Disagree	Low	
1.0 – 1.50	Strongly Disagree	Very Low	

The findings reveal that teachers exhibit a high level of effectiveness in technological integration across three indicators: perception, effectiveness, and elements. The indicator "Perception of ICT integration in teaching" received a mean score of 4.54, with the "Strongly Agree" descriptor, indicating that teachers have a highly positive perception of integrating ICT into their teaching practices. "Effectiveness of ICT integration for students' learning" got a mean score of 4.52. A "High" qualitative interpretation suggests that the various components of ICT integration, such as access to resources, technical support, and professional development, are also perceived very positively by teachers.

The overall mean score of 4.35 indicates that, on average, the teachers "Agree" that ICT integration is "High." This is a very positive and encouraging finding, showing that teachers have a strong, favorable view of using technology in the classroom. The overall data taken from the responses shows that the teachers have a holistic and enthusiastic view of the role of technology in their teaching and learning.

By continuing to support and empower teachers with the resources they need, schools can optimize the integration of technology and unlock its transformative potential for both

teaching and learning. Dyehouse and Polly (2020) claimed that using technology in education can improve teachers' capacity to provide individualized feedback, differentiate instruction, and adapt the curriculum to meet the diverse needs of their students.

These suggest that the teachers believe technology can truly benefit their students' academic performance, engagement, and development of essential 21st-century skills. Tondeur (2017) found that teachers' attitudes and beliefs about the usefulness and effectiveness of technology were among the most significant predictors of successful ICT integration. When teachers held more positive perceptions of the value of technology for teaching and learning, they were more likely to integrate technology effectively in their classrooms.

Instructional Delivery Practices of Teachers

Table 10-13 reveals the level of instructional delivery practices of teachers in terms of the following: Instructional planning; Instructional Delivery; and instructional assessment.

Instructional Planning

Table 10 presents teachers' instructional planning practices, reporting an overall mean score of 4.56, suggesting that these practices were very highly used.

Table 10: Mean scores of instructional delivery practices in terms of Instructional planning

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Creates and plans strategies that allow multiple learning areas to be integrated in the lesson	4.68	Strongly Agree	Very highly practiced
Accesses and uses ICT in the design of instruction to engage learners' attention and improve the caliber of teaching	4.66	Strongly Agree	Very highly practiced
Develops plans for the lesson based on previous responses and feedback from learners to further improve the planning of the repeated lesson	4.60	Strongly Agree	Very highly practiced
Uses present data of learners to design instruction that is differentiated according to the individual learning needs of learners	4.55	Strongly Agree	Very highly practiced
Uses and analyzes information of learners to design instruction that meets the diverse needs of learners and leads to ongoing growth and achievement	4.53	Strongly Agree	Very highly practiced
Assesses teaching materials for their relevance to the learning competency attainment and needs of learners	4.52	Strongly Agree	Very highly practiced
Selects appropriate content for instruction, resources, examples, and materials that are known and suited to the learners for differentiation of learning.	4.51	Strongly Agree	Very highly practiced
Uses sociodemographic information regarding learners' background, like culture, family structure, and status, and communities in planning instruction suited to the needs of the learners	4.48	Agree	Highly practiced
OVERALL MEAN	4.56	Strongly Agree	Very highly practiced
Legend:	Descriptive Rating:	Qualitative practice:	
4.51 – 5.00	Strongly Agree	Very highly practiced	
3.51 – 4.50	Agree	Highly practiced	
2.51 – 3.50	Undecided	Moderately practiced	
1.51 – 2.50	Disagree	Less practiced	
1.0 – 1.50	Strongly Disagree	Not practiced at all	

The indicator "creates and plans strategies that allow multiple learning areas to be integrated in the lesson" received a 4.68 rating from respondents. This means that, among other indicators, teachers have the highest mean score and are highly effective at creating strategies that integrate

multiple learning areas within lessons. Next, the indicator with a 4.66 rating suggests that the incorporation of Information and Communication Technology (ICT) is perceived as a strong practice. This reflects an awareness of the need for modern teaching methods that capture learners' attention and improve teaching quality.

The overall mean score of 4.56 indicates that instructional planning was very highly practiced. The strong ratings across most indicators reflect a high level of teacher commitment to effective instructional strategies. The data reveal that teachers are planning their instruction to meet their students' needs, creating engaging, relevant, and differentiated learning experiences. This indicates a holistic approach to education, promoting interdisciplinary learning which can enhance student engagement and understanding.

Continuous improvement and responsiveness to student needs are crucial for adaptive teaching. Graham (2019) argued that teachers may anticipate student needs, differentiate teaching, and integrate a variety of learning modalities when they use well-structured instructional planning. Hattie (2017) added that instructional planning improves educational accountability. As they review their goals, resources, and assessment methods, they can adjust their methods based on student performance and feedback.

Instructional Delivery

Table 11 outlines key indicators of effective instructional delivery. Each indicator reflects essential practices that teachers implement to enhance student understanding and engagement in the learning process

Table 11: Mean scores of instructional delivery practices in terms of Instructional Delivery

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Uses varying perspectives, theories, and methods of investigation and inquiry in instructing the concept of the lesson	4.53	Strongly Agree	Very highly practiced
Provides opportunities for learners to engage in activities of inquiry, critical thinking, and evidence-based discipline	4.53	Strongly Agree	Very highly practiced
Connects prior knowledge of the learners to the new information of the lesson.	4.51	Strongly Agree	Very highly practiced
Discusses lessons in increasing levels of complexity and difficulty	4.51	Strongly Agree	Very highly practiced
Ensures that learning experiences of the learners are relevant and connect to other curriculum content areas	4.50	Agree	Highly practiced
Facilitates a learning environment where the sense of belonging of learners through individual differences is respected	4.49	Agree	Highly practiced
Employs various ways of explaining concepts to scaffold learning while correcting misconceptions and misunderstandings	4.49	Agree	Highly practiced
Incorporates experiences into instructional practices that relate to a learner's current life	4.49	Agree	Highly practiced
Demonstrates fluency in technology systems, uses technology to support instruction and enhance learning, and designs learning experiences to develop learner skills in the application of technology appropriate to the disciplines.	4.47	Agree	Highly practiced
OVERALL MEAN	4.50	Agree	Highly practiced
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very highly practiced	
3.51 – 4.50	Agree	Highly practiced	
2.51 – 3.50	Undecided	Moderately practiced	
1.51 – 2.50	Disagree	Less practiced	
1.0 – 1.50	Strongly Disagree	Not practiced at all	

Each indicator is essential for enhancing students' learning experience while also supporting teachers in their instructional roles. Indicator 1 "Uses varying perspectives, theories, and

methods of investigation and inquiry in instructing the concept of the lesson" received a mean score of 4.53, suggesting that teachers diversify their teaching strategies, enhancing their pedagogical effectiveness and enriching students' understanding. The following three indicators had the same mean score of 4.49, indicating that teachers facilitate, employ, and incorporate diverse experiences into their instructional delivery. The last indicator, which got the lowest mean score, reveals that teachers demonstrate fluency in using technology to support their instructional delivery.

The overall mean score of 4.50 indicates that the teachers' instructional delivery was highly practiced and effective. This reflects a firm commitment from teachers to adopt strategies that enhance both student learning and teaching effectiveness. These findings align with Kane's (2011) study, which emphasizes that effective instructional delivery that engages students leads to improved academic performance.

The data underscores the critical importance of effective instructional delivery in fostering an engaging, inclusive, and relevant learning environment. Hattie (2017) asserts that instructional delivery has a significant influence on student accomplishment. Learning becomes more meaningful when teachers use a variety of instructional strategies to improve student engagement and deepen comprehension of the subject matter. Zhao (2021) added that effective instructional delivery strategies, such as project- and inquiry-based learning, foster an environment where students can work together, apply their knowledge in practical settings, and thoroughly examine topics.

Instructional assessment

Table 12 highlights the effectiveness of various instructional assessment practices as rated by teachers. Where it shows eight indicators, all reveal very highly practiced.

Table 12: Mean scores of instructional delivery practices in terms of Instructional Assessment

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Provides an assessment that allows learners to work individually or in groups through independent/cooperative learning	4.55	Strongly Agree	Very Highly Practiced
Shows relevance and connection between the topics discussed	4.54	Strongly Agree	Very Highly Practiced
Uses multiple assessment methods, including adjusted pacing and flexible grouping, to engage learners in active learning opportunities that promote the development of critical and creative thinking, problem-solving, and performance capabilities.	4.53	Strongly Agree	Very Highly Practiced
Uses learning materials like module, activity sheets, SIM, etc., that evaluates learning inside and outside the school	4.53	Strongly Agree	Very Highly Practiced
Provides opportunities for the development of performance-based assessment	4.52	Strongly Agree	Very Highly Practiced
Provides multiple assessment strategies for the differentiation and accommodation of individual differences	4.52	Strongly Agree	Very Highly Practiced
Provides opportunities for the development of product-based assessment	4.52	Strongly Agree	Very Highly Practiced
Creates an assessment method that is sustainable and withSD continuity to trace behavioral and cognitive changes of learners through time	4.51	Strongly Agree	Very Highly Practiced
OVERALL MEAN	4.53	Strongly Agree	Very Highly Practiced
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very Highly Practiced	
3.51 – 4.50	Agree	Highly Practiced	
2.51 – 3.50	Undecided	Moderately Practiced	
1.51 – 2.50	Disagree	Less Practiced	
1.0 – 1.50	Strongly Disagree	Not Practiced at all	

The indicator that got the highest mean score of 4.55 "Provides assessment that allows learners to work individually or in groups through independent/cooperative learning", reflects the teachers' recognition of the importance of allowing learners to work both individually and in groups. The next indicator got a mean score of 4.54. "Shows relevance and connection between the topics discussed". This indicator highlights the importance of aligning assessment strategies with the topics discussed. The following two indicators had the same mean score of 4.53, a high level of agreement, as evidenced by the indicators "Uses multiple assessment methods..." and "uses of learning materials...". This shows that teachers are dedicated to helping students develop critical thinking and problem-solving abilities. The use of learning materials encourages students to learn both in and out of the classroom. The following three indicators, with a mean score of 4.52, indicate that teachers provide opportunities for students to demonstrate their understanding through practical tasks, thereby enhancing engagement and the relevance of learning. Lastly, creating sustainable assessment methods that track behavioral and cognitive changes over time is essential for long-term educational success. A mean score of 4.51 indicates that teachers are focused on continuous assessment practices that provide insights into student growth and development.

The overall mean score of 4.53, categorized as "Strongly Agree" and "Very Highly Implemented," indicates a strong commitment among teachers to employ effective assessment strategies that enhance student learning and engagement. It shows that instructional assessment procedures are not only widely used but also successfully improve students' learning experiences. Fostering a positive and productive learning environment that equips students to navigate future challenges requires a commitment to practical instructional assessment.

This flexibility supports different learning styles and promotes collaboration, which is essential for students' social skills and critical thinking. This finding aligns with Hattie (2009), who emphasizes that varied assessment methods foster student engagement and promote deeper learning. The strong agreement suggests that teachers value varied assessment formats that cater to diverse learner needs. Additionally, Tomlinson (2014) emphasizes the importance of differentiated instruction and assessment to meet learners' diverse needs. It highlights how varied assessment formats can help unlock each student's unique strengths and potential. This method demonstrates an awareness of the need to accommodate various learning requirements.

Summary of the Level of Instructional Delivery Practices of the teachers

Table 13 summarizes teachers' instructional delivery practices across instructional planning, instructional assessment, and instructional delivery. The data reveal a positive attitude of the teachers towards the three indicators.

Table 13: Summary of the level of Instructional Delivery Practices of the teachers

Indicator	Mean	Descriptive Rating	Qualitative Interpretation
Instructional planning	4.56	Strongly Agree	Very Highly Practiced
Instructional assessment	4.53	Strongly Agree	Very Highly Practiced
Instructional delivery	4.50	Agree	Highly Practiced
OVERALL MEAN	4.53	Strongly Agree	Very Highly Practiced
Legend:	Descriptive Rating:	Qualitative Interpretation:	
4.51 – 5.00	Strongly Agree	Very Highly Practiced	
3.51 – 4.50	Agree	Highly Practiced	
2.51 – 3.50	Undecided	Moderately Practiced	
1.51 – 2.50	Disagree	Less Practiced	
1.0 – 1.50	Strongly Disagree	Not Practiced at all	

Instructional planning got the highest mean score of 4.56. This reveals that teachers design and organize learning experiences to effectively deliver lesson content, ensuring that teaching strategies align with educational objectives and meet students' diverse needs. Instructional planning helps teachers define clear, measurable learning objectives, ensuring that both teachers and students understand the lesson's goals. The instructional assessment score of

4.53 indicates that teachers are using assessment techniques effectively. Teachers are actively assessing student learning and using assessment results to guide their teaching strategies. Instructional delivery methods are considered highly implemented, with a mean score of 4.50. This score shows a strong commitment to effective teaching practices, with teachers concerned about the methods and strategies for presenting lesson content and facilitating learning in the classroom, aiming to engage students actively and promote understanding of the material. A shared dedication to enhancing student learning outcomes and instructional effectiveness is evident in consistently high ratings across all indicators.

The overall mean of 4.53, with a descriptive rating of "strongly agree," shows that teachers practiced their instructional delivery in the classroom very highly. Effective instructional delivery practices, such as project- and inquiry-based learning, foster an environment where students can work together, apply their knowledge in practical settings, and thoroughly examine topics. This aligns with Alake and Ogunseemi (2020), who found that teachers who engaged in more detailed and thoughtful lesson planning were better able to select and implement instructional strategies that promoted higher-order thinking skills among their students. Yuriev (2021) added that when teachers incorporated a range of active learning techniques, students demonstrated significantly higher levels of engagement, understanding, and academic performance. Lastly, Zhao (2021) emphasized that when teachers modify their delivery methods, students are better prepared for future professional development.

Correlation of LAC engagement, technology integration effectiveness, and instructional delivery practices of teachers

Table 14 reveals a significant correlation between learning action cell engagement and the effectiveness of technology integration in teachers' instructional delivery practices.

Table 14: Correlation result of LAC engagement, technology integration effectiveness, and instructional delivery practices of teachers

VARIABLE	CORRELATION COEFFICIENT	SIG
LAC engagement	.094	.099 ns
LAC along with Lectures and Orientation	.051	.366 ns
LAC along with Coaching and Development	.010	.855 ns
LAC along with Group Discussion	.100	.078 ns
Integration of Technology	.051	.373 ns
Integration in Teaching	-.082	.150 ns
Integration for Student's Learning	.010	.861 ns
Elements in Teaching and Learning	.143	.011*

* - $p < 0.05$

ns – not significant

As shown in Table 16, the learning action cell engagement sub-variables namely: lectures and orientation, coaching and development and group discussion with r-values of 0.051, 0.10, and .0100, respectively, indicating non-linear relationship. Generally, LAC engagements imply no relationship on the instructional delivery of teachers

The results align with the findings of Reyes and Campos (2020) in their study found that, while teachers reported positive experiences in LACs, the translation into classroom instruction changes was limited. They emphasize a more critical examination of the underlying assumptions and implementation of LACs in the Philippines. There is a need for a shift towards a more contextualized understanding of these relationships. Similarly, Aquino and Buenafe (2021) highlighted that participation in LACs alone does not automatically lead to improvements in teaching methods. They emphasize the need for more targeted professional development within the LAC structure positively improve instructional practices effectively.

On the other hand, teachers' integration of technology in teaching, one variable came out to be positively correlated in terms of the Elements of teaching and learning ICT with an r -value of 0.143, (p -value = 0.10). This means that the relationship between the teachers' ICT integration and their instructional delivery practices is statistically significant at the $p < 0.05$ level. This further imply that teachers who are more knowledgeable in the elements of teaching and learning ICT, their instructional delivery were more enhanced. Thus, the null hypothesis states that "There is no relationship between exists between Instructional delivery and Technology integration" is rejected in favor of the Elements of Teaching and Learning ICT

The result corroborates with the study of Parker (2021) that fostering a supportive school culture that encourages experimentation with technology can lead to more effective integration. He added that by combining effective pedagogical strategies, robust infrastructure, and comprehensive professional development, educational institutions can significantly enhance the teaching and learning experience through ICT integration.

Variables that best predict the instructional delivery practices of teachers

Table 15 presents the regression analysis of the relationship between learning action cell engagement and technology integration on teachers' instructional delivery practices. The indicator elements of ICT integration were found to be the sole predictors of teachers' instructional delivery practices. This implies that the more teachers understand the application of ICT elements, the more effective instructional delivery is.

Table15. Variables that best predict instructional delivery practices of the teachers

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	4.539	.141		32.126	.000
Elements of ICT in teaching & learning	.058	.019	.174	3.013	.003
	R	R square	F		Sig.
	.122 ^a	.015	4.650		.032

The regression model has an R^2 of .015, implying that approximately 1.5% of the variability in Instructional delivery is explained by the predictor variables for ICT integration. This reveals that, among the variables included, the only one with a statistically significant relationship with instructional delivery practices is the elements of ICT integration, which is also its best predictor. The unstandardized coefficient, with a standard error of 0.019, reveals that the variable is predicted to increase by 0.058 units, holding all other variables constant. The standardized beta coefficient is 0.174, indicating that this variable has a relatively small but

meaningful impact on teachers' instructional delivery practices. Importantly, its p-value is 0.003, which is well below the 0.05 significance threshold.

Where:

The regression equation derived from this analysis is expressed as follows: $Y = 4.539 + 0.058x$

Y = Instructional Delivery

4.539 = constant

X = Elements of ICT in Teaching & learning (Integration of Technology)

Interpreting this regression equation, the constant value (4.539) represents the baseline level of instructional delivery when all predictor variables are zero. For each one-unit increase in ICT elements, it is predicted to increase by 0.058.

Based on these results, we can now reject the second null hypothesis that states "there is no variable that best predicts the instructional delivery practices of teachers." The variable elements of ICT integration are a significant predictor of teachers' instructional delivery practices, even though their explanatory power is relatively low. The regression results suggest that as teachers increase their integration and use of technology in the classroom, it has a positive and significant impact on how they deliver instruction to their students.

Recent studies support these results and align with the conceptual framework of this study, where Rogers (2003) claimed that comprehending the traits of innovations—such as relative advantage, compatibility, complexity, trialability, and observability—as they relate to instructional strategies and student learning is essential to the successful integration of technology. He added that teachers are more inclined to implement technology in their classrooms if they believe it will be helpful and work well with their current teaching strategies. Moreover, Parker (2021) confirms that creating a supportive school culture that encourages experimentation with technology can lead to more effective integration. By combining effective pedagogical strategies, robust infrastructure, and comprehensive professional development, educational institutions can significantly enhance the teaching and learning experience through ICT integration. Consequently, Ferrer and Lacap (2020) conducted and found that teachers' technological competence, access to technology resources, and school support for technology integration were significant in their instructional delivery practices. Reyes and Palma (2017) supported that teachers with higher digital literacy levels were more likely to incorporate technology-assisted instructional strategies.

5. Conclusion

Based on the results of the study, the following conclusions were derived:

The level of Teacher Learning action cell engagement is high across all measured domains. Group discussions show particularly high engagement levels, while the development and use of instructional materials have a slightly lower mean score but still fall within the highly engaged category.

Technology integration is generally moderately effective. Perception of Technology integration stands out as the most effective. The effectiveness of technology integration in students' learning stands as the most significant.

The teachers' instructional delivery practices were highly consistent. Instructional planning and instructional assessment are the most highly practiced, while instructional delivery is highly practiced.

Correlation analysis showed that the elements of technology integration are significantly positively related to teachers' instructional delivery. An increase in any aspect of technology integration is associated with improved implementation of teachers' instructional delivery practices.

Technology integration, particularly on the elements of ICT in teaching and learning, was found to be the best predictor of teachers' instructional delivery practices. Overall, the result highlights that increasing the use of technology, especially ICT integration, might help improve teachers' instructional delivery. Thus, supporting teachers' instructional delivery practices enhances their teaching effectiveness and ultimately contributes to improved student outcomes.

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