**European Journal of Education Studies** 

ISSN: 2501 - 1111 ISSN-L: 2501 - 1111 Available online at: <u>www.oapub.org/edu</u>

DOI: 10.46827/ejes.v12i1.5753

Volume 12 | Issue 1 | 2025

# TECHNOLOGY INTEGRATION, TEACHING EFFECTIVENESS AND TEACHERS' PERFORMANCE IN SIRAWAI DISTRICT SCHOOLS DIVISION OF ZAMBOANGA DEL NORTE, PHILIPPINES

Alpen Arcayena Caoile<sup>1</sup>, James O. Baes<sup>2</sup>, Leo C. Naparota<sup>3i</sup> <sup>1</sup>MAEM, Teacher, Sirawai National High School, Sirawai District, Department of Education, Zamboanga del Norte, Philippines <sup>2</sup>MEd, MAEM, Student, Doctor of Philosophy in English Literature, University of San Jose-Recoletos, Cebu City, Philippines Faculty, DMC College Foundation Inc., Dipolog City, Philippines Faculty, Graduate School, Saint Vincent College, Inc., Dipolog City, Philippines <sup>3</sup>PhD, Dean, School of Criminal Justice Education and College of Arts and Sciences, Andres Bonifacio College, Dipolog City, Philippines

#### Abstract:

This study aimed to determine the technology integration and teaching effectiveness and how it affects teachers' performance in Sirawai District, Schools Division of Zamboanga del Norte, during the school year 2022-2023. It employed descriptive survey and descriptive correlational as the research methods. Weighted mean, standard deviation, and Spearman Rank-Order Correlation Coefficient (Spearman rho) were the statistical tools used in the analysis of data. There were one hundred nineteen (119) secondary school teachers involved as respondents. The level of technology integration was very high. The level of teaching effectiveness was "very high". The level of teachers' performance was "very satisfactory". The levels of technology integration and teachers' performance were not significantly correlated. The levels of teaching effectiveness and

Copyright © The Author(s). All Rights Reserved.

<sup>&</sup>lt;sup>i</sup> Correspondence: email <u>naparotaleo28@gmail.com</u>

teachers' performance were not significantly correlated. Based on the findings and conclusions of the study, the author recommends that the DepEd Top Officials (Central Office, Regional Offices, and Division Offices) utilize the findings of this study as baseline data for the conduct of teachers training, particularly on the new MATATAG Curriculum, specifically technology integration for teaching effectiveness and teachers' performance.

Keywords: technology integration, teaching effectiveness, teachers' performance

## 1. Introduction

Nowadays, the integration of technology in education has gained significance. It becomes essential to changing instructional approaches and improving student outcomes. Technology integration in education transcends the mere incorporation of gadgets or software into classroom settings. According to Mayer (2009), the use of multimedia presentations, such as videos and interactive simulations, can improve student engagement, comprehension, and retention of information. It embodies a holistic approach aimed at leveraging digital tools to engage students, facilitate personalized learning experiences, and foster critical thinking skills. Moreover, technology-enabled pedagogical strategies often promote active participation, collaboration, and real-world problem-solving, fostering a dynamic learning environment conducive to student success. A study by Means *et al.* (2013) found that teachers who incorporated online collaborative tools into their instruction reported increased student engagement, higher-order thinking skills, and improved communication and collaboration among students.

In addition to its influence on teaching effectiveness, technology integration has also been shown to enhance teacher's performance. A study by Ertmer (2005) examined the impact of technology integration on teacher professional development and found that teachers who effectively integrated technology into their instruction reported increased self-efficacy, greater motivation, and improved instructional practices. However, the successful integration of technology hinges not only on its adoption but also on the competence and adaptability of educators. Therefore, teachers in modern education anticipate incorporating technology into their classrooms (Demissie, *et al.*, 2022).

Integrating technology into classroom instruction in a meaningful and state-of-theart way remains challenging for teachers (Pittman & Gaines, 2015). Teacher performance emerges as a critical determinant in realizing the full potential of technology in education. Effective utilization of digital resources demands pedagogical agility, digital literacy, and a willingness to embrace innovation among educators. Teachers who are knowledgeable in advanced technology are more likely to be effective in teaching and successful in their careers (Savage & Brown, 2014). Moreover, teachers play a pivotal role in scaffolding students' digital citizenship skills, ensuring responsible and ethical use of technology in learning contexts. Furthermore, the transformative potential of technology integration challenges abounds in its implementation. Issues such as access to technology, digital equity, and professional development loom large, underscoring the need for a comprehensive approach to address systemic barriers. Moreover, concerns regarding the overreliance on technology and its potential to exacerbate educational inequalities necessitate nuanced strategies for harnessing its benefits while mitigating risks.

There have been many studies on different factors affecting the effectiveness of teachers' teaching and job performance. Integrating technology into teaching significantly enhances teachers' productivity and performance in the classroom. The study showed that teachers and students are considered competent class members because they use innovative teaching methods that incorporate technology into the learning process (Hero, 2019). There was a correlation between teaching effectiveness and teachers' performance. Indicates that there is still a substantial amount of work that can be completed. The relationship between teachers' teaching effectiveness and their performance is vital for achieving high-quality teacher education (Mangila, 2022). The investigation intends to fill gaps in the literature on technology integration, teaching effectiveness, and teachers' performance to determine if technology and teaching effectiveness could possibly be incorporated into existing teacher performance in the schools division of Zamboanga del Norte, Sirawai District.

## 2. Theoretical Framework

This study was anchored on the Social Connectivism Theory by George Siemens (2004) which states that learning occurs through the process of connecting nodes or information sources, both human and technological, which leads to the creation of new knowledge. This learning theory emphasizes the importance of social interactions and connections in the process of knowledge acquisition and construction. Social connectivism theory is rooted in the broader constructivist perspective, which posits that learners actively construct their own knowledge through meaningful interactions with their environment. However, social connectivism takes this idea further by highlighting the significance of social networks and digital technologies in facilitating learning. Moreover, the application of social connectivism theory in education has gained considerable attention, particularly in the context of online learning environments. Research has shown that when learners engage in collaborative activities and participate in online communities, they are more likely to develop critical thinking skills, improve their problem-solving abilities, and enhance their overall learning outcomes (Kop, 2011; Veletsianos & Kimmons, 2012).

## 3. Conceptual Framework

The conceptual framework is presented in Figure 1. Part I is the independent variable, which consists of technology integration with six (6) items and teaching effectiveness

categorized into commitment, independent learning, knowledge of the subject matter, and management of learning with five (5) items, respectively. Part II, the dependent variable, is the teachers' performance based on IPCRF supplied by the individual respondents.



Figure 1: Conceptual Framework of the Study

## 4. Statement of the Problem

This study aimed to determine the technology integration and teaching effectiveness and how it affects teachers' performance in Sirawai District, Schools Division of Zamboanga del Norte, during the school year 2022-2023.

Specifically, it sought to answer the following questions:

- 1) What is the respondents' perceived level of technology integration?
- 2) What is the respondents' perceived level of teaching effectiveness in terms of: 2.1 commitment;

2.2 independent learning;

2.3 knowledge of the subject matter; and

2.4 management of learning?

- 3) What is the respondents' level of performance in terms of the Individual Performance Commitment and Review Form (IPCRF)?
- 4) Is there a significant relationship between the respondents' technology integration and teachers' performance?
- 5) Is there a significant relationship between the respondents' teaching effectiveness and teachers' performance?

## 4.1 Hypotheses

**H01:** There is no significant relationship between the respondents' technology integration and teachers' performance.

**H02:** There is no significant relationship between teaching effectiveness and teachers' performance.

## 5. Literature Review

## 5.1 Technology Integration

Technology integration refers to the incorporation of technology resources and tools into various aspects of an organization's or individual's activities to enhance and streamline processes, improve productivity, and achieve specific goals. It involves using technology as an integral part of daily operations and learning. Alternatively, problem-solving rather than as a separate or isolated entity (Teach Educator, 2023). Technology integration can be problematic at times. Having a high ratio of individuals to technological devices can hinder or delay learning and task accomplishment. Some cases have shown that when two individuals interact using advanced technology, it can lead to the development of a more cooperative understanding of social relationships. The success or failure of technology integration is greatly influenced by factors other than the technology itself. The lack of suitable software for the technology being incorporated poses a challenge in terms of software accessibility for students and educators (Yu, 2013).

## 5.2 Teaching Effectiveness

Teaching effectiveness can be described as the amalgamation of cognitive and noncognitive characteristics, including academic qualifications and achievements, clarity of thinking and communication, fluency, teaching methodology, charisma, experience, and socio-personal interaction (Kumari & Padhi, 2014).Teaching effectiveness is a discipline that examines the characteristics of teachers, the classroom environment, teaching techniques, and how they influence students. Teaching effectiveness is the capacity of teachers to educate in a manner that results in the intended change in students' conduct. Teachers' attitudes and characteristics can significantly impact a teacher's performance. (Gupta & Verma, 2021).

#### 5.3 Commitment

The teacher's high level of commitment is the driving force behind fulfilling duties and responsibilities. The teacher is responsible for the tasks, and their commitment builds trust and increases motivation to achieve the best results (Park *et al.*, 2021). Organizational commitment is a multifaceted concept. The combined effect comprises three core themes: affective, continuance, and normative commitment. Organizational commitment is a crucial element in human resource management that pertains to employees' loyalty and adherence to their organization's goals and objectives (Lambert *et al.*, 2020). Teacher commitment is a vital concept in the realm of education, especially in emerging countries. Teachers often face difficult situations and have access to limited resources. Their dedication to their students and their profession is crucial in creating a productive learning environment (Al-Zoriqi, 2019).

## 5.4 Independent Learning

An autonomous learner has the capacity to make informed decisions, set goals, and choose the most appropriate methods to fulfill their educational needs (Main, 2022). Effective communication is essential for promoting learning. The teacher can share knowledge with students and foster a friendly environment that promotes the exchange of ideas, opinions, and emotions among learners. Independent learning is a method of acquiring knowledge in which learners possess authority and responsibility over their own learning. They exercise control, guide, and assess their own learning and acquire knowledge as a result of their actions (Obilor, 2019).

## 5.5 Knowledge of the Subject Matter

Skilled educators have a thorough grasp of the content in their specific subjects. Having a teacher who is highly knowledgeable in their specific field is crucial in the classroom. A teacher must have passion, patience, effective communication skills, and other qualities that characterize a good teacher. The teacher must exhibit a deep understanding and expertise in the subject matter they are teaching, showcasing a thorough command of the content (Obilor, 2019). The teacher should possess a deep understanding of both the content and structure of the subject, going beyond basic facts and procedures. Substantive structures are the various ways in which the core concepts and principles of a discipline are organized to incorporate its facts. The user's text is succinct and lacks details. (Denbel, 2023).

## 5.6 Management of Learning

Learning management involves teachers supervising and controlling the educational activities within the classroom. Effective management plays a crucial role in the successful implementation of educational initiatives. Teachers need to efficiently oversee the utilization of media and other resources to improve their performance (Lian, 2021). Teachers' insufficient handling of learning can be traced back to a lack of thorough comprehension of learning management. Teachers' performance is impacted by a lack of understanding of quality learning management, leading to suboptimal learning administration (Ratnawati, 2018). Learning management plays a crucial role in supervising the interaction and communication between teachers, students, and learning resources. The interaction among the three components is strongly connected to various factors that enhance learning, including infrastructure, instructional methods, learning resources, academic environment management, funding, and systematic evaluation of learning (Ginting, Neliwati, Nazri, & Hutagaol, 2022).

## 5.7 Teachers' Performance

Performance is the outcome, whether quantitative or qualitative, achieved in relation to established objectives. Performance evaluation is a management system created by supervisors to assess employees' performance success within the organization. The auditor fills out an assessment form that evaluates various dimensions of the employee, and then discusses the assessment results with the employee. Performance evaluation assesses all aspects of an individual, rewards achievements, and addresses deficiencies (Özgenel & Mert, 2019). Performance refers to the individual's actions and outcomes that are separate from the intended objective. Measurable actions are crucial for assessing performance. It is important to differentiate between the behaviors and the results of performance (Azeem, 2018).

## 6. Methodology

## 6.1 Method Used

The study utilized survey and descriptive-correlational research methods. The researchers utilized the survey method to collect data on technology integration, teaching effectiveness, and teacher performance through a questionnaire. A survey is a research method described by Check & Schutt (2012) as a collection of information from a sample of individuals through their responses to questions. Campbell and Stanley (1963) who describe correlational research as "*the systematic investigation of relationships among two or more variables, without any experimental manipulation of those variables*". Correlational research is a non-experimental method where a researcher measures variables and evaluates the statistical relationship between technology integration, teaching effectiveness and teacher performance without interference from other variables.

#### 6.2 Research Environment

The study was conducted in Sirawai District, Schools Division of Zamboanga del Norte, Philippines. On the southern shore of the Zamboanga Peninsula, on the island of Mindanao, lies a municipality called Sirawai. No one knows how and when Sirawai started as a community.

## 6.3 Respondents of the Study

The teachers of Sirawai District, Schools Division of Zamboanga del Norte served as research respondents. The researcher used complete enumeration.

#### 6.4 Research Instrument

The questionnaire used in the study consisted of three parts. Part I: Technology Integration, adopted from Hero, J. L. (2019) which consists of six (6) items; Part II: Teaching Effectiveness, adopted from Agsalud, P. L. (2017), which consists of twenty (20) items divided into four (4) indicators, namely: commitment, independent learning, knowledge of subject matter and management of learning; Part III: Teacher Performance is the actual performance of teachers' taken from IPCRF of individual respondents.

#### 6.5 Scoring Procedure

#### A. Technology Integration

Scale	Range of Values	Description	Interpretation
5	4.21-5.00	Strongly agree	Very Great Extent
4	3.41-4.20	Agree	Great Extent
3	2.61-3.40	Somewhat Agree	Extent
2	1.81-2.60	Disagree	Less extent
1	1.00-1.80	Strongly Disagree	None at all

#### **B.** Teaching Effectiveness

Scale	Range of Values	Description	Interpretation
5	4.21-5.00	Strongly agree	Very High
4	3.41-4.20	Agree	High
3	2.61-3.40	Somewhat Agree	Average
2	1.81-2.60	Disagree	Low
1	1.00-1.80	Strongly Disagree	Very Low

#### C. Teachers' Performance

Scale	Range of Values	Description	Interpretation
5	4.21-5.00	Outstanding	Very High
4	3.41-4.20	Very Satisfactory	High
3	2.61-3.40	Satisfactory	Average
2	1.81-2.60	Unsatisfactory	Low
1	1.00-1.80	Poor	Very Low

#### 6.6 Statistical Treatment of the Data

Presented below are the statistical tools utilized in the treatment and analysis of the data gathered.

- 1) **Weighted Mean.** This is used to quantify the respondents' ratings on the technology integration, teaching effectiveness and teachers' performance.
- 2) **Standard Deviation.** This is used to determine the homogeneity and heterogeneity of the employee's score, where SD ≤ 3 is homogenous and SD > 3 is heterogeneous Aiken & Susane (2001); Refugio, Galleto, & Torres (2019).
- 3) **Spearman Rank-Order Correlation Coefficient.** This is used to determine the correlation between technology integration, teaching effectiveness, and teachers' work performance. The following guide in interpreting the correlation value proposed by Cohen, West, and Aiken (2014) was utilized in this study:

Value	Size	Interpretation
±0.50 to ±1.00	Large	High positive/negative correlation
±0.30 to ±.49	Medium	Moderate positive/negative correlation
±0.10 to ±0.29	Small	Low positive/negative correlation
±0.01 to ±0.09	Negligible	Slight positive/negative correlation
0.0	No correlation	

#### 7. Results

Technology Integration in Teaching	Mean	SD	Description	Interpretation
1. Technology Operations and Concepts.	4.50	0.59	Strongly Agree	Very Great Extent
2. Planning and Designing Learning Environments and Experiences.	4.49	0.59	Strongly Agree	Very Great Extent
3. Assessment and Evaluation.	4.53	0.64	Strongly Agree	Very Great Extent
4. Productivity and Professional Practices.	4.61	0.61	Strongly Agree	Very Great Extent
5. Social, Ethical, Legal, and Human Issues.	4.50	0.81	Strongly Agree	Very Great Extent
6. Planning of Teaching According to Individual Differences and Special Needs.	4.61	0.60	Strongly Agree	Very Great Extent
Overall	4.52	0.65	Strongly Agree	Very Great Extent

Table 1: Perceived Level of Technology Integration

Table 1 portrays the perceived level of technology integration in teaching. The data affirms that the respondents "strongly agree" that they utilized technology operations and concepts in the planning and designing learning environments and experiences, assessment and evaluation, productivity and professional practices, considering social, ethical, legal, and human issues, and in the planning of teaching according to the individual differences and special needs of the learners. Overall, technology integration is to a great extent (mean = 4.52, SD = 0.65) in the secondary schools in Sirawai District. This implies that the teachers recognize the value of technology integration in teaching and are greatly equipped with the technological skills necessary for teaching. This finding is supported by Hero (2019) who revealed that teachers are greatly equipped with regards to technological-pedagogical skills needed in technology-based teaching and Internet-based technologies.

#### 7.1 Perceived Level of Teaching Effectiveness

A. Commitment	Mean	SD	Description	Interpretation
1. Demonstrate sensitivity to students' ability	4.61	0.57	Strongly Agree	Very High
to attend and absorb content information.	4.01	0.57	Strongly Agree	very riigh
2. Integrates sensitively his/her learning				
objectives with those of the students in a	4.55	0.62	Strongly Agree	Very High
collaborative process.				
3. Makes self-available to students beyond	4.50	0.65	Strongly Agroo	Vom Uich
official time.	4.50	0.05	Strongly Agree	Very High
4. Regularly comes to class on time, well-				
groomed, and well-prepared to complete	4.62	0.55	Strongly Agree	Very High
assigned responsibilities.				

Table 2: Perceived Level of Teaching Effectiveness in Terms of Commitment

#### Alpen Arcayena Caoile, James O. Baes, Leo C. Naparota TECHNOLOGY INTEGRATION, TEACHING EFFECTIVENESS AND TEACHERS' PERFORMANCE IN SIRAWAI DISTRICT SCHOOLS DIVISION OF ZAMBOANGA DEL NORTE, PHILIPPINES

5. Keeps accurate records of students' performance and prompt submission of the same.	4.68	0.50	Strongly Agree	Very High
Overall	4.59	0.58	Strongly Agree	Very High

Table 2 reflects the perceived level of teaching effectiveness in terms of commitment. The respondents "strongly agree" that they show their commitment in demonstrating sensitivity to the student's ability to attend and absorb content information, integrate their learning objectives sensitively with those of the students in a collaborative process, they are available to the students beyond official time, regularly come to class on time, well-groomed and well-prepared to complete assigned responsibilities, and keep accurate records of student's performance and prompt submission of the same. Overall, the respondents maintain that their commitment to teaching is very high. This finding reveals that the commitment of secondary school teachers in Sirawai District is very high. This finding is similar to the finding of Agsalud (2017), who revealed that the level of teaching effectiveness in terms of commitment is very satisfactory.

Table 3: Perceived Level of Teaching Effectiveness in Terms of Independent Learning				
B. Independent Learning	Mean	SD	Description	Interpretation
1. Creates teaching strategies that allow students	4.65	0.53	Strongly	Very High
to practice using concepts they need to understand			Agree	
2. Enhances students' self-esteem and gives due	4.57	0.56	Strongly	Very High
recognition to student's performance.	4.37	0.56	Agree	very riigh
3. Allows students to create their own course with	4.41	0.63	Strongly	Vom Hich
an objective and realistically defined	4.41	0.65	Agree	Very High
4. Allow students to think independently and make	4 50	0.02	Strongly	Vora Lich
their own decisions.	4.50	0.62	Agree	Very High
5. Encourage students to learn beyond what is required			Chuomalas	
and help/guide the students on how to apply the	4.57	0.56	Strongly	Very High
concepts learned.			Agree	
0	4 5 4	0.50	Strongly	Vers II als
Overall	4.54	0.59	Agree	Very High

Table 3: Perceived Level of Teaching Effectiveness in Terms of Independent Learning

Table 3 discloses the perceived level of teaching effectiveness in terms of independent learning. As can be gleaned in the table, the respondents "strongly agree" that they create teaching strategies that allow students to practice using concepts they need to understand, enhance students' self-esteem and give due recognition to student's performance, allow students to create their own course with objective and realistically defined and think independently and make their own decisions, and encourage students to learn beyond what is required and help/guide the students how to apply the concepts learned. Overall, teaching effectiveness in terms of independent learning obtained a mean of 4.54 with a standard deviation of 0.59, which is described as "strongly agree" and interpreted as "very high". This finding implies that the level of independent learning in secondary schools in Sirawai District is very high. This finding is aligned with

Agsalud (2017), who argued that the level of teaching effectiveness in terms of teaching for independent learning is very satisfactory.

C. Knowledge of the Subject Matter	Mean	SD	Description	Interpretation
1. Demonstrates mastery of the subject matter	4.60	0.53	Strongly Agree	Very High
2. Draws and share information on the state of the art of theory and practice in his discipline.	4.55	0.58	Strongly Agree	Very High
3. Integrates subject to practical circumstance and learning intents/purposes.	4.53	0.56	Strongly Agree	Very High
4. Explains the relevance of present topics to the previous lessons.	4.66	0.51	Strongly Agree	Very High
5. Demonstrates up-to-date knowledge and/or awareness on current trends and issues of the subject.	4.61	0.54	Strongly Agree	Very High
Overall	4.59	0.54	Strongly Agree	Very High

**Table 4:** Perceived Level of Teaching Effectivenessin Terms of Knowledge of the Subject Matter

Table 4 illustrates the perceived level of teaching effectiveness in terms of knowledge of the subject matter. The respondents "strongly agree" that their knowledge of the subject matter is shown by demonstrating mastery of the lesson, drawing and sharing information on the state of the art of theory and practice in their respective discipline, integrating subject to practical circumstances and learning intents/purposes, explain the relevance of present topics to the previous lessons, and demonstrate up-to-date knowledge and/or awareness on current trends and issues of the subject. Overall, the respondents "strongly agree" that their knowledge of the subject matter is very high. This finding can be attributed to the fact that secondary school teachers are teaching/handling their major subjects. This finding is confirmed by Agsalud (2017), who asserted that the level of teaching effectiveness in terms of knowledge of the subject matter is very satisfactory.

Effectiveness in Terms of Management of Learning					
D. Management of Learning	Mean	SD	Description	Interpretation	
1. Creates opportunities for intensive and /or extensive contribution of students in the class activities.	4.62	0.54	Strongly Agree	Very High	
2. Assume roles as facilitator, resource person, coach, inquisitor, instigator, and referee in drawing students to contribute to knowledge and understanding of the concept at hand.	4.61	0.52	Strongly Agree	Very High	
3. Designs and implements learning conditions and experiences that promote healthy exchange and/or confrontations.	4.55	0.62	Strongly Agree	Very High	

**Table 5:** Perceived Level of Teaching Effectiveness in Terms of Management of Learning

#### Alpen Arcayena Caoile, James O. Baes, Leo C. Naparota TECHNOLOGY INTEGRATION, TEACHING EFFECTIVENESS AND TEACHERS' PERFORMANCE IN SIRAWAI DISTRICT SCHOOLS DIVISION OF ZAMBOANGA DEL NORTE, PHILIPPINES

4. Structures/restructures learning and teaching/learning context to enhance the attainment of collective learning objectives.	4.50	0.58	Strongly Agree	Very High
5. Use of instructional materials (audio/video materials, field trips, film showing, computer-aided instruction, etc.) to reinforce the learning process.	4.65	0.53	Strongly Agree	Very High
Overall	4.59	0.56	Strongly Agree	Very High

Table 5 exhibits the perceived level of teaching effectiveness in terms of management of learning. The result attests that the respondents "strongly agree" that they create opportunities for intensive and/or extensive contribution of students in the class activities, assume roles as facilitator, resource person, coach, inquisitor, instigator, and referee in drawing students to contribute to knowledge and understanding of the concept at hand, design and implement learning conditions and experiences that promote healthy exchange and/or confrontations, structure/restructure learning and teaching/learning context to enhance the attainment of collective learning objectives, and use of instruction, etc.) to reinforce learning process. Overall, management of learning obtained a mean of 4.59 with a standard deviation of 0.56, which is described as "strongly agree" and interpreted as "very high". This finding declares that the management of learning of the teachers in secondary schools of Sirawai District is very high. This finding agrees with Agsalud (2017), who attested that the level of teaching effectiveness in terms of the management of learning is very satisfactory.

Teaching Effectiveness	Mean	SD	Description	Interpretation			
A. Commitment	4.59	0.58	Strongly Agree	Very High			
B. Independent Learning	4.54	0.59	Strongly Agree	Very High			
C. Knowledge of the Subject Matter	4.59	0.54	Strongly Agree	Very High			
D. Management of Learning	4.59	0.56	Strongly Agree	Very High			
Overall	4.58	0.57	Strongly Agree	Very High			

Table 6: Summary of the Perceived Level of Teaching Effectiveness

Table 6 conveys the summary of the perceived level of teaching effectiveness. The data manifests that the teaching effectiveness of secondary schools in Sirawai District is very high (mean = 4.58, SD = 0.57). This finding can be attributed to the fact that the Department of Education is strengthening its instructional supervision as part of its learning recovery plan after the COVID-19 pandemic. This finding is confirmed by Agsalud (2017), who claimed that the level of teaching effectiveness in terms of commitment, knowledge of the subject matter, teaching for independent learning, and management of learning is very satisfactory.

#### 7.2 Level of Teachers' Performance

Scale	Range of Values	Description	F	%	Weighted Mean	Description
1	Below 1.499	Poor	0	0.000	4.066	Very Satisfactory
2	1.500-2.499	Unsatisfactory	0	0.000		
3	2.500-3.499	Satisfactory	0	0.000		
4	3.500-4.499	Very Satisfactory	111	93.277		
5	4.500	Outstanding	8	6.723		

Table 7: Level of Teachers' Performance

Table 7 shows the level of teachers' performance based on their Individual Performance Commitment and Review Form (IPCRF). The result avers that one hundred eleven (111) or 93.277% of the teachers obtained a very satisfactory rating. At the same time, eight (8) or 6.723%, obtained an outstanding rating. Overall, the level of teachers' performance is 4.066 which is described and interpreted as very satisfactory. This finding indicates that the secondary school teachers of Sirawai District have very satisfactory performance. This further indicates that the teachers are exerting efforts to obtain a very satisfactory rating as a requirement for promotion and performance-based bonuses. This finding is supported by Bellino (2024), who averred that the level of teachers' performance in terms of RPMS-IPCRF is very satisfactory.

Technology Integration and Teaching Effectiveness	Correlation Value and p-value	Teacher Performance	Interpretation	
Technology Integration	Q-value	-0.075	Negligible/Slight Negative Correlation Not Significant	
Technology Integration	p-value	0.416		
Commitment	٥-value	-0.066	Negligible/Slight Negative	
Commitment	p-value	0.477	Correlation Not Significant	
Indonondont Looming	Q-value	-0.175	Small/Low Negative	
Independent Learning	p-value	0.057	Correlation Not Significant	
Knowledge of the Subject	Q-value	-0.194	Small/Low Negative	
Matter	p-value	0.035	Correlation Significant	
Management of Learning	Q-value	-0.128	Small/Low Negative	
Management of Learning	p-value	0.165	Correlation Not Significant	
Overall Teaching	Q-value	0.023	Negligible/Slight Positive	
Effectiveness	p-value	0.808	Correlation Not Significant	

**Table 8:** Test of Relationships Between the Levels of Technology Integration in Teaching, Teaching Effectiveness and Teacher Performance

Table 8 shows the test of relationships between the levels of technology integration and teaching effectiveness and teachers' performance. Using the Spearman Rank-Order Correlation Coefficient (Spearman rho), the result reveals that there is no significant relationship between the level of technology integration and teachers' performance. Thus, the null hypotheses for these two variables are not rejected. This means that the teachers' performance is not dependent on technology integration. This finding further

means that technology integration has no significant effect on the teachers' performance. This finding contradicted Hero's findings (2019), which argued that the six dimensions of technology integration are correlated with teaching performance. On the other hand, there is no significant relationship between the levels of teaching effectiveness and teachers' performance. Thus, the null hypotheses on these two variables are not rejected. This finding indicates that the teachers' performance is not dependent on teaching effectiveness. This finding further indicates that there is no significant effect on the teachers' performance. This finding contradicts the findings of Ozgel & Mert (2019), which asserted that there is a moderate and positive relationship between teachers' performances and teaching effectiveness.

## 8. Conclusions

The study concludes that technology integration in teaching is quite widespread in the Sirawai district, implying that teachers appreciate the need for technology integration in teaching and are well-equipped with the technological abilities required for teaching. The high level of teachers teaching effectiveness in terms of commitment, subject matter knowledge, teaching for independent learning, and learning management can be attributed to the Department of Education strengthening instructional supervision as part of its learning recovery plan following the COVID-19 pandemic. It has also been proved that the secondary school teachers in Sirawai District perform quite well. This further implies that teachers are working hard to achieve a very satisfactory rating as a prerequisite for promotion and a performance-based incentive.

#### **Conflict of Interest Statement**

The authors declare no conflicts of interest.

## References

- Agsalud, P. L. (2017). Teaching effectiveness of the teacher education faculty members in Pangasinan State University Asingan Campus, Philippines. *Asia Pacific Journal of Multidisciplinary Research*, 5(1), 16-22.
- Aiken, L., & Susane, G. (2001). *West Multiple Progression*. Newbury Park, California: Sage Publishing, Inc.
- Al-Zoriqi, M. (2019). The Mediating Effect of Organizational Teachers' Commitment on Relationship Transformational the between Leadership and Teachers' Performance: А Study in Yemeni Public Schools. Retrieved from https://www.semanticscholar.org/paper/The-Mediating-Effect-of-Organizational-Teachers'-on-Al-Zoriqi/165f4a35d1e81900568b8c875e190e9d7d6ca1c7
- Azeem, N. et al. (2018). Exploring teacher performance: A review of concepts and<br/>approaches.Retrievedfrom

https://www.researchgate.net/publication/329880401\_Exploring\_Teacher\_Perfor mance\_A\_Review\_of\_Concepts\_and\_Approaches

- Bellino, C. (2024). Self-esteem and Teachers' Performance in Polanco I District, Schools Division of Zamboanga del Norte. Retrieved from https://hal.science/hal-04104351v1/document
- Campbell, D. T., & Riecken, H. W. (1968). Quasi-experimental design. *International encyclopedia of the social sciences*, 5(3), 259-263.
- Check, J., & Schutt, R. K. (2011). Research methods in education. Sage Publications.
- Demissie, E. B., Labiso, T. O., & Thuo, M. W. (2022). Teachers' digital competencies and technology integration in education: Insights from secondary schools in Wolaita Zone, Ethiopia. Social Sciences & Humanities Open, 6(1), 100355.
- Denbel, D. G. (2023). Competency Level of Teachers' Subject Matter Knowledge as a Compulsory for Teaching Secondary School Mathematics: A Case Study on Postgraduate Diploma Trainee. Education Research International, 2023.
- Ertmer, P. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration?. *Educational technology research and development*, 53(4),25-29.
- Ginting, B. S., Neliwati, N., Nazri, E., & Hutagaol, A. L. (2022). The Implementation of Learning Management as an Effort to Improve Students' Achievement at Elementary School. *Jurnal Basicedu*, 6(6), 9752-9762.
- Gupta, M., & Verma, G. (2021). Teaching Effectiveness of School Teachers: A Theoretical Perspective. *International Journal of Creative Research Thoughts (IJCRT)*, 9(10), 172-179.
- Hero, J. L. (2019). The Impact of Technology Integration in Teaching Performance. *Online Submission*, 48(1), 101-114.
- Kop, R. (2011). The challenges to connectivist learning on open online networks: Learning experiences during a massive open online course. *International Review of Research in Open and Distributed Learning*, 12(3), 19-38.
- Kumari, A., & Padhi, S. (2014). A study of teacher effectiveness of secondary school teachers with reference to certain demographic variables. *International Journal of Advanced Research*, 2(12), 26-32.
- Lambert, E., Keena, L., Leone, M., May, D., & Haynes, S. (2020). The effects of distributive and procedural justice on job satisfaction and organizational commitment of correctional staff. *Soc. Sci. J.* 2020, *57*, 405–416.
- Lian, B. (2021). The Impact of Learning Management and Teacher Performance on Student's Learning Outcomes in Junior High School at Tulung Selapan District. In International Conference on Education Universitas PGRI Palembang (INCoEPP 2021) (pp. 56-60.
- Main, P. (2022). Independent Learning: A teacher's guide. Retrieved from https://www.structural-learning.com/post/independent-learning-a-teachers-guide.

- Mangila, B. (2022). Teaching Effectiveness and Work Performance of General Education Instructors in a Higher Education Institution in the Philippines. *Akademika* 92(3), 2022: 91-99. https://doi.org/10.17576/akad-2022-9203-07.
- Mayer, R. (2009). Multimedia Learning. Cambridge University Press.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). *Evaluation of evidencebased practices in online learning: A meta-analysis and review of online learning studies.* US Department of Education.
- Obilor, E. I. (2019). Influence of teaching effectiveness on students' learning outcome. *International Journal of Innovative Social & Science Education Research*, 7(2), 37-48.
- Özgenel, M., & Mert, P. (2019). The role of teacher performance in school effectiveness. International *Journal of Education Technology and Scientific Researches (IJETSAR)* 4(2).
- Pittman, T. T., & Gaines, T. T. (2015). Technology integration in third, fourth and fifthgrade classrooms in a Florida school district. *Educational Technology Research & Development*, 63(4), 539-554.
- Ratnawati. (2018). Pengaruh manajemen pembelajaran terhadpa kinerja guru dalam mewujudkan prestasi belajar siswa. *Khazanah Akademia, Volume* 2 No 1, 63-73.
- Refugio, C. N., Galleto, P. G., & Torres, R. (2019). Competence Landscape of Grade 9 Mathematics Teachers: Basis for an Enhancement Program. *Cypriot Journal of Educational Sciences*, 14(2), 241-256.
- Savage, A. J., & Brown, D. S. (2014). Examining past studies of the effects of classroom technology implementation in terms of student attitude and academic achievement. *Global Education Journal*, *4*, 20-27.
- Siemens, G. (2004). Connectivism: A learning theory for the digital age. Retrieved from https://jotamac.typepad.com/jotamacs\_weblog/files/connectivism.pdf
- TeachEducator. (2023). What is Technology Integration? & Its Advantages. Retrieved from https://teacheducator.com/technology-integration/.
- Veletsianos, G., & Kimmons, R. (2012). Networked participatory scholarship: Emergent techno-cultural pressures toward open and digital scholarship in online networks. *Computers & Education*, 58(2), 766-774.
- Yu, C. (2013). The Integration of Technology in the 21st Century Classroom: Teachers' Attitudes and Pedagogical Beliefs Toward Emerging Technologies. *Journal of Technology Integration in the Classroom*. 5(1): 6.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a Creative Commons Attribution 4.0 International License (CC BY 4.0).