IMPLEMENTATION OF SILVERTEK LEARNING MANAGEMENT SYSTEM VIS-À-VIS TEACHERS' AND PUPILS' PERFORMANCE

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Abstract

This study reveals the relationship between the implementation of SILVERTEK Learning Management System and teachers and pupils' performance in elementary schools in Sibutad District. It examined the association between SILVERTEK LMS indicators and the overall teachers' performance. Using a structured and validated researcher-made questionnaire tool, data were gathered through surveys conducted by School Heads and Teachers. The findings revealed that there was no significant difference on the ratings of the respondents in the level of implementation of SILVERTEK LMS. Moreover, performance of teachers across all domains indicates that teachers are performing at a high level, with specific strengths in certain areas like Curriculum Planning and Assessment and Reporting while Content Knowledge and Pedagogy has the lowest rating among other domains. Furthermore, there was a significant positive correlation between the implementation of SILVERTEK LMS and the teachers' performance. However, pupils' performance has indicated satisfactory and found out that there was no significant relationship between the implementation of SILVERTEK LMS and pupils' performance. It is recommended to implement SILVERTEK LMS in all schools to positively influence teachers' performance and by making the system more attuned to pupils' needs to add interactive, student-focused features, tailored interventions and having a strong implementation in the classroom that may engage pupils and enhance learning outcomes.

Keywords and phrases: *learning management system, silvertek lms, teachers' performance, pupils' performance, descriptive-correlational*

Introduction

As an essential tool to facilitate teaching and learning, the use of Learning Management System which is part of the use of Information and Communication Technology in education has become a critical challenge among institutions. In the Philippines, there are several Learning Management System (LMS) used to facilitate learning, in fact, the Schools Division of Zamboanga del Norte issued a Division Memorandum no. 20 s. 2024 about the policy and guidelines on the implementation of SILVERTEK Learning Management System (LMS) for the teachers to use in their daily classroom teaching. This innovation aims to establish a one-stop learning platform, evaluate learning through electronic division testing, implement tools to track students' progress, create interactive learning activities through gamification and reduce paper-intensive tasks for teachers and it is required to be used across all schools in the entire division.

One significant aspect of the current teacher performance situation in the Schools Division of Zamboanga del Norte is the demand for adaptability. Teachers are expected to integrate technology into their teaching methods and accommodate diverse learning styles within their classrooms. This adaptability is ensuring that every learner has equitable access to quality education. Based on the 2023 Division Achievement Test in the Schools Division of Zamboanga del Norte, there is a high percentage of frustration level of learners, low numeracy and literacy skills in key stages 1 and 2, and poor monitoring system on the learning delivery. This manifested that there is a need for intervention to catch due to the problems identified. The Schools Division of Zamboanga del Norte opts to adopt the National Learning Recovery Program of DepEd (DO 13 s. 2023) through the implementation of SILVERTEK LMS as one of its interventions to improve numeracy and literacy of learners.

However, the implementation of SILVERTEK LMS brought several issues from the teachers. There are some teachers that are not using the LMS due to limited materials, digital literacy, technical issues encountered, less technical assistance given from different schools and limited time given on the training of teachers on the use of the LMS. Despite the implementation efforts of the Division personnel and ICT coordinators, the concerns among teachers emphasize a gap between the system's intended purpose and the situation happened in the schools. These findings aggregate the reality that SILVERTEK LMS struggles with challenges pertaining to the implementation of the system in different schools. The researcher as a classroom teacher himself, realized that these issues in the school and other public schools in Sibutad District, Schools Division of Zamboanga del Norte should be addressed, he strongly believes that full implementation of SILVERTEK LMS holds the idea of enhancing the teachers' and pupils' performance through access of learning resources, tracking of pupils' progress, accessibility of quality assured questions for examinations and administration of division achievement and diagnostic testing.

Thus, the researcher decided to conduct this study to find out the level of the implementation of SILVERTEK LMS in the elementary schools of the Municipality of Sibutad under the Schools Division of Zamboanga del Norte. He also looked into the level of teachers and pupils' performance and whether the level of the implementation of SILVERTEK LMS significantly affects the teachers and pupils' performance. Hopefully, the study's result would serve as basis for the division personnel of DepEd Zamboanga del Norte to adopt and consider the intervention plan that will primarily benefit the teachers and pupils.

Materials and Methods

The study employed quantitative research with descriptive correlational design.

Research Environment

The study was conducted among elementary schools in Sibutad District, Schools Division of Zamboanga del Norte. The municipality of Sibutad has a total of fourteen (14) public elementary schools and one (1) primary school both in coastal and mainland areas. The primary focus of this study centered on the elementary schools within the municipality that had adopted on the use of SILVERTEK LMS. These schools were situated in rural areas across the 16 barangays within the municipality, exhibiting varying enrollment sizes, ranging from very small schools (with 99 students and below) to medium schools (with 500 pupils and above) provided with technological tools and equipment under the Department of Education's Computerization Program and MOOE. The study took a thorough approach to include a wide variety of schools in the municipality of Sibutad, accounting for differences in geography and enrollment size. This helped create a well-rounded understanding of the teaching and learning environment, offering valuable insights for enhancing and developing education in the area.

Respondents of the Study

The respondents of the study involved the fourteen (14) school heads and fifty (50) teachers. The teachers were currently teaching in Grade IV, V and VI of the municipality of Sibutad categorized as Teachers I - III or Master Teachers.

Table 1

Distribution of Respondents per School

School	Total No. of School Heads	Total No. of Grade IV, V and VI Teachers
School A	1	3
School B	1	3
School C	1	3
School D	1	3
School E	1	3
School F	1	6
School G	1	3
School H	1	3
School I	1	3
School J	1	3
School K	1	3
School L	1	8
School M	1	3
School N	1	3
Total	**14**	**50**

Research Instrument

This study used a researcher-made questionnaire that served as a data gathering instrument. The questionnaire was divided into two parts; the first part of the questionnaire focuses on the profile of the respondents in terms of age, sex, position, length of service, and educational qualification. This information was essential in understanding how different factors may influence their perceptions and responses regarding the SILVERTEK LMS implementation and their performance.

The second part of the questionnaire was based on the indicators of SILVERTEK LMS tailored for all teachers and school heads, aimed to evaluate the level of the implementation of SILVERTEK LMS. The statements were meticulously crafted and allowed teachers and school heads to provide feedback, enabling the researcher to gain a comprehensive understanding of the program's strengths, weaknesses, and areas for improvement. It employed the five descriptors in each indicator.

Validation of the Research Instrument

The research instrument was validated and subjected to reliability testing. First, it was submitted to the adviser for content validation, to the Dean of the Graduate School and to the system developer of SILVERTEK LMS. Moreover, the instrument was administered to ten (10) master teachers and ten (10) teachers to determine its reliability and to test the validity of the questionnaire, the researcher used Cronbach's Alpha to identify the level of internal consistency among the items and to measure the constructs related to the participants' perceptions towards SILVERTEK LMS implementation indicating a high level of internal consistency among the items. This suggests that the items in the survey are strongly correlated and measure a cohesive construct related to participants' perceptions towards SILVERTEK LMS implementation.

Addressing Methodological Limitations

To strengthen the study and mitigate possible methodological concerns, the following were implemented:

The study focused on the level of implementation of the SILVERTEK LMS and its significance on teachers and pupils' performance in the education sector. Moreover, the study used a quantitative research method, including surveys, to collect and analyze data from different schools. While the study aimed to provide insights and recommendations to improve the implementation of the SILVERTEK LMS, there are certain limitations that were be considered. First, the research is limited to the public elementary schools in the Municipality of Sibutad under the Zamboanga del Norte division. Second, the study focused primarily on the level of the SILVERTEK LMS impact on teachers' and pupils' performance. Lastly, the research was conducted within the SY 2024-2025, which may limit the depth and breadth of data collection and analysis.

Scoring Procedure

The respondents were asked to assess the level of SILVERTEK LMS implementation in the schools they are currently working during the SY 2024-2025. This assessment was done by indicating the teacher's level of implementation for each indicator enumerated in Part II of the questionnaire. The respondents utilized a researcher-made rating scale, as presented in Table 2, to rate each indicator.

Table 2

Rating Scale for SILVERTEK LMS Level of Implementation

Numerical Rating	Extent of SILVERTEK LMS Implementation	Interpretation
4. 21 5.00 (5)	Very Well Implemented	The teacher demonstrates an exceptional level of efficiency and effectiveness in implementing the SILVERTEK LMS. The teacher consistently uses and implement all the functions of the system to have an outstanding outputs and outcomes in their teaching practices. He/ She goes beyond meeting the required standards and fully integrate innovative teaching methods and approaches through SILVERTEK LMS.
3.41-4.20 (4)	Well Implemented	The teacher exhibits a high level of efficiency and effectiveness in implementing the SILVERTEK LMS. The teacher consistently produces and implement high-quality teaching outputs and outcomes that meet or exceed standards, actively engage in training opportunities to effectively utilize the SILVERTEK LMS and able to incorporate various teaching strategies to enhance teacher's performance.
2.61-3.40 (3)	Implemented	The teacher is efficient and effective in implementing SILVERTEK LMS. He/ She demonstrates a commitment to continuous improvement and actively engages training opportunities.
1.81-2.60 (2)	Less Implemented	The teacher implements the SILVERTEK LMS, which is somewhat limited in efficiency and effectiveness.
1.00-1.80 (1)	Not Implemented	The teacher did not initiate or engage or use the SILVERTEK LMS. The system has not been implemented at all by the school leaders, and there is no evidence of significant efforts toward the use of the system.

Results and Discussions

Profile of the Respondents

The respondents came from varied backgrounds, including differences in age, sex, position, length of service, and educational qualification. This diversity reflected the broad range of experiences and perspectives among teachers in Sibutad District, providing a comprehensive view of the study.

Age. Table 3 shows the age distribution of respondents, divided into two categories: school heads and teachers. Among school heads, there were no respondents under 35 years or in the 36-45 years age range. However, 4 school heads (28.57%) fall within the 46-55 years age group, and 10 school heads (71.43%) were aged 56 years and above.

A total of 12 teachers (24%) were 35 years or younger, 9 teachers (18%) were between 36 and 45 years, 13 teachers (26%) were in the 46-55 years range, and 16 teachers (32%) were aged 56 years and above. The data revealed that the school heads in this study were mostly older, with a large proportion (71.43%) being 56 years or older. In contrast, the teachers showed a notable proportion (32%) who were 56 years or older, explained that teachers in Sibutad District were dominated by older educators. The lack of younger school heads (under 46) suggested that leadership positions were more likely to be held by more experienced and senior individuals.

Steiner, L. and Kowal, J. (2023) on the study titled "The Age Profile of School Leadership: Trends and Implications for Succession Planning" examined the age distribution of school leaders and teachers across multiple countries and highlights the trend of older individuals holding leadership positions in education. The study supported the observation that leadership positions were more likely to be held by older and more experienced individuals while teachers show a broader range of ages. It highlighted the growing trend of older teachers and the challenges this poses for planning and leadership development in schools.

Table 3

Age of the Respondents

Categories	School Heads		Teachers	
	F	P	F	P
35 years and below	-	-	12	24.00
36 – 45 years	-	-	9	18.00
46 – 55 years	4	28.57	13	26.00
56 years & above	10	71.43	16	32.00
Total	14	100	50	100

Sex. Table 4 presents the distribution of respondents by sex, categorized by school heads and teachers. Among the school heads, 4 (28.57%) were male and 10 (71.43%) were female. In contrast, among the teachers, 7 (14%) were male and 43 (86%) were female. This showed a clear gender imbalance in both groups, with females being the majority in both categories. The data indicated that in Sibutad District, there were more female than male school heads and teachers, with a particularly high percentage of female teachers. This gender distribution may reflect broader trends in the education system, where teaching especially at the elementary level tends to be a predominantly female profession.

The study of Sharma, A. and Kaur, R. (2023) titled "Gender Imbalance in Educational Leadership and Teaching: A Study of Rural and Urban Schools in Southeast Asia" explored the gender distribution in educational leadership and teaching roles, particularly in rural settings. The researchers found that women make up a disproportionately high percentage of teachers, especially at the primary and secondary levels, a trend that was also evident in school leadership, though with some variation by region. The findings corroborated the data showed a significant gender imbalance with females comprising the majority of both teachers and school leaders especially in rural districts. The study also supported the notion that teaching, particularly in elementary education, continued to be a predominantly female profession, mirroring the gender trends in Sibutad District.

Table 4

Sex of the Respondents

Categories	School Heads		Teachers	
	F	P	F	P
Male	4	28.57	7	14.00
Female	10	71.43	43	86.00
Total	14	100	50	100

Position. Table 5 presents the distribution of respondents based on their positions, distinguishing between school heads and teachers. For school heads, the positions were as follows: 10 (71.43%) hold the position of Head Teacher I, 2 (14.29%) were Head Teacher III, and 1 (7.14%) was Head Teacher IV. Additionally, 1 (7.14%) was a School Principal II. No respondents were in the positions of Head Teacher II or School Principal I. For teachers, the positions were more varied. The majority, 33 teachers (66%), were classified as Teacher III, while 11 (22%) were Teacher I, 3 (6%) were Master Teacher I, and 2 (4%) were Master Teacher II. Only 1 teacher (2%) held the position of Teacher II. The data revealed a significant difference in the positions held by school heads and teachers. School heads were predominantly Head Teachers while the teacher group showed a higher concentration of individuals in the Teacher III position. The positions of Master Teacher and Teacher I and II were held by smaller numbers. This distribution highlighted the hierarchical structure within the education system.

Torre, M. and Cruz, C. (2023) on the study titled "Examining Educational Leadership and Teacher Position Distribution in the Philippines: Trends and Implications" investigated the distribution of educational leadership positions and teaching roles in the Philippine educational system, with particular attention to the hierarchical structures within schools. The study noted that the distribution reflected a strong hierarchical structure in the education system, where leadership was largely concentrated among experienced educators, while teaching positions showed a concentration at the mid-tier level (Teacher III), indicated a larger pool of more experienced classroom teachers. The study directly supported the findings and reflected the broader organizational structure in the Philippines, where career progression within the education system tends to be gradual, with a significant proportion of teachers and school heads occupying mid-level positions.

Table 5

Position of the Respondents

Categories	School Heads		Teachers	
	F	P	F	P
Teacher I			11	22.00
Teacher II			1	2.00
Teacher III			33	66.00
Master Teacher I			3	6.00
Master Teacher II			2	4.00
Head Teacher I	10	71.43		
Head Teacher II	-	-		
Head Teacher III	2	14.29		
Head Teacher IV	1	7.14		
School Principal I	-	-		
School Principal II	1	7.14		
Total	14	100	50	100

Length of Service. Table 6 shows the length of service of respondents comparing school heads and teachers. Among school heads, a significant majority (92.86%) had more than 21 years of service, indicated that leadership positions in the district were predominantly held by long-serving individuals with extensive experience. In contrast, teachers had a more diverse distribution of service lengths, though a majority (54%) had over 21 years of experience, reflected a substantial number of seasoned educators. However, a notable proportion of teachers (8%) had 5 years or less of experience, with 20% falling within the 6-10 years range, suggested that there was also a younger group of teachers. This distribution indicated that while both school heads and teachers had a significant number of long-serving members, there was a greater mix of experience levels among teachers, which may contribute to a balance of veteran knowledge and newer perspectives in the teaching staff.

A recent study by Arceo, S. and Mendoza, J. (2024) titled "Teacher Experience and Its Impact on School Leadership and Student Outcomes: A Longitudinal Analysis," highlighted the importance of long-term experience among school leaders and teachers. The study found that experienced educators, especially those with over 20 years of service, were

more likely to hold leadership roles and positively influence school performance. Furthermore, it suggested that a mix of experience levels within teaching staff contributed to a dynamic learning environment, with newer teachers brought fresh ideas while veteran teachers provided stability and mentorship.

Table 6

Length of Service of the Respondents

Categories	School Heads		Teachers	
	F	P	F	P
5 years and below	-	-	4	8.0
6-10 years	-	-	10	20.0
11-15 years	1	7.14	4	8.0
16-20 years	-	-	5	10.0
21 above	13	92.86	27	54.0
Total	14	100	50	100

Educational Qualification. Table 7 presents the educational qualifications of the respondents, differentiating between school heads and teachers. Among school heads, the majority (78.57%) had completed Master's units, while a small proportion held a Master's degree (7.14%) or had doctoral units (7.14%). Notably, 7.14% of school heads had obtained a doctoral degree. On the other hand, the teacher group showed a higher proportion of individuals with Master's units (86%) and fewer with Master's degrees (8%). Only a small number of teachers had completed a Bachelor's degree (6%), while none held doctoral units or a doctoral degree. The data explained that educational qualifications among school heads and teachers in the district reflected a strong focus on professional development, with most individuals having pursued postgraduate education. The higher percentage of school heads with Master's units or doctoral degrees likely indicated the importance of advanced qualifications in assuming leadership roles. Conversely, while a significant number of teachers had completed Master's units, there was a smaller proportion holding advanced degrees, which may suggest a focus on professional growth without necessarily completing the full Master's program.

A recent study by Mendoza, R. and Santos, M. (2024) titled "Educational Attainment and Its Role in Teacher Effectiveness and Leadership in Philippine Schools" supported these findings. The study found that in the Philippine educational system, teachers and school leaders with Master's and Doctoral qualifications tend to perform better in their roles, with school heads in particular benefiting from higher-level education in terms of leadership effectiveness. The study specifically highlights that school heads with advanced degrees are more likely to demonstrate higher leadership effectiveness. This is likely due to the advanced training and deeper expertise these educators acquire through postgraduate education, which equips them with the necessary skills for strategic decision-making, problem-solving, and leading educational reforms within schools. The research explained that post-graduate education, was increasingly seen as essential for educators aiming for leadership positions. This aligned with the current data, where school heads had a higher concentration of advanced educational qualifications compared to teachers.

Table 7

Educational Qualification of the Respondents

Categories	School Heads		Teachers	
	F	P	F	P
Bachelor's Degree	-	-	3	6.0
With Master's Units	11	78.57	43	86.0
Master's Degree	1	7.14	4	8.0
With Doctoral Units	1	7.14	-	-
Doctoral Degree	1	7.14	-	-
Total	14	100	50	100

Implementation of SILVERTEK LMS

The Schools Division of Zamboanga del Norte had adopted the National Learning Recovery Program of DepEd (DO 13 s. 2023) by introducing the SILVERTEK LMS as a key strategy. This initiative aimed to enhance students' numeracy and literacy skills, support the recovery and continuity of the department's learning programs, and speed up progress toward educational goals.

Summary on the Implementation of SILVERTEK LMS.

Table 8 summarizes the implementation of the SILVERTEK LMS from the perspectives of school heads and teachers. The mean scores reflected the perceived effectiveness and extent of implementation for various LMS features, with scores for both groups falling within the implementation range. Across the six indicators, the highest ratings were given to Question Banking, with mean scores of 3.48 for school heads and 3.62 for teachers, both categorized as "WI" (Well Implemented). This explained that the feature was more effectively integrated into the daily teaching process compared to others. On the other hand, indicators such as Interactive Learning Technology and Learning Resource Banking had lower scores, with school heads rating Interactive Learning Technology at 2.98 and teachers at 3.02. These lower scores may indicate that these aspects of the LMS were still in the early stages of implementation or were not as widely used, despite their potential to enhance the learning experience. Similarly, the mean scores for Electronic Performance Tracking and Automating Reports were in the mid-range, reflecting informal but functional usage of these tools. Overall, both school heads and teachers showed relatively similar perceptions of the LMS, with only slight differences.

These findings aligned with the conclusions of a recent study by Chen et al. (2023), which examined the adoption of LMS platforms in secondary education. The study found that while certain features, such as testing and assessment tools, were widely adopted and valued by both teachers, other features like interactive learning and resource management tools were still in the process of being fully realized, confirming the mixed levels of implementation observed. On the other hand, features like interactive learning tools and resource management systems, which might involve more complex integration or require more training and support for effective use, are still in the early stages of adoption.

The "mixed levels of implementation" observed in the table could reflect this discrepancy, where some schools or educators are more advanced in utilizing certain LMS features, while others may still be grappling with the challenges of fully incorporating the more advanced tools.

Table 8

Summary on the Implementation of SILVERTEK LMS

Indicators	School Heads		Teachers	
	Mean	D	Mean	D
1. Electronic Division Achievement and Diagnostic Testing	3.34	I	3.37	I
2. Automating Reports	3.23	I	3.15	I
3. Question Banking	3.48	WI	3.62	WI
4. Learning Resource Banking	3.26	I	3.02	I
5. Interactive Learning Technology	2.98	I	3.11	I
6. Electronic Performance Tracking	3.02	I	3.16	I
Mean	3.22	I	3.24	I

Table 9

Significant Difference in the Ratings of School Heads and Teachers along SILVERTEK LMS

Indicators		$\bar{X}$	$\bar{X}D$	tV	PV	Decision
Electronic Division Achievement and Diagnostic Testing	School Heads	3.34	0.03	0.19	0.85	Not Significant
	Teachers	3.37				
Automating Reports	School Heads	3.23	0.08	0.51	0.62	Not Significant
	Teachers	3.15				
Question Banking	School Heads	3.48	0.14	0.89	0.39	Not Significant
	Teachers	3.62				
Learning Resource Banking	School Heads	3.26	0.24	1.52	0.15	Not Significant
	Teachers	3.02				
Interactive Learning Technology	School Heads	2.98	0.13	0.82	0.42	Not Significant
	Teachers	3.11				
Electronic Performance Tracking	School Heads	3.02	0.14	0.89	0.39	Not Significant
	Teachers	3.16				

Note. Significant @ 0.05

The data presented in Table 9 reveals that there was no significant difference between the ratings of School Heads and Teachers across various indicators of the SILVERTEK LMS. Indicator such as Electronic Division Achievement and Diagnostic Testing, Automating Reports, Question Banking, Learning Resource Banking, Interactive Learning Technology, and Electronic Performance Tracking, the p-values were all greater than the 0.05 significance level, indicated that the differences in ratings between school heads and teachers were not statistically significant. The p-value for Electronic Division Achievement and Diagnostic Testing was 0.85, far exceeded the threshold for significance, meaning that both school heads and teachers rated the indicator similarly. This trend held true across all indicators, where the mean differences between the two groups (ranging from 0.03 to 0.24) were small and do not result in significant differences when tested for statistical significance. These findings explained that despite some variations in mean ratings between school heads and teachers, both groups perceived the effectiveness of the SILVERTEK LMS in a comparable manner.

The outcome was consistent with the recent study by Ramos and Cruz (2024) titled "Perception of School Leaders and Teachers on Learning Management Systems: A Comparative Study," which found that school leaders and teachers often hold similar views regarding the effectiveness of LMS, with any observed differences in their ratings typically not reaching statistical significance. The study emphasized that while leadership and teaching staff may have slightly different perspectives on certain aspects of an LMS, these differences were generally not substantial enough to affect overall evaluations.

Level of Teachers' Performance

Teachers' performance played a crucial role in the overall success and effectiveness of the education system. Effective teaching had a significant impact on student learning and academic achievement, which makes it important to regularly assess and improve teaching practices. This study followed DepEd Order No. 8, s. 2023, titled "Multi-Year Guidelines on the Results-Based Performance Management System", which offered a framework for evaluating teacher performance. The study focused on key areas outlined in the Philippine Professional Standards for Teachers (PPST).

Table 10 summarizes the performance of teachers across four key areas: Content Knowledge and Pedagogy, Learning Environment and Diversity of Learners, Curriculum and Planning and Assessment and Reporting, and Community Linkages and Professional Engagement and Personal Growth and Professional Development. The overall grand mean of 4.21 (Outstanding) indicated that, on average, teachers were performing at a high level across all domains, with specific strengths in certain areas.

The performance in Content Knowledge and Pedagogy (mean of 4.14, Very Satisfactory) and Learning Environment and Diversity of Learners (mean of 4.15, Very Satisfactory) explained that teachers were effectively integrating content knowledge into their teaching and creating inclusive environments for diverse learners. In contrast, the highest scores were observed in Curriculum and Planning and Assessment and Reporting (mean of 4.33, Outstanding) and Community Linkages and Professional Engagement and Personal Growth and Professional Development (mean of 4.21, Outstanding), indicated that teachers were particularly strong in setting clear learning goals, using assessments

effectively, and engaging in continuous professional development while building strong community relationships.

The results implied that while teachers excel in designing and planning curricula, using assessments to inform teaching, and maintaining positive community engagement, there is room for continued development in content knowledge and pedagogy. The grand mean of 4.21 (Outstanding) explained that teachers were highly effective in their roles, but in content knowledge and pedagogy, teachers were having low scores. These findings were consistent with Darling-Hammond et al. (2023) in their study Effective Teacher Professional Development, published in Educational Policy Analysis Archives. The research emphasized that teacher effectiveness was most enhanced when professional development is aligned with instructional practices, community engagement, and ongoing assessment.

Table 10

Summary on Teachers' Performance

Indicators	Mean	D
1. Content Knowledge and Pedagogy	4.14	VS
2. Learning Environment and Diversity of Learners	4.15	VS
3. Curriculum and Planning and Assessment and Reporting	4.33	O
4. Community Linkages and Professional Engagement and Personal Growth and Professional Development	4.21	O
Grand Mean	4.21	O

Level of Pupils' Performance

Table 11 presents the performance of pupils across different classifications, with the majority of students falling under the Satisfactory category, accounting for 93.12% of the total population, followed by smaller proportions in the Very Satisfactory (4.38%) and Outstanding (1.25%) categories. There was only 0.62% of pupils categorized as Fair, and none were classified as Poor. The mean score for the pupils was 3.04, which corresponded to the Satisfactory performance level, explained that most pupils were performing at an acceptable but not exceptional level in their assessments.

The relatively low percentages of students in the higher classifications (Outstanding and Very Satisfactory) point to an opportunity for further enhancement in pupils' performance, particularly to help more pupils reach higher levels of achievement. The implication of these results was that while the majority of pupils were meeting expectations, a significant number could benefit from additional support to improve their academic performance and reach higher classifications. The fact that there were no pupils classified as Poor was a positive outcome, but the predominance of pupils in the Satisfactory category explained that interventions to boost academic achievement might be necessary, especially in fostering higher-order thinking skills and deeper understanding of the content.

Recent research by Hattie and Yates (2023) in their study Visible Learning for Teachers: Maximizing Impact on Learning supports the importance of targeted interventions and differentiated instruction in improving student performance. Hattie's work emphasized that while most students may perform adequately, the key to improving student outcomes lies in personalized feedback, increased student engagement, and the use of evidence-based teaching strategies. This aligned with the current table's findings, suggested that efforts to move more students into the Very Satisfactory and Outstanding categories should focus on optimizing teaching strategies and providing more individualized learning opportunities.

Table 11

Performance of Pupils

Classification	F	P	$\bar{X}$	D
Outstanding	2	1.25		
Very Satisfactory	7	4.38		
Satisfactory	149	93.12	3.04	Satisfactory
Fair	1	0.62		
Poor	-	-		
Total	160	100		

Significant Relationship between the Implementation of the SILVERTEK LMS and Teachers' Performance

Table 12 presents the significant relationship between the implementation of the SILVERTEK Learning Management System (LMS) and teachers' performance, with the results showing a correlation coefficient (r-value) of 0.26 and a p-value of 0.042, indicated a statistically significant relationship between the two variables. The mean score for the implementation of the SILVERTEK LMS is 3.23, with a standard deviation (SD) of 2.18, reflected moderate variation in how teachers are utilizing the LMS. On the other hand, the mean score for teachers' performance is 4.21, with a standard deviation of 3.25, showed that overall; teachers were performing at a high level. The positive but modest correlation explained that the use of the SILVERTEK LMS had a small but significant impact on teachers' performance.

The implication of these findings was that while the implementation of the SILVERTEK LMS is positively related to teacher performance, the relationship was moderate, indicated that other factors also contribute to teaching effectiveness. The significant but modest correlation suggested that while the LMS can enhance teachers' instructional practices, more efforts may be needed to integrate it fully into their daily routines or combine it with other teaching strategies and professional development initiatives to maximize its impact.

Recent research by Zhou, Li, and Li (2023) in Educational Technology Research and Development supported the notion that the effective integration of technology, such as Learning Management Systems, can positively influence teaching quality. Their study found that the use of LMS platforms, when aligned with teacher training and support, can lead to improvements in teaching efficiency and learner engagement, which is consistent with the

findings in this table. However, they also highlighted that the relationship between LMS usage and teaching performance depends on factors such as the teacher's familiarity with the technology and the support provided for its use. This reinforced the idea that while technology can significantly contribute to teaching quality, its success hinged on how well it was implemented and integrated into teachers' practices.

Table 12

Significant Relationship between the Implementation of the SILVERTEK LMS and Teachers' Performance

Indicators	Mean	SD	r-value	p-value	D
Implementation of SILVERTEK LMS	3.23	2.18			
			.26	.042	Significant
Teachers' Performance	4.21	3.25			

Significant Relationship between the Implementation of the SILVERTEK LMS and Pupils' Performance.

Table 13 looks into the relationship between the use of the SILVERTEK LMS and pupils' performance. The average score for the implementation of the SILVERTEK LMS was 3.23, with a standard deviation of 2.15. For pupils' performance, the average score was slightly lower at 3.11, but the standard deviation of 3.98. When analyzing the relationship between the two variables, the correlation coefficient (r-value) is 0.191, which was a very weak positive correlation. This means there was only a slight connection between the use of the LMS and pupils' performance. However, the p-value is 0.092, which was higher than the standard threshold of 0.05, indicating that the relationship was not statistically significant. This means that there was no strong evidence to suggest that the use of the SILVERTEK LMS had a meaningful impact on pupils' performance. Therefore, based on this data, we can conclude that the relationship between the LMS implementation and pupils' performance was not significant.

A similar result presented by Cheng, Y., and Tsai, C. (2023) on a study titled Exploring the Effects of Learning Management Systems on Student Performance: A Meta-Analysis found that while many studies report positive correlations, the effect sizes were often small and vary significantly across different contexts. The authors concluded that while LMS systems can offer benefits such as increased engagement, their direct impact on academic achievement was often weak, especially when other factors such as teaching quality and student engagement were not controlled for.

Table 13

Significant Relationship between the Implementation of the SILVERTEK LMS and Pupils' Performance

Indicators	Mean	SD	r-value	p-value	D
Implementation of SILVERTEK LMS	3.23	2.15	.191	.092	Not Significant
Pupils' Performance	3.11	3.98			

Note. Not significant @ .0

Based on the results of the study, the researcher noted the need for improvement in the implementation of the SILVERTEK LMS specifically the Interactive Learning Technology. While it was true that teachers attended various trainings related to SILVERTEK LMS utilization, it was seemingly insufficient due to the complexity on navigating the system. It would take time and effort to come up with an output and develop mastery on utilizing the Interactive Learning Technology in the SILVERTEK LMS. Thus, an intervention plan was proposed. The intervention program will provide meaningful learning experience to teachers where they will be given opportunity to have a personal experience in preparing and utilizing the Interactive Learning Technology and be assisted and guided by the SILVERTEK Team.

Conclusions

The findings highlighted key issues for educational leadership and professional development. The seasoned school heads call for the development of young and well-prepared leaders. The wide range of teaching experience emphasizes the need for targeted mentorship and professional growth programs. Many teachers remain at the Teacher III level, suggesting limited career advancement opportunities. Despite many school heads having completed Master's units, few hold advanced degrees. The SILVERTEK LMS in Sibutad District showed strengths, particularly in Question Banking, but the low rating for Interactive Learning Technology indicates it may not be fully integrated into teaching practices. Both teachers and school heads shared similar views on the system's effectiveness. Teachers performed well in Curriculum, Assessment, and Community Linkages but had room for improvement in Content Knowledge and Pedagogy. The study found a significant link between the LMS and teachers' performance, enhancing teaching outcomes, though it had no direct impact on pupils' performance, explaining that the LMS supports teachers but does not fully engage pupils or improve their learning results.

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Disclosure: Use of AI Tools

In accordance with Threshold's guidelines for the ethical use of artificial intelligence (AI) and automated tools in academic research, the authors disclose the use of OpenAI's ChatGPT to improve the clarity and quality of the manuscript. ChatGPT was specifically used to assist with language refinement ensuring the manuscript met high academic standards. The authors confirm that all data analysis, interpretation of results, and formulation of conclusions were carried out independently by the researchers. The AI tool was solely used for editorial support and did not influence the content, research methodology, or ethical considerations of the study. All contributions from ChatGPT were reviewed by the authors to ensure alignment with the study's objectives and have been approved by the research committee. This use of ChatGPT adheres to Threshold's ethical guidelines, which require transparency in reporting AI involvement in academic work. The authors maintain full responsibility for the accuracy, integrity, and validity of the manuscript.

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