Instructional Leadership Practices on Delivering Content Knowledge and Pedagogy

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ABSTRACT

This study determined the instructional leadership practices of school leaders and their relationship with the delivery of content knowledge and pedagogy among public elementary school teachers in Vinzons District. Specifically, it examined instructional leadership in terms of curriculum guidance and support, monitoring of instructional practices, professional development support, instructional coaching and mentoring, and promotion of research-based practices. It also assessed content knowledge and pedagogy based on the Philippine Professional Standards for Teachers (PPST). The study employed a quantitative method using a descriptive-correlational research design. Public elementary school teachers in Vinzons District served as respondents and were selected through total enumeration. Data were gathered using a validated researcher-made questionnaire on instructional leadership practices and an instrument based on Domain 1 of the PPST. Descriptive and correlational statistical techniques were used to analyze the data. Findings revealed that instructional leadership practices were generally highly practiced across all areas, although the promotion of research-based practices emerged as an area requiring further attention. The delivery of content knowledge and pedagogy was likewise generally highly observed, particularly in the application of content knowledge, use of ICT, literacy and numeracy strategies, higher-order thinking skills, language use, and classroom communication. However, the application of research-based knowledge and principles of teaching and learning showed greater need for strengthening. The findings further established a significant positive relationship between instructional leadership practices and the delivery of content knowledge and pedagogy. The study concluded that sustained instructional leadership contributes to strengthening teachers' content knowledge and pedagogical practices. It recommends sustaining curriculum support, instructional monitoring, professional development, coaching, and mentoring while intensifying research-based practices through School Learning Action Cell sessions, demonstration teaching, peer sharing, and related professional learning activities. The implementation and evaluation of PROJECT SIBOL: Strengthening Instructional Best Practices through Observation and Leadership is recommended to address the identified areas for improvement.

Keywords: Instructional leadership practices, content knowledge and pedagogy, curriculum guidance and support, monitoring of instructional practices, professional development support, instructional coaching and mentoring, and promotion of research-based practices

INTRODUCTION

The success of basic education depends greatly on the instructional support provided by school leaders to teachers. Hallinger (2020) emphasizes that school leaders should serve as "lead learners" who help teachers strengthen their subject knowledge and teaching practices, while Fullan (2021) highlights their role in promoting continuous professional growth. Effective leadership should therefore support teachers' Content Knowledge and Pedagogy (CKP), including the appropriate use of technology. Mishra and Koehler (2006) emphasize the importance of integrating Information and Communication Technology (ICT) into modern teaching.

Furthermore, Darling-Hammond (2017) stresses the use of research-based strategies in developing learners' literacy, numeracy, and higher-order thinking skills. In the Philippine context, the effective use of Mother

Tongue, Filipino, and English also supports learner understanding and participation (Lucas et al., 2023). However, Leithwood et al. (2019) point out that the influence of school leadership on learning depends on how effectively leaders address teachers' instructional needs.

These responsibilities are supported by Republic Act No. 9155, Republic Act No. 10533, DepEd Order No. 42, s. 2017 or the Philippine Professional Standards for Teachers (PPST), and DepEd Order No. 24, s. 2020 or the Philippine Professional Standards for School Heads (PPSSH). These policies emphasize quality instruction, appropriate pedagogical approaches, content knowledge and pedagogy, and the responsibility of school leaders to provide instructional support and technical assistance.

Despite these mandates, recent National Achievement Test results in the Schools Division Office of Camarines Norte showed that learner performance in English, Mathematics, and Science remained at the nearly proficient level, with Mathematics showing greater areas of concern. Similarly, the Rapid Mathematics Assessment results in Vinzons District revealed difficulties in problem-solving, conceptual understanding, and other higher-order competencies. These findings suggest a continuing need to strengthen instructional delivery and teacher support.

Thus, this study determined the instructional leadership practices of school leaders and their relationship with teachers' content knowledge and pedagogy in Vinzons District. The findings served as the basis for developing an intervention that provides focused and evidence-based technical assistance to strengthen teaching practices and improve learner outcomes.

METHODOLOGY

The study employed a quantitative method using a descriptive-correlational research design to determine the level of instructional leadership practices and teachers' content knowledge and pedagogy, as well as the relationship between these variables. Data were gathered using a two-part questionnaire consisting of a validated researcher-made instrument on instructional leadership practices and an instrument adopted from Domain 1 of the Philippine Professional Standards for Teachers (PPST) on content knowledge and pedagogy. The data were analyzed using weighted mean to determine the level of the variables and Pearson Product-Moment Correlation Coefficient (r) to determine the strength, direction, and significance of their relationship. Statistical analysis was performed using SPSS Version 21.

RESULTS AND DISCUSSIONS

Level of Instructional Leadership Practices of School Leaders. Instructional leadership practices refer to the actions of school leaders in providing direction and support to improve teaching and learning. In this study, these practices focus on how school leaders guide curriculum implementation, monitor instruction, support teachers' professional development, provide coaching and mentoring, and encourage the use of research-based practices to improve classroom instruction.

Curriculum Guidance and Support. Curriculum guidance and support refer to the practices of school leaders in providing teachers with the direction, assistance, and resources needed in planning, organizing, and delivering lessons. These practices help ensure that classroom instruction remains aligned with curriculum standards, learning competencies, and intended learning outcomes. Table 1 shows that instructional leadership practices along curriculum guidance and support obtained an overall weighted mean of 3.55, interpreted as Highly Practiced. This indicates that school leaders consistently provide guidance and support to teachers in implementing the curriculum. The highest weighted mean of 3.63, interpreted as Highly Practiced, was obtained for the indicator "Instructional materials are aligned with the curriculum." This indicates that school leaders give close attention to the appropriateness of the instructional materials used by teachers and their alignment with the prescribed curriculum. The finding was conformed by Li et al. (2023), who found that school leaders strengthen teachers' instructional practices by creating supportive structures and providing opportunities and resources for professional growth. Their study emphasized that instructional leadership works through the support provided to teachers, enabling them to improve their content knowledge and pedagogical practices.

Table 1 Instructional Leadership Practices along Curriculum Guidance and Support

Indicators	Weighted Mean	Interpretation
1. Clear direction is provided on curriculum goals and learning competencies.	3.57	HP
2. Assistance is given in aligning lesson plans with curriculum standards.	3.51	HP
3. Instructional materials are aligned with the curriculum.	3.63	HP
4. Guidance is provided in organizing lesson content across subject areas.	3.58	HP
5. Support is given in adapting the curriculum to learners' needs.	3.53	HP
6. Discussions on curriculum implementation are facilitated.	3.51	HP
7. Learning objectives are clearly communicated to teachers.	3.61	HP
8. Resources are provided to support effective curriculum delivery.	3.49	HP
9. Collaboration in curriculum planning is encouraged.	3.52	HP
10. Alignment of instruction with curriculum standards is monitored.	3.60	HP
Overall Weighted Mean	3.55	HP

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Practiced (HP)

2.50 – 3.24 - Practiced (P)

1.75 – 2.49 - Moderately Practiced (MP)

1.00 – 1.74 - Not Practiced (NP)

Monitoring of Instructional Practices. Monitoring of instructional practices refers to the regular observation and review of classroom teaching by school leaders. It includes looking into teachers' instructional practices, providing feedback, and following their progress to determine areas that may be improved in succeeding classroom instruction. Table 2 shows that instructional leadership practices along monitoring of instructional practices obtained an overall weighted mean of 3.44, interpreted as Highly Practiced. This indicates that monitoring forms part of the regular instructional leadership practices of school leaders.The highest weighted mean of 3.49, interpreted as Highly Practiced, was shared by two indicators: "Observation results are used to improve teaching practices" and "Reflective teaching practices are encouraged." This shows that classroom observation results are utilized to identify aspects of instruction that teachers need to sustain or improve. It also shows that teachers are encouraged to reflect on their classroom practices as part of improving their teaching. The finding was corroborated by Sun et al. (2026), who found that regular classroom observations combined with constructive feedback improve teachers' instructional strategies and classroom engagement. Their study also emphasized that specific and actionable feedback provides teachers with direction for improving their practices. Similarly, Murphy et al. (2024) emphasized that collaborative professional learning promotes reflective practice by allowing teachers to examine and refine their instructional strategies. Their study further showed that professional learning can strengthen teachers' practical skills and instructional confidence.

Table 2 Instructional Leadership Practices along Monitoring of Instructional Practices

Indicators	Weighted Mean	Interpretation
1. Classroom observations are conducted regularly.	3.37	HP
2. Timely and constructive feedback is provided after observations.	3.42	HP
3. Observation results are used to improve teaching practices.	3.49	HP
4. Follow-up is conducted on previously given feedback.	3.42	HP
5. Lesson plans and instructional materials are reviewed	3.44	HP

regularly.		
6. Use of appropriate teaching strategies in the classroom is monitored.	3.40	HP
7. Data are used to assess instructional effectiveness.	3.48	HP
8. Reflective teaching practices are encouraged.	3.49	HP
9. Consistency in instructional practices across classrooms is ensured.	3.43	HP
10. Support is provided based on identified instructional needs.	3.46	HP
Overall Weighted Mean	3.44	HP

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Practiced (HP)

2.50 – 3.24 - Practiced (P)

1.75 – 2.49 - Moderately Practiced (MP)

1.00 – 1.74 - Not Practiced (NP)

Professional Development Support. Professional development support refers to the opportunities provided by school leaders to help teachers continuously improve their knowledge and skills. It includes trainings, seminars, workshops, and other learning activities intended to strengthen teachers' content knowledge and pedagogical practices. Table 3 shows that instructional leadership practices along professional development support obtained an overall weighted mean of 3.39, interpreted as Highly Practiced. This indicates that school leaders provide professional learning opportunities that support teachers in improving their instructional practices. The highest weighted mean of 3.44, interpreted as Highly Practiced, was obtained for the indicator "In-service trainings focused on instructional improvement are organized." This shows that the organization of INSET is one of the more evident practices of school leaders in supporting the professional development of teachers. This finding was supported by Murphy et al. (2024), who emphasized that sustained and collaborative professional development strengthens teachers' instructional knowledge and practical skills. Their study further showed that professional learning provides opportunities for teachers to reflect on and refine their teaching strategies. Similarly, He (2024) highlighted that school leaders contribute to teachers' professional growth by facilitating structured development opportunities aligned with instructional goals. This finding was also affirmed by Darling-Hammond and Hyler (2023), who emphasized that professional development and leadership support contribute to teachers' application of research-based strategies in classroom settings. Their study shows the connection between professional learning and the instructional practices demonstrated by teachers in their classes.

Table 3 Instructional Leadership Practices along Professional Development Support

Indicators	Weighted Mean	Interpretation
1. Opportunities are provided for teachers to attend trainings and seminars.	3.37	HP
2. Professional development activities are relevant to teachers' needs.	3.40	HP
3. Participation in learning communities is encouraged.	3.40	HP
4. Continuous professional growth among teachers is supported.	3.39	HP
5. In-service trainings focused on instructional improvement are organized.	3.44	HP
6. Sharing of best practices among teachers is promoted.	3.43	HP
7. Time is allocated for professional development activities.	3.39	HP
8. Access to learning resources and materials is provided.	3.36	HP
9. The effectiveness of professional development programs is	3.32	HP

evaluated.		
10. Application of new learning in the classroom is encouraged.	3.40	HP
Overall Weighted Mean	3.39	HP

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Practiced (HP)

2.50 – 3.24 - Practiced (P)

1.75 – 2.49 - Moderately Practiced (MP)

1.00 – 1.74 - Not Practiced (NP)

Instructional Coaching and Mentoring. Instructional coaching and mentoring refer to the support provided by school leaders and master teachers in guiding and assisting teachers in improving classroom instruction. These practices involve professional guidance, coaching, mentoring, and other forms of instructional support that respond to teachers' needs in carrying out their teaching responsibilities. Table 4 shows that instructional leadership practices along instructional coaching and mentoring obtained an overall weighted mean of 3.38, interpreted as Highly Practiced. This indicates that coaching and mentoring are evident practices of school leaders in supporting teachers' instructional work. The highest weighted mean of 3.46, interpreted as Highly Practiced, was shared by two indicators: "Support is provided in improving instructional strategies" and "Coaching sessions are conducted to enhance teaching performance." The results show that instructional coaching is commonly directed toward helping teachers improve the strategies they use in classroom instruction and addressing aspects of teaching performance that need attention. This finding was supported by Reyes and Tindowen (2024), who found that mentoring, coaching, monitoring, and technical assistance from school leaders are associated with teachers' improved pedagogical decision-making. Their findings also showed that leadership support contributes to teachers' ability to teach complex concepts and apply appropriate instructional approaches.

Table 4Instructional Leadership Practices along Instructional Coaching and Mentoring

Indicators	Weighted Mean	Interpretation
1. Individualized support is provided to teachers.	3.23	P
2. Mentoring between experienced and new teachers is facilitated.	3.32	HP
3. Collaborative teaching practices are encouraged.	3.38	HP
4. Support is provided in improving instructional strategies.	3.46	HP
5. Guidance is provided in addressing classroom challenges.	3.37	HP
6. Coaching sessions are conducted to enhance teaching performance.	3.46	HP
7. Peer observation among teachers is encouraged.	3.39	HP
8. Constructive suggestions for instructional improvement are provided.	3.42	HP
9. A supportive environment for mentoring is established.	3.36	HP
10. Progress of teachers is monitored through coaching activities.	3.37	HP
Overall Weighted Mean	3.38	HP

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Practiced (HP)

2.50 – 3.24 - Practiced (P)

1.75 – 2.49 - Moderately Practiced (MP)

1.00 – 1.74 - Not Practiced (NP)

Promotion of Researcher-Based Practices. Promotion of research-based practices refers to the support provided by school leaders in encouraging teachers to use teaching strategies grounded in research and evidence. It covers the use of research findings, instructional data, evidence-based strategies, and reflective practices in improving classroom instruction. Table 5 shows that instructional leadership practices along promotion of research-based practices obtained an overall weighted mean of 3.26, interpreted as Highly Practiced. This indicates that school leaders promote the use of evidence and research in improving teaching practices. The highest weighted mean of 3.32, interpreted as Highly Practiced and obtained for the indicator "Data are used to improve instruction." This shows that the use of available school and classroom data is one of the more evident research-based practices promoted by school leaders. This implies that teachers and school leaders use actual learner performance data when looking into instructional concerns. After quarterly assessments, teachers examine learners' scores and identify competencies where many learners performed poorly. When a large number of learners fail to reach the expected level of mastery in a particular competency, teachers identify the areas that need to be retaught and provide remediation or additional learning activities. The results therefore become part of the teacher's basis for adjusting succeeding instruction rather than remaining only as recorded grades. This finding was corroborated by Sun et al. (2026), who found that classroom observations combined with specific and constructive feedback contribute to improvements in teachers' instructional strategies and classroom engagement. Their findings show how information gathered from actual classroom practices can become a basis for improving teaching performance.

Table 5 Instructional Leadership Practices along Promotion of Researcher-Based Practices

Indicators	Weighted Mean	Interpretation
1. Use of evidence-based teaching strategies is encouraged.	3.29	HP
2. Research findings are promoted in classroom instruction.	3.22	P
3. Access to research materials and references is provided.	3.24	P
4. Innovation in teaching practices is supported.	3.29	HP
5. Conduct of action research is encouraged.	3.25	HP
6. Research-based strategies are integrated into school programs.	3.18	P
7. Effective instructional models are promoted.	3.25	HP
8. Reflective practices based on research are encouraged.	3.28	HP
9. Data are used to improve instruction.	3.32	HP
10. Teachers who apply research-based practices are recognized.	3.27	HP
Overall Weighted Mean	3.26	HP

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Practiced (HP)

2.50 – 3.24 - Practiced (P)

1.75 – 2.49 - Moderately Practiced (MP)

1.00 – 1.74 - Not Practiced (NP)

Level of School Leaders' Delivery of Content Knowledge and Pedagogy. Content knowledge and pedagogy refer to the integration of subject matter knowledge and appropriate teaching practices in delivering instruction. In this study, the level is reflected across the seven strands of PPST Domain 1, covering the application of content knowledge, research-based teaching principles, ICT integration, literacy and numeracy, higher-order thinking skills, language use, and classroom communication strategies.

Content Knowledge and its Application within and Across Curriculum Areas. Content knowledge and its application within and across curriculum areas refer to the ability to demonstrate mastery of subject matter and establish meaningful connections among concepts within the same learning area and with other disciplines. In this study, it reflects how content knowledge is applied and connected across learning areas to support classroom

instruction. Table 6 shows that school leaders' delivery of content knowledge and pedagogy along its application within and across curriculum areas obtained an overall weighted mean of 3.39, interpreted as Highly Observed. This indicates that the application and connection of content knowledge within and across curriculum areas are evident in instructional practice. The highest weighted mean of 3.43, interpreted as Highly Observed, was obtained for the indicator "Model effective applications of content knowledge within and across curriculum teaching areas." This indicates that the application of subject matter is not confined to a single topic or learning area but is connected with related concepts that learners encounter in other lessons and subjects. This finding was conformed by Magat and Valencia (2024), who found that the application of content knowledge across curriculum areas requires both content understanding and appropriate pedagogical support. Their study emphasized that teachers need to connect knowledge across learning areas, particularly in responding to the multidisciplinary demands of curriculum implementation. Delahunty et al. (2021) similarly noted that interdisciplinary teaching requires subject mastery and pedagogical flexibility because teachers need to establish meaningful connections among concepts from different disciplines.

Table 6 School Leaders' Delivery of Content Knowledge and Pedagogy along Its Applications within and Across Curriculum Areas

Indicators	Weighted Mean	Interpretation
1. Demonstrate content knowledge and its application within and/or across curriculum teaching areas.	3.37	HO
2. Apply knowledge of content within and across curriculum teaching areas.	3.41	HO
3. Model effective applications of content knowledge within and across curriculum teaching areas.	3.43	HO
4. Model exemplary practice to improve the applications of content knowledge within and across curriculum teaching areas	3.36	HO
Overall Weighted Mean	3.39	HO

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

Research-Based Knowledge and Principles of Teaching and Learning. This refers to the use of research-informed strategies and established principles in planning and delivering instruction. In this study, it reflects the application of research-based teaching approaches and learning principles in actual classroom practice. Table 7 shows that school leaders' delivery of content knowledge and pedagogy along research-based knowledge and principles of teaching and learning obtained an overall weighted mean of 3.23, interpreted as Observed. This indicates that research-based knowledge and principles are evident in instructional practice, although their application is not observed at the highest level. The highest weighted mean of 3.28, interpreted as Highly Observed, was obtained for the indicator "Demonstrate understanding of research-based knowledge and principles of teaching and learning." This shows that understanding of established teaching and learning principles is evident in the way instruction is carried out. This finding was conformed by Darling-Hammond and Hyler (2023), who emphasized that effective teaching involves combining content knowledge with an understanding of how learners learn. They further stressed the importance of research-informed instructional decisions in responding to learners with different needs.

Table 7 School Leaders' Delivery of Content Knowledge and Pedagogy along Researcher-Based Knowledge and Principles of Teaching and Learning

Indicators	Weighted Mean	Interpretation
1. Demonstrate understanding of research-based knowledge and principles of teaching and learning.	3.28	HO
2. Use research-based knowledge and principles of teaching and learning to enhance professional practice.	3.23	O
3. Collaborate with colleagues in conducting and applying research to strengthen content knowledge and pedagogy.	3.23	O
4. Lead colleagues in advancing the art and science of teaching based on comprehensive knowledge of research and pedagogy.	3.18	O
Overall Weighted Mean	3.23	O

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

Positive Use of ICT. This refers to the meaningful, appropriate, and responsible integration of information and communication technology in teaching and learning. In this study, it reflects the use of ICT tools to support instructional delivery, improve the presentation of lessons, and promote learner engagement. Table 8 shows that school leaders' delivery of content knowledge and pedagogy along positive use of ICT obtained an overall weighted mean of 3.34, interpreted as Highly Observed. This indicates that the use of ICT to support teaching and learning is evident in instructional practice. The highest weighted mean of 3.37, interpreted as Highly Observed, was shared by two indicators: "Ensure the effective use of ICT to support teaching and learning" and "Promote effective strategies in the positive use of ICT to enhance instruction." The results show that ICT is used not only as an available classroom resource but also as a tool that supports the delivery of lessons. This finding was corroborated by Oducado and Soriano (2021), who emphasized that the meaningful use of ICT goes beyond the availability of technological resources. Their study noted that ICT becomes more useful in teaching when it is effectively incorporated into lesson delivery and supported by instructional guidance.

Table 8 School Leaders' Delivery of Content Knowledge and Pedagogy along Positive Use of ICT

Indicators	Weighted Mean	Interpretation
1. Demonstrate skills in the positive use of ICT to facilitate the teaching and learning process.	3.35	HO
2. Ensure the effective use of ICT to support teaching and learning.	3.37	HO
3. Promote effective strategies in the positive use of ICT to enhance instruction.	3.37	HO
4. Mentor colleagues in implementing policies that ensure the positive use of ICT within or beyond the school.	3.27	HO
Overall Weighted Mean	3.34	HO

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

Strategies for Promoting Literacy and Numeracy. This refers to teaching practices that develop learners' reading, writing, comprehension, and mathematical skills across learning areas. In this study, it reflects the use of appropriate instructional strategies that strengthen these foundational skills and support learners in meeting expected competencies. Table 9 shows that school leaders' delivery of content knowledge and pedagogy along strategies for promoting literacy and numeracy obtained an overall weighted mean of 3.34, interpreted as Highly Observed. This indicates that strategies intended to develop learners' literacy and numeracy skills are evident in instructional practice. The highest weighted mean of 3.39, interpreted as Highly Observed, was obtained for the indicator "Demonstrate knowledge of teaching strategies that promote literacy and numeracy skills." This shows that teachers demonstrate knowledge of strategies that develop literacy and numeracy as part of classroom instruction. This finding was conformed by Llego (2022), who emphasized the use of contextualized instructional strategies in addressing learners' literacy and numeracy needs. The study highlighted that appropriate interventions and instructional guidance contribute to the development of these foundational skills. Patel and Jones (2024) likewise found that instructional support, monitoring, feedback, and targeted interventions are associated with improved literacy and numeracy practices.

Table 9 School Leaders' Delivery of Content Knowledge and Pedagogy along Strategies for Promoting Literacy and Numeracy

Indicators	Weighted Mean	Interpretation
1. Demonstrate knowledge of teaching strategies that promote literacy and numeracy skills.	3.39	HO
2. Use a range of teaching strategies to improve learner achievement in literacy and numeracy.	3.35	HO
3. Work with colleagues to evaluate the effectiveness of strategies that enhance literacy and numeracy achievement.	3.34	HO
4. Model a comprehensive selection of effective teaching strategies that advance learner achievement in literacy and numeracy.	3.28	HO
Overall Weighted Mean	3.34	HO

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

On the other hand, the lowest weighted mean of 3.28, interpreted as Highly Observed, was obtained for the

Strategies for Developing Critical and Creative Thinking, as well as Other Higher-Order Thinking Skills. This refers to teaching practices that require learners to go beyond recalling information. These involve opportunities for learners to analyze ideas, examine situations, solve problems, make decisions, develop original responses, and explain the reasons behind their answers. Table 10 shows that school leaders' delivery of content knowledge and pedagogy along strategies for developing critical and creative thinking, as well as other higher-order thinking skills, obtained an overall weighted mean of 3.32, interpreted as Highly Observed. This indicates that teaching strategies that develop higher levels of thinking are evident in classroom instruction. The highest weighted mean of 3.34, interpreted as Highly Observed, was obtained for the indicator "Apply teaching strategies that develop critical, creative, and other higher-order thinking skills." This shows that teachers use instructional

activities that require learners to process information, express ideas, solve problems, and make judgments rather than simply recall facts. This finding was corroborated by Ramos (2023), who found that teachers use questioning techniques, collaborative learning, and problem-solving activities to develop critical and creative thinking. The study also noted that sustained instructional support contributes to the consistent use of strategies that promote higher-order thinking skills.

Table 10 School Leaders' Delivery of Content Knowledge and Pedagogy along Strategies for Developing Critical and Creative Thinking and Other Higher Order Thinking Skills

Indicators	Weighted Mean	Interpretation
1. Apply teaching strategies that develop critical, creative, and other higher-order thinking skills.	3.34	HO
2. Implement a variety of strategies to strengthen critical, creative, and other higher-order thinking skills.	3.32	HO
3. Develop and apply effective strategies that promote critical, creative, and higher-order thinking skills.	3.32	HO
4. Lead colleagues in reviewing, refining, and expanding strategies that foster critical, creative, and other higher-order thinking skills.	3.28	HO
Overall Weighted Mean	3.32	HO

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

Mother Tongue, Filipino and English in Teaching and Learning. This refers to the appropriate use of languages to communicate lesson content, facilitate understanding, and support learners' participation in classroom activities. It also involves using language in ways that recognize learners' linguistic background, culture, and learning needs. Table 11 shows that school leaders' delivery of content knowledge and pedagogy along Mother Tongue, Filipino, and English in teaching and learning obtained an overall weighted mean of 3.35, interpreted as Highly Observed. This indicates that the appropriate use of these languages is evident in facilitating classroom instruction and supporting learners' understanding. The highest weighted mean of 3.39, interpreted as Highly Observed, was obtained for the indicator "Use Mother Tongue, Filipino, and English to support teaching and learning." This shows that teachers use available languages as part of explaining lessons, communicating with learners, and facilitating classroom activities. This finding was corroborated by Ramos (2026), who emphasized that multilingual teaching practices allow teachers to use learners' available language resources to support understanding and participation. Their discussion recognizes the value of flexible language use in making academic content accessible to learners from different linguistic backgrounds.

Table 11 School Leaders' Delivery of Content Knowledge and Pedagogy along Mother Tongue, Filipino and English in Teaching and Learning

Indicators	Weighted Mean	Interpretation
1. Use Mother Tongue, Filipino, and English to support teaching and learning.	3.39	HO
2. Demonstrate proficient use of Mother Tongue, Filipino, and English in facilitating instruction.	3.37	HO
3. Model and support colleagues in the proficient use of these languages to improve learning and nurture learners' pride in their language, heritage, and culture.	3.29	HO

4. Exhibit exemplary practice and advocate the strategic use of Mother Tongue, Filipino, and English to enhance learners' language, cognitive, and academic development, and to strengthen pride in their linguistic and cultural identity.	3.34	HO
Overall Weighted Mean	3.35	HO

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

Classroom Communication Strategies. These refer to the verbal and non-verbal ways teachers communicate with learners to make instruction clear and understandable. These include the use of appropriate language, questioning, explanations, gestures, facial expressions, voice, and other forms of communication that support learner understanding, participation, and engagement. Table 12 shows that school leaders' delivery of content knowledge and pedagogy along classroom communication strategies obtained an overall weighted mean of 3.34, interpreted as Highly Observed. This indicates that verbal and non-verbal communication strategies that support learners during classroom instruction are evident in teaching practice. The highest weighted mean of 3.39, interpreted as Highly Observed, was obtained for the indicator "Demonstrate understanding of verbal and non-verbal classroom communication strategies that support learner understanding, participation, engagement, and achievement." This shows that teachers recognize the importance of both spoken communication and non-verbal cues in facilitating classroom instruction. This finding was corroborated by Li et al. (2023), who emphasized that clear verbal communication, questioning, feedback, and non-verbal cues contribute to learner engagement and understanding. Their study also recognized that classroom communication allows teachers to respond to learners during the teaching-learning process.

Table 12 School Leaders' Delivery of Content Knowledge and Pedagogy along Classroom Communication Strategies

Indicators	Weighted Mean	Interpretation
1. Demonstrate understanding of verbal and non-verbal classroom communication strategies that support learner understanding, participation, engagement, and achievement.	3.39	HO
2. Use effective verbal and non-verbal communication strategies to enhance learner understanding, participation, engagement, and achievement.	3.37	HO
3. Demonstrate a wide range of effective verbal and non-verbal communication strategies to support learner understanding, participation, engagement, and achievement.	3.33	HO
4. Exhibit exemplary practice in using effective verbal and non-verbal communication strategies across varied learning contexts to promote learner understanding, participation, engagement, and achievement.	3.30	HO
Overall Weighted Mean	3.34	HO

Rating Scale: Descriptive Interpretation:

3.25 – 4.00 - Highly Observed (HO)

2.50 – 3.24 - Observed (O)

1.75 – 2.49 - Moderately Observed (MO)

1.00 – 1.74 - Not Observed (NO)

Relationship between Instructional Leadership Practices and School Leaders' Delivery of Content Knowledge and Pedagogy. The table presents the results of the Spearman rank-order correlation analysis conducted to determine the relationship between Instructional Leadership Practices and School Leaders' Delivery of Content Knowledge and Pedagogy. Spearman's rho (ρ) was appropriately used because the data did not satisfy the assumption of normality. The results show that instructional leadership practices have statistically significant positive relationships with the school leaders' delivery of content knowledge and pedagogy. The correlation coefficients range from ρ = .140 to ρ = .362, indicating weak to moderate positive associations. This generally means that higher levels of instructional leadership practices tend to be associated with higher levels of school leaders in delivering content knowledge and pedagogy. However, the strength of the relationships varies across the variables considered in this study. The highest coefficient in this area is between curriculum guidance and support and content knowledge and its application across curriculum areas (ρ = .351, p < .001). This indicates that school leaders who provide stronger curriculum guidance and support tend to be associated with teachers demonstrating better content knowledge and greater ability to apply such knowledge across curriculum areas. The finding highlights the possible importance of school leaders' guidance in ensuring curriculum coherence, clarifying learning expectations, and supporting teachers in translating curriculum requirements into classroom practice. Similarly, monitoring of instructional practices demonstrates a moderate positive relationship with content knowledge (ρ = .328, p < .001). This suggests that effective monitoring of teaching practices is associated with stronger content knowledge and its application. The relationships with professional development support (ρ = .217), instructional coaching and mentoring (ρ = .283), and promotion of research-based practices (ρ = .258) are weak but still statistically significant. These findings suggest that professional development, coaching, mentoring, and research-based instructional practices are also positively associated with teachers' content knowledge and its application. Moreover, it can be noticed that all variables under the instructional leadership practices are statistically significant when associated to school leaders' delivery of content knowledge and pedagogy particularly on knowledge and principles of teaching and learning. The strongest association is observed between monitoring of instructional practices and knowledge and principles of teaching and learning (ρ = .277, p < .001), followed closely by promotion of research-based practices (ρ = .270, p < .001). This suggests that when school leaders regularly monitor and provide feedback regarding instructional practices and encourage teachers to use research-informed approaches, teachers tend to demonstrate stronger knowledge of teaching and learning principles. The relatively weak correlations indicate, however, that instructional leadership practices are only one of several factors associated with teachers' knowledge of teaching and learning. Teacher education, experience, professional development, self-efficacy, and individual learning may also contribute to this aspect of instructional performance. An especially notable finding is the relationship between Professional Development Support and Positive Use of ICT, which yielded the highest correlation (ρ = .362, p < .001). This suggests that teachers who receive stronger professional development support tend to demonstrate better use of information and communication technologies in instruction. This finding has practical significance because professional development provides teachers with opportunities to acquire technological skills, explore digital instructional resources, and develop confidence in integrating ICT into teaching and learning. On the other hand, promotion of research-based practices has the weakest relationship in this row (ρ = .140, p = .017), it remains statistically significant. The result indicates a positive association, although the magnitude of the relationship is relatively small. Moreover, a relationship exists between monitoring of instructional practices and strategies for promoting literacy and numeracy (ρ = .317, p < .001), followed by curriculum guidance and support (ρ = .311, p < .001). These findings suggest that instructional monitoring and curriculum guidance are particularly relevant to teachers' use of strategies intended to develop learners' literacy and numeracy skills. School leaders who monitor classroom instruction can probably identify teachers' needs, provide feedback, and encourage the use of appropriate literacy and numeracy strategies. Similarly, curriculum guidance can help teachers align classroom activities with expected competencies in these areas. Monitoring of instructional practices has the strongest association with teachers' use of strategies for developing higher-order thinking skills (ρ = .322, p < .001). Professional development support also demonstrates a relatively strong relationship (ρ = .316, p < .001). This suggests that teachers are more likely to employ strategies that develop critical and creative thinking when school leaders provide

instructional monitoring and opportunities for professional learning. Such leadership practices encourage teachers to move beyond recall-oriented teaching toward questioning, problem solving, analysis, evaluation, creativity, and other higher-order learning processes. The strongest association is between professional development support and Mother Tongue, Filipino, and English in teaching and learning ($\rho = .359$, $p < .001$). This suggests that professional development support is particularly relevant to teachers' capacity to effectively use the languages of instruction. Training and professional learning opportunities enhance teachers' pedagogical knowledge and strategies for addressing multilingual learning environments. Meanwhile the relationship between instructional coaching and mentoring and the same variable is comparatively weaker ($\rho = .169$, $p = .004$), although it remains statistically significant. Finally, the relationship between the school leaders' delivery of content knowledge and pedagogy and the instructional leadership practices are statistically significant but weak in magnitude. The highest coefficient is the relationship between promotion of research-based practices and classroom communication strategies ($\rho = .193$, $p < .001$). This indicates that teachers' classroom communication strategies are positively associated with instructional leadership practices, although the associations are relatively modest. This is due to classroom communication which is influenced by many teacher- and learner-level factors beyond instructional leadership, including teachers' communication competence, experience, personality, classroom composition, and learner characteristics. The findings were corroborated by He (2024) found that instructional leadership significantly contributes to teachers' professional development, particularly through curriculum coordination and the provision of professional learning opportunities. Similarly, the study of Tolentino (2024) established that instructional leadership is significantly related to teachers' instructional practices and that professional learning serves as an important mechanism through which leadership is translated into classroom practice. These findings support the results of the present study, where curriculum guidance, monitoring of instruction, professional development, coaching and mentoring, and promotion of research-based practices were significantly associated with different dimensions of content knowledge and pedagogy. The varying strengths of the correlations further indicate that instructional leadership is associated with teachers' practices in content application, ICT use, literacy and numeracy, higher-order thinking skills, language use, and classroom communication, although it does not operate as the sole factor shaping these practices. Overall, the findings reinforce the view that instructional leadership provides an important school-level environment that supports teachers in strengthening and refining their instructional practices.

Table 13 Test for Significant Relationship between Instructional Leadership Practices and School Leaders' Delivery of Content Knowledge and Pedagogy

School Leaders' Delivery of Content Knowledge and Pedagogy	Instructional Leadership Practices									
	Curriculum Guidance and Support		Monitoring of Instructional Practices		Professional Development Support		Instructional Coaching and Mentoring		Promotion of Researcher-Based Practices	
	ρ	p-value	ρ	p-value	ρ	p-value	ρ	p-value	ρ	p-value
Content Knowledge and its Application within and Across Curriculum Areas	.351**	.000	.328**	.000	.217**	.000	.283**	.000	.258**	.000
Research-based Knowledge and Principles of Teaching and Learning;	.206**	.000	.277**	.000	.185**	.002	.242**	.000	.270**	.000
Positive Use of ICT	.213**	.000	.194**	.001	.362**	.000	.230**	.000	.140*	.017
Strategies for Promoting Literacy and Numeracy	.311**	.000	.317**	.000	.208**	.000	.271**	.000	.161**	.006
Strategies for Developing Critical and Creative	.258**	.000	.322**	.000	.316**	.000	.286**	.000	.217**	.000

Thinking, as well as Other Higher-Order Thinking Skills										
Mother Tongue, Filipino and English in Teaching and Learning	.182**	.002	.267**	.000	.359**	.000	.169**	.004	.176**	.003
Classroom Communication Strategies	.149*	.011	.163**	.005	.182**	.002	.185**	.002	.193**	.001

**Correlation is significant @ .01 level

*Correlation is significant @ 0.05 level

Proposed Intervention to Enhance Teachers' Content Knowledge and Pedagogy and Instructional Leadership Practices. The proposed PROJECT SIBOL: Strengthening Instructional Best Practices through Observation and Leadership was developed based on the findings of the study, particularly the indicators that obtained the lowest weighted means under instructional leadership practices and the delivery of content knowledge and pedagogy. Although the overall findings showed generally positive levels of practice, the lowest-rated indicators reveal specific aspects where further professional support and instructional development can be focused. For instructional leadership practices, the lowest weighted mean was 3.18, interpreted as Practiced, for the integration of research-based strategies into school programs. This was followed by individualized support provided to teachers with a weighted mean of 3.23, also interpreted as Practiced. Other lowest indicators across the areas were the evaluation of the effectiveness of professional development programs with 3.32, regular conduct of classroom observations with 3.37, and provision of resources to support effective curriculum delivery with 3.49, all interpreted as Highly Practiced. These findings indicate that while instructional leadership practices are generally evident, greater attention is given to translating research into school-based instructional practices, providing support responsive to individual teacher needs, monitoring the effects of professional development, and sustaining instructional supervision and curriculum support. The findings on the delivery of content knowledge and pedagogy provide further basis for the proposal. The lowest weighted mean was 3.18, interpreted as Observed, for leading colleagues in advancing the art and science of teaching based on comprehensive knowledge of research and pedagogy. This was followed by mentoring colleagues in implementing policies that ensure the positive use of ICT with a weighted mean of 3.27. Modeling a comprehensive selection of strategies for literacy and numeracy and leading colleagues in reviewing and refining strategies for critical, creative, and higher-order thinking skills both obtained 3.28. Supporting colleagues in the proficient use of Mother Tongue, Filipino, and English obtained 3.29, while exemplary use of verbal and non-verbal classroom communication strategies obtained 3.30. Modeling exemplary application of content knowledge within and across curriculum areas obtained 3.36. While most of these indicators remained Highly Observed, their comparatively lower ratings show that teachers demonstrate these competencies more strongly at the individual level than in practices requiring them to model, mentor, lead, and support other teachers. A common pattern can therefore be observed across the findings. Several of the lowest-rated indicators involve research-based instruction, individualized coaching and mentoring, classroom observation, professional sharing, and the capacity of teachers to model effective pedagogical practices for their colleagues. This provides the direct basis for PROJECT SIBOL. Rather than introducing activities unrelated to the identified needs, the project concentrates on the specific instructional leadership and pedagogical areas that emerged from the study. PROJECT SIBOL will be integrated into the School Learning Action Cell (SLAC) of Vinzons Pilot Elementary School for three months, from October to December 2026, involving the 52 teachers of the school. The October activities will address research-based instruction, curriculum alignment, and application of content knowledge within and across curriculum areas. The November activities will focus on classroom observation, coaching, mentoring, individualized instructional support, and professional feedback. The December activities will concentrate on ICT integration, literacy and numeracy strategies, higher-order thinking skills, appropriate language use, and effective classroom communication. Through its integration into SLAC, the proposal provides a school-based mechanism for addressing the areas identified by the research without establishing a separate professional development

structure. The sessions will use collaborative discussions, demonstration teaching, peer sharing, coaching, development of lesson exemplars, classroom observation, and reflection. In this manner, PROJECT SIBOL is directly anchored on the empirical findings of the study, particularly the lowest-rated indicators, and translates these findings into focused professional learning activities that respond to the instructional needs identified among the respondents.

CONCLUSIONS

The study concludes that school leaders demonstrate a high level of instructional leadership practices in supporting and improving classroom instruction. The delivery of content knowledge and pedagogy is also generally evident among respondents, although research-based knowledge and principles of teaching and learning require further strengthening. A significant positive relationship exists between instructional leadership practices and the delivery of content knowledge and pedagogy, leading to the rejection of the null hypothesis. Thus, stronger instructional leadership is associated with better teaching practices. These findings further establish the need for a focused school-based intervention; hence, PROJECT SIBOL is proposed to strengthen the identified areas of instructional leadership, content knowledge, and pedagogy.

RECOMMENDATIONS

The study recommends that school heads and master teachers are encouraged to sustain and strengthen instructional leadership practices, particularly curriculum guidance, instructional monitoring, professional development, coaching and mentoring, and the promotion of research-based practices. Greater attention may be given to strengthening teachers' application of research-based knowledge and principles through SLAC sessions, demonstration teaching, peer sharing, and other professional learning activities while continuously supporting ICT integration, literacy and numeracy, HOTS, language use, and classroom communication. The school may also implement and monitor PROJECT SIBOL: Strengthening Instructional Best Practices through Observation and Leadership to address the identified areas for improvement. Future researchers may conduct similar studies in other settings and evaluate the effectiveness of PROJECT SIBOL using quantitative, qualitative, or mixed-method approaches.

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