



School Leadership in the 21st Century: An Analysis of Trends, Practices, and Effectiveness in Elementary Schools

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Abstract

Review Article

This study investigated the relationship between 21st-century leadership trends and administrative practices among public elementary school heads in Diffun District 2, Quirino. While the Department of Education has set clear professional standards, there is still a need to understand how these modern roles are actually performed in local schools. This research aimed to fill that gap by examining how instructional leadership, data-driven habits, and teamwork affect school success. Using a quantitative research design, data were gathered from 102 teachers with at least three years of experience. The study focused on identifying which specific leadership behaviors serve as the strongest predictors of school effectiveness. By using statistical tools like Pearson correlation and stepwise regression, the research looked for the "success formula" that helps a school run better. The findings provide an evidence-based look at how moving away from traditional, top-down management toward a more collaborative and data-informed approach can improve outcomes. This information is intended to help the Department of Education create better training programs for school leaders in the 21st century.

Keywords: 21st-Century Leadership, Data-Driven Decision-Making, Distributed Leadership, School Effectiveness, Research Gap.

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Introduction

In the 21st century, school leadership has shifted from basic administration to active instructional leadership. Driven by academic reforms and technological growth, school heads are now essential in monitoring learning outcomes and supporting teacher growth to improve student achievement (Ulit, 2025; Fresnido & Uy, 2026). In the Philippines, the Department of Education

(DepEd) formalized these roles through DepEd Order No. 24, s. 2020. The Philippine Professional Standards for School Heads were instituted through this policy, emphasizing crucial areas including instructional leadership, the utilization of data in decision-making processes, and the cultivation of community partnerships (DepEd, 2020). In the local context, DepEd-Region II reinforces these standards by mandating annual improvement plans and



providing capacity-building initiatives for school leaders (Olasiman & Torreón, 2024; Dinglasa & Lantaka, 2025).

Notwithstanding these national directives, however, leadership practices exhibit considerable variation across individual schools. Research indicates that a leader's experience, education, and school size often influence how these standards are executed (Rodulfa, 2023; Fernandez & Tagadiad, 2024). This highlights the need for local studies to examine how these modern trends are actually implemented.

This quantitative investigation examines the correlation between contemporary leadership paradigms and administrative methodologies employed by public elementary school principals within Diffun District 2, Quirino. Through an assessment of instructional leadership, personnel management, and school-community collaborations, the study seeks to identify the most significant predictors of school efficacy. The resulting data will contribute to the formulation of evidence-based leadership development initiatives and inform potential policy adjustments.

Thus, the study sought to determine the relationship between the adoption of 21st – century leadership trends and the level of administrative and supervisory practices among the public elementary school heads in Diffun District 2. Specifically, it aimed to answer the following questions:

1. What is the extent of adoption of 21st-century leadership trends among elementary school heads in terms of:
 - a. Instructional Leadership;
 - b. Data-Driven Decision-Making; and
 - c. Distributed Leadership?
2. What is the level of administrative and supervisory practices of school heads in terms of:
 - a. Personnel Management;
 - b. Curriculum Supervision; and

c. School–Community Partnership?

3. What is the level of school effectiveness as perceived by teachers-respondents?
4. Is there a significant relationship between the adoption of 21st – century leadership trends and the level of administrative and supervisory practices?
5. Which among the leadership trends and practices significantly predict school effectiveness?

Methods

This investigation employed a descriptive-correlational and predictive methodology to assess leadership dynamics within 29 public schools situated in Diffun District 2. A total of 102 teachers, selected via purposive stratified sampling and possessing a minimum of three years of professional experience, participated in the study. Data acquisition involved the administration of a validated questionnaire, meticulously designed in accordance with both national and international benchmarks, thereby ensuring robust reliability. Ethical considerations were rigorously observed to safeguard participant confidentiality and secure informed consent. The analysis, conducted using SPSS software, incorporated weighted means, Pearson correlation, and multiple regression techniques to evaluate leadership patterns, administrative procedures, and their respective influences on school efficacy. These analytical instruments facilitated the identification of critical determinants of success.

Results and Discussions

This section presents the findings and analysis of the results of the study after appropriate statistical procedures have been applied.

Table 1. Extent of Adoption of 21st-Century Leadership Trends among Elementary School Heads as Perceived by Teacher-Respondents along Instructional Leadership

Statements	Mean	SD	Description
1.The school head ensures that the school’s academic goals are clearly understood by all staff members.	3.65	.52	VH
2. The school head makes regular classroom visits to observe teaching and learning.	3.57	.54	VH
3. The school head provides specific, constructive feedback to teachers after observations.	3.67	.49	VH
4. The school head coordinates the curriculum across grade levels to ensure continuity.	3.66	.54	VH
5. The school head reviews student work and assessment results to monitor instructional quality.	3.48	.58	VH
Grand Mean	3.60	.39	VH

*Legend: 3.25 – 4.00 Very High (VH)
2.50 – 3.24 High (H)*

*1.75 – 2.49 Low (L)
1.00 – 1.74 Very Low (VL)*

Table 1 shows that teacher-respondents perceive a very high extent of adoption of 21st century instructional leadership among elementary school heads (grand mean = 3.60). All assessed items fell within the "Very High" range (3.25–4.00), suggesting that principals consistently articulate academic objectives, observe classroom instruction, offer feedback, manage curriculum, and evaluate student performance. These actions correspond with fundamental aspects of instructional leadership recognized globally: the communication and establishment of school goals, the supervision of instruction, the coordination of curriculum, and the monitoring of student advancement (Hallinger,

2011; Sebastian et al., 2017). The notably high ratings concerning curriculum coordination and goal clarity are consistent with research indicating that effective school leaders demonstrate proficiency in both coordinating the curriculum and establishing school goals (Leithwood & Louis, 2012). Regular feedback and classroom observations are likewise emphasized as key behaviors that enhance teacher effectiveness and student performance (Robinson, Lloyd, & Rowe, 2008). Overall, the table suggests that principals in this setting function as strong instructional leaders, consistent with 21st-century leadership expectations (Hallinger, 2011).

Table 2. Extent of Adoption of 21st-Century Leadership Trends among Elementary School Heads as Perceived by Teacher-Respondents along Data– Driven Decision-Making

Statements	Mean	SD	Description
1. The school head uses standardized test data to identify specific student learning gaps.	3.39	.57	VH
2. The school head provides digital tools (dashboards/e-spreadsheets) to help teachers analyze student data.	3.29	.62	VH

3. Decisions regarding the school’s annual improvement plan (AIP) are based on longitudinal performance data.	3.66	.50	VH
4. The school head schedules regular meetings dedicated solely to discussing data trends and student progress.	3.66	.57	VH
5. Data is used to assign teachers and resources to the areas where students are struggling most.	3.58	.53	VH
Grand Mean	3.52	.41	VH

Legend: 3.25 – 4.00 Very High (VH)
2.50 – 3.24 High (H)

1.75 – 2.49 Low (L)
1.00 – 1.74 Very Low (VL)

The data presented in the table suggests that teacher-respondents believe elementary school heads extensively utilize data-driven decision-making, as indicated by a grand mean of 3.52. Specifically, the high mean scores associated with the application of standardized test data to pinpoint learning deficiencies (M = 3.39) and the incorporation of longitudinal data into the Annual Improvement Plan (M = 3.66) demonstrate that school leaders are methodically leveraging assessment data to inform school enhancement strategies. This aligns with existing research indicating that structured data utilization facilitates instructional choices and

enhances student outcomes (Meyers et al., 2021; Prenger & Schildkamp, 2018). Similarly, the elevated means for conducting regular data-centric meetings (M = 3.66) and employing data for the allocation of teachers and resources (M = 3.58) imply a well-established data culture and collaborative engagement with evidence (Abrams et al., 2020; Datnow & Hubbard, 2015). Consequently, the overall results depict school heads as data-informed leaders who cultivate collaborative, evidence-based methodologies to address student requirements and promote ongoing improvement (Young et al., 2018; Schelling & Rubenstein, 2021).

Table 3. Extent of Adoption of 21st-Century Leadership Trends among Elementary School Heads as Perceived by Teacher-Respondents along Distributed Leadership

Statements	Mean	SD	Description
1. The school head empowers a leadership team (Grade Heads/Coordinators) to make significant school decisions.	3.71	.52	VH
2. Responsibility for school-wide instructional improvement is shared among the entire staff.	3.71	.50	VH
3. The school head encourages teachers to take leadership roles in areas where they have expertise.	3.64	.50	VH
4. There is a strong sense of collective responsibility for the academic success of all students.	3.67	.51	VH
5. The leadership team works cohesively to solve school problems rather than relying solely on the principal.	3.67	.51	VH
Grand Mean	3.68	.41	VH

Legend: 3.25 – 4.00 Very High (VH)
2.50 – 3.24 High (H)

1.75 – 2.49 Low (L)
1.00 – 1.74 Very Low (VL)

The table shows that teacher-respondents perceive a very high extent of distributed leadership practices among elementary school heads, with a grand mean of 3.68. Key aspects include empowering leadership teams to make significant decisions and sharing responsibility for instructional improvement (M = 3.71), encouraging teachers to take leadership roles in their areas of expertise (M = 3.64), fostering collective responsibility for student success (M = 3.67), and promoting collaborative problem-solving within leadership teams (M = 3.67). These findings align with research emphasizing that distributed leadership involves shared decision-making, collaboration, and collective responsibility, which contribute to improved school functioning and instructional outcomes. Distributed leadership

models in elementary schools have been shown to enhance instructional leadership by involving multiple stakeholders such as grade heads, coordinators, and teachers in leadership roles, thereby supporting school improvement efforts (Camburn, Rowan, & Taylor, 2003; Modeste et al., 2021; Tenha & Makamure, 2024). Such collaborative approaches are linked to stronger professional learning communities and better academic results through shared leadership responsibilities (Modeste et al., 2021; Heck & Hallinger, 2009). Overall, the data reflects a deliberate and effective distribution of leadership functions that empower staff and promote collective engagement in school success.

Table 4. Level of Administrative and Supervisory Practices of School Heads as Perceived by the Teacher-Respondents

Domain	Mean	SD	Description
Personnel Management	3.66	.42	VHE
Curriculum Supervision	3.66	.35	VHE
School-Community Partnership	3.68	.35	VHE

*Legend: 3.25 – 4.00 Very High Extent (VHE)
2.50 – 3.24 High Extent (HE)*

*1.75 – 2.49 Low Extent (LE)
1.00 – 1.74 Very Low Extent (VLE)*

The table presents the perceived effectiveness of school heads' administrative and supervisory practices, as reported by teachers, across three areas: Personnel Management, Curriculum Supervision, and School-Community Partnership. Each area received mean scores exceeding 3.25; specifically, 3.66 for both Personnel Management and Curriculum Supervision, and 3.68 for School-Community Partnership, thereby categorizing them as "Very High Extent" (VHE). This indicates that

teachers perceive school heads as highly proficient in personnel management, curriculum oversight, and community partnership development. The relatively low standard deviations suggest that the respondents' perceptions of these practices were consistent. These results are consistent with recent research highlighting the importance of effective supervisory practices by school heads—including providing constructive feedback, conducting classroom observations, and involving community

stakeholders—in enhancing teaching quality and student achievement (Mangadlao & Oropa, 2025; Abdurajik, 2025). Furthermore, robust personnel management and curriculum oversight foster a conducive atmosphere, thereby augmenting teacher efficacy and professional growth (Alba et al., 2025). While obstacles like time limitations and administrative demands persist, these can be

alleviated through focused training initiatives and improved supervisory frameworks (Cabildo, 2025). In essence, the findings indicate a favorable shift towards holistic leadership approaches that merge administrative effectiveness with instructional assistance and community engagement, ultimately advancing educational achievement.

Table 5. Pearson r Correlation between the Adoption of Leadership Trends and the Level of Administrative and Supervisory Practices

21st-Century Leadership Trends	Administrative and Supervisory Practices								
	Personnel Management			Curriculum Supervision			School–Community Partnership		
	r	P	Decision	r	P	Decision	R	p	Decision
Instructional Leadership	.653	<.001	Reject Ho	.643	<.001	Reject Ho	.485	<.001	Reject Ho
Data-Driven Decision-Making	.662	<.001	Reject Ho	.631	<.001	Reject Ho	.511	<.001	Reject Ho
Distributed Leadership	.740	<.001	Reject Ho	.623	<.001	Reject Ho	.554	<.001	Reject Ho

p-value of ≤ 05 is significant

The results in the table show a marked positive relationship between 21st-century leadership trends and the table presents Pearson correlation coefficients (r) showing strong positive relationships between the adoption of 21st-century leadership trends—Instructional Leadership, Data-Driven Decision-Making, and Distributed Leadership—and key administrative and supervisory practices: Personnel Management, Curriculum Supervision, and School–Community Partnership. All correlations are statistically significant with p-values less than .001, leading to rejection of the null hypothesis in each case. Distributed Leadership shows the strongest association with Personnel Management (r = .740), indicating that sharing

leadership responsibilities and fostering collaboration among staff significantly enhances personnel management effectiveness. Instructional Leadership and Data-Driven Decision-Making also demonstrate substantial positive correlations across all three administrative domains, with coefficients ranging from .485 to .662, suggesting that focusing on instructional quality and evidence-based decisions supports better curriculum oversight and community engagement. These findings align with research emphasizing that transformational and democratic leadership styles improve administrative functions by promoting collaboration, instructional focus, and data utilization (Dangalan, 2025). Meta-analytic evidence further confirms that leadership

styles have a meaningful impact on organizational outcomes in public administration, particularly in achieving beneficial group- and organization-related results (Backhaus & Vogel, 2022). Additionally, effective leadership practices correlate with improved teacher performance through enhanced planning, organizing, and emotional support

(Crescencio & Dioso, 2025). Overall, the data suggest that adopting modern leadership approaches strengthens multiple dimensions of school administration by fostering shared responsibility, data-informed decision-making, and instructional leadership, which collectively enhance educational outcomes and school-community partnerships.

Table 6. Stepwise Regression Analysis of 21st-Century Leadership Trends as Predictors of School Effectiveness

Predictor Variable/s	Regression Model	R ²	F	p-value
Data-Driven Decision-Making (X ₁)	Y = 1.363 + 0.612X ₁	0.393	64.844	<.001
Data-Driven Decision-Making (X ₁) and Distributed Leadership (X ₂)	Y = 0.927 + 0.411X ₁ + 0.311X ₂	0.451	40.714	<.001

p-value of ≤ 05 is significant

The study used a stepwise regression analysis to find out which leadership styles have the biggest impact on a school’s success. The results show that Data-Driven Decision-Making is the single most important factor. By itself, it explains 39.3% of why a school is effective (R²= 0.393). This means that when a principal focuses on using facts and student results to make choices, it creates a massive boost in how well the school performs. The model became even stronger when Distributed Leadership was added. Together, these two leadership styles explain 45.1% of school effectiveness (R²= 0.451). This tells us that a school reaches its highest potential when the leader does two things at once: uses evidence to

make plans and shares power with the rest of the staff.

The very high statistical significance (p < .001) confirms that these results are not a coincidence. These findings align with major research by Tan, Gao, and Shi (2020) and Tan, Dimmock, and Walker (2021), which proves that the best school outcomes happen in "collaborative environments." In simple terms, when leaders stop guessing and start sharing their responsibilities, the whole school wins. These two traits—being smart with data and being a team player—are the most reliable predictors of a successful school in the 21st century.



Table 7. Stepwise Regression Analysis of Administrative and Supervisory Practices as Predictors of School Effectiveness

Predictor Variable/s	Regression Model	R ²	F	p-value
Personnel Management (X ₁)	Y = 1.409 + 0.576X ₁	0.363	58.651	<.001
Personnel Management (X ₁) and Curriculum Supervision (X ₂)	Y = 0.898 + 0.345X ₁ + 0.371X ₂	0.405	35.392	<.001

p-value of ≤.05 is significant

The stepwise regression analysis indicates that Personnel Management significantly predicts school effectiveness, accounting for 36.3% of the variance (R² = 0.363, F = 58.651, p < .001). When Curriculum Supervision is added, the model explains 40.5% of the variance (R² = 0.405, F = 35.392, p < .001), showing that both administrative and supervisory practices jointly enhance school effectiveness. Research supports that effective personnel management by school administrators fosters a positive learning environment that can improve student achievement (Bangcoyan, 2025). Additionally, supervisory practices such as classroom observation and instructional support have been linked to improved teacher job effectiveness and overall school performance (Owan et al., 2023; Adebola et al., 2018). However, some studies note that while administrative competence is important, its direct effect on teacher performance may be influenced by other factors like experience and training (Refugio et al., 2025). Overall, combining strong personnel management with active curriculum supervision is critical for enhancing school effectiveness in public education settings (Macalisang, 2023; Msuya & Mwila, 2023)

The results of this study lead to the conclusion that public elementary school heads in Diffun District 2 have successfully transitioned into modern, 21st-century leadership roles. The "Very High" extent of adoption across Instructional Leadership, Data-Driven Decision-Making, and Distributed Leadership indicates that school governance in the

district is no longer a purely administrative task but a collaborative, evidence-based mission. The statistical analysis proves that modernizing leadership is the most effective way to strengthen school management. The exceptionally strong relationship between Distributed Leadership and Personnel Management (r = .740) suggests that when school heads trust their teams and share decision-making power, the management of staff becomes significantly more effective. This validates the idea that 21st-century schools thrive on "collective responsibility" rather than top-down authority.

Furthermore, the study provides a clear "success formula" for school effectiveness. The regression models identify Data-Driven Decision-Making and Distributed Leadership as the most powerful predictors of success, jointly explaining 45.1% of school effectiveness. Similarly, the combination of Personnel Management and Curriculum Supervision (explaining 40.5% of effectiveness) confirms that administrative efficiency must be paired with active instructional support to truly improve student and teacher outcomes.

Ultimately, the study confirms that the most effective school heads in the district are those who "stop guessing and start sharing." By using longitudinal data to drive their Annual Improvement Plans and empowering their teachers to take on leadership roles, these school heads are meeting the complex demands of the 21st-century educational landscape. These findings serve as strong evidence base for future leadership training programs within the

Department of Education.

Based on the findings, school heads should focus on "leading with data and leading together." Instead of guessing, they should use school records and test results to make better plans for the future. Principals are also encouraged to share their power by letting teachers take charge of projects and make important decisions. This teamwork makes managing the school much easier and more effective. The Department of Education should create training programs that teach leaders how to use digital tools and how to build strong, collaborative teams. Finally, future researchers should look into why some schools have very happy teachers but still struggle with low test scores, and how new technology like AI can help smaller schools manage their data more simply.

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