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Organizational Culture, School-based Management Practices, and Administrative Techno-Stress on Leadership Competence of School Leaders

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Abstract: This study investigated the relationships among organizational culture, school-based management practices, and administrative techno-stress and their collective impact on the leadership competence of school leaders.In the province of Bukidnon during the 2024–2025 school year. The research employed a descriptive-correlational design, with a sample of 300 school heads selected through stratified random sampling across three divisions in Bukidnon. Data were collected using validated and reliable standardized questionnaires measuring organizational culture (collaborative leadership, teacher collaboration, unity of purpose), school-based management practices (school leadership, internal stakeholder participation, school-based resources, school performance accountability), administrative techno-stress (process-, profession-, technical issue-, personal-, and social-oriented techno-stress), and leadership competence.

Descriptive statistics revealed high levels of organizational culture (M = 4.42), school-based management practices (M = 4.19), and administrative techno-stress (M = 3.90) among school leaders. Collaborative leadership and school leadership emerged as the most substantial dimensions within their respective domains, while teacher collaboration and internal stakeholder participation were identified as areas for potential improvement. Correlational analysis indicated significant positive relationships between organizational culture and leadership competence, as well as between school-based management practices and leadership competence. Conversely, higher levels of administrative techno-stress were associated with lower leadership competence. Regression analysis further identified organizational culture as the strongest predictor of leadership competence, followed by school-based management practices, while administrative techno-stress demonstrated a significant negative predictive effect.

These findings underscore the importance of fostering a positive organizational culture and effective school-based management practices to enhance leadership competence while addressing administrative techno-stress to support school leaders' effectiveness. The study highlights the need for targeted interventions and support systems that promote collaborative environments, stakeholder engagement, and technological adaptability among school leaders to achieve improved educational outcomes.

Keywords: *Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on Leadership Competence of School Leaders.*

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I. INTRODUCTION

The education landscape is continuously evolving, demanding that school leaders possess robust competencies to navigate the complexities of the 21st-century learning environment. The effectiveness of these leaders is significantly influenced by various factors, including the organizational culture within their schools, the implementation of school-based management practices, and the ever-increasing pressure of administrative techno-stress. Understanding the interplay between these factors and their impact on leadership competence is crucial for fostering successful educational outcomes.

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Despite the recognized importance of leadership competence in schools, several problems and gaps persist. Studies have indicated a deficiency in specific leadership skills among school leaders, hindering their ability to effectively manage resources, promote collaboration, and drive instructional improvements. For instance, a study by Reyes (2022) highlighted that some school principals in the Philippines struggle with strategic planning and decision-making, leading to inconsistent implementation of school programs. Similarly, Dela Cruz (2019) found that a lack of practical communication skills among school leaders can create barriers to building strong relationships with teachers, students, and parents, ultimately affecting school climate and performance. Moreover, Gonzales (2017) pointed out that inadequate knowledge and skills in utilizing data for informed decision-making limit the capacity of school leaders to identify areas for improvement and implement targeted interventions. These gaps underscore the need for a comprehensive investigation into the factors influencing leadership competence.

The relationship between organizational culture, school-based management practices, administrative technostress, and leadership competence is complex and multifaceted. A positive and supportive organizational culture can foster collaboration, innovation, and professional growth among teachers and staff, empowering school leaders to focus on strategic priorities and instructional leadership (Santos, 2020). Effective implementation of school-based management practices, such as shared decision-making and decentralized resource allocation, can enhance the autonomy and accountability of school leaders, enabling them to respond more effectively to the unique needs of their schools (Castro, 2018). However, the increasing reliance on technology in administrative tasks can also create technostress among school leaders, potentially impacting their ability to focus on instructional leadership and build relationships with stakeholders (Torres, 2023). Understanding how these factors interact and influence leadership competence is essential for developing targeted interventions and support systems for school leaders.

II. OBJECTIVES OF THE STUDY

The objectives of the study were to develop a structural model of Organizational Competence, School-Based Management Practices, and Administrative Techno-Stress on Leadership Efficacy of School Leaders in Northern Mindanao, Region X. Specifically, this study aimed to:

- *Determine the level of Organizational Culture on the Leadership Competence of School Leaders in terms of:*

  - Collaborative Leadership
  - Teachers Collaboration
  - Unity of Purpose

- *Determine the level of School-Based Management Practices on the Leadership Competence of School Leaders in terms of:*

  - School Leadership
  - Internal Stakeholder Participation
  - School-Based Resources
  - School Performance Accountability

- *Determine the level of Administrative Techno-Stress on the Leadership Competence of School Leaders in terms of:*

  - Process Oriented Techno-stress
  - Profession-Oriented Techno-stress
  - Technical Issue-Oriented Techno stress
  - Personal-Oriented Techno Stress
  - Social-Oriented Techno stress

- *Ascertain the level of Leadership Competence of School Leaders.*
- *Assess the relationship between Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on Leadership Competence of School Leaders.*

III. MATERIALS AND METHODS

- *Respondents*

This study's respondents consisted of 300 school heads from the three divisions within the province of Bukidnon during the school year 2024–2025. We selected them using stratified random sampling to ensure representation across three divisions. This sampling method provided a diverse group of participants to comprehensively examine the relationship between their holistic well-being and leadership competence.

- *Research Design*

The study used descriptive, correlational, and regression analysis methods to analyze quantitative data. It utilized the descriptive approach to examine Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on the Leadership Competence of School Leaders. Pearson Product-Moment Correlation assessed variable relationships, while multiple regression analysis predicted the variables influencing administrators' supervisory competence.

- *Instrument*

This research study tested the content validity and reliability of a standardized questionnaire. We pilot-tested the questionnaire with 25 teachers to ensure its effectiveness. The results showed a Cronbach's alpha coefficient [α] of 0.958, indicating high reliability. Each item in the questionnaire used a five-point Likert scale, ranging from "strongly agree" to "strongly disagree," allowing respondents to provide nuanced feedback on their holistic well-being and technological competence.

The Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on the Leadership Competence of School Leaders were examined in this study. Each of the variables has a distinct instrument. This research utilized the questionnaire as the primary tool for gathering the needed data and information.

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Pilot Testing of instruments was done. Its reliability had tested the instrument.

The first part of the instrument was an Organizational Culture questionnaire, which was adopted from the study of Villote (2022). Organizational Culture and Management Skills on the Performance of Basic Education Teachers during the Pandemic, Central Mindanao University, Unpublished Master's Thesis.

The second instrument was on school-based management practices. The questionnaire was adapted from Quinga's (2016) Challenging and Coping Mechanisms of Junilla used School Administrators in the Implementation of the School-Based Management Program. (2016).

The third instrument was the administrative technostress. The questionnaire was patterned from the study Çoklar, A. N., Efilti, E., Sahin, Y. L., & Akçay, A. (2016). Investigation of techno-stress levels of teachers who were included in technology integration processes. Turkish Online Journal of Educational Technology, 15(4), 1331-1339. Retrieved from ERIC database. (ERIC Number: ED575012) and with a Cronbach alpha of 0.985.

Finally, the study of Magdato and Paglinawan (2024), Sociocultural-Political Influences and Grit on Leadership Competence of School Administrators, adopted the leadership competencies of school leaders..

➢ *Statistical Analysis*

The following statistical procedures were employed to answer the specific problems of the study:

Descriptive statistics such as the frequency and percentage were used to determine the extent of Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on the Leadership Competence of School Leaders. Pearson Product Moment Correlation was used to establish the relationships among variables. At the same time, Multiple Linear Regressions were utilized to determine the variable that best predicts the supervisory competence of the school administrators.

IV. RESULTS AND DISCUSSION

➢ *Results of Descriptive Statistics of Variables*

Table 1 Summary of Organizational Culture of School Leaders in Leadership Competence

Indicators	**Mean**	**Qualitative Interpretation**
Collaborative Leadership	4.55	*Very High Level*
Unity of Purpose	4.47	*Very High Level*
Teachers Collaboration	4.23	*High Level*
Overall Mean	4.42	*High Level*

NUMERICAL RATING	**RANGE**	**DECRIPTIVE RATING**	**QUALITATIVE INTERPRETATION**
5	4.51-5.0	Strongly Agree	Very High Level
4	3.51-4.50	Agree	High Level
3	2.51-3.50	Neither	Moderate Level
2	1.51-2.50	Disagree	Low Level
1	1.0-1.50	Strongly Disagree	Very Low Level

Table 1. The summary table clearly shows school leaders' organizational culture and its impact on their leadership competence. The overall mean score of 4.42 indicates a high level of organizational culture among school leaders, suggesting that the leaders generally possess strong cultural traits conducive to effective leadership.

The highest indicator in the table is Collaborative Leadership, with a mean score of 4.55, categorized as a Very High Level. This suggests that school leaders prioritize collaboration to create a supportive environment where teachers feel valued and engaged. Collaborative leadership fosters teamwork and shared decision-making, which leads to improved educational outcomes. This aligns with findings from Johnson and Lee (2022), who found that schools with collaborative leadership reported higher levels of teacher satisfaction and student performance.

On the other hand, the lowest indicator is teachers' collaboration, with a mean score of 4.23, which is classified as a high level. While still positive, this score indicates that there may be areas for improvement in how teachers collaborate within the school setting. This could imply that although collaboration is valued, it may not be fully optimized or effectively structured. Research by Garcia (2020) supports this notion, suggesting that effective collaboration among teachers requires clear goals and supportive frameworks to be genuinely beneficial.

The high level of collaborative leadership suggests that school leaders effectively engage their teams, which is crucial for fostering a positive school culture. However, the slightly lower score in teachers' collaboration indicates a need for more structured approaches to enhance collaborative practices among teachers. This could involve providing professional development focused on collaboration skills or creating more opportunities for teachers to collaborate on projects.

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Smith et al. (2019) emphasize that schools with strong collaborative leadership and clear vision experience better teaching and learning outcomes. Similarly, Reyes et al. (2021) highlight the importance of fostering a collaborative culture in Philippine schools, noting that effective leadership significantly contributes to teacher collaboration. Furthermore, research by Tan (2023) indicates that structured collaboration among teachers improves student engagement and learning outcomes. Additionally, Hwang and Lee (2022) argue that while collaboration is vital, it must be purposeful and well-facilitated to yield positive results. Finally, Nguyen and Tran (2021) find that when school leaders support collaborative practices, it enhances overall school performance.

Organizational culture indicators reveal important insights into school leaders' leadership competence. While collaborative leadership is a strong asset, enhancing teacher collaboration through structured support can further improve school leadership's overall effectiveness.

Table 2 Summary of School-Based Management of School Leaders in Leadership Competence

Indicators	**Mean**	**Qualitative Interpretation**
School Leadership	4.24	*High Level*
School-Based Resources	4.23	*High Level*
School Performance Accountability	4.21	*High Level*
Internal Stakeholder Participation	4.06	*High Level*
Overall Mean	4.19	*High Level*

NUMERICAL RATING	RANGE	DECRIPTIVE RATING	QUALITATIVE INTERPRETATION
5	4.51-5.0	Strongly Agree	Very High Level
4	3.51-4.50	Agree	High Level
3	2.51-3.50	Neither	Moderate Level
2	1.51-2.50	Disagree	Low Level
1	1.0-1.50	Strongly Disagree	Very Low Level

Table 2 School-Based Management (SBM) practices of school leaders and their influence on leadership competence. The overall mean score of 4.19 indicates a High Level of school-based management, suggesting that school Leaders are effectively implementing practices that enhance their leadership capabilities.

The highest indicator in the table is the School.

Leadership, with a score of 4.24, is classified as a High Level. This indicates that school leaders are viewed as effective in guiding their institutions. Strong leadership is crucial for creating a positive school environment, fostering teacher collaboration, and improving student outcomes. Research by Johnson and Lee (2022) supports this, noting that effective school leadership is associated with higher levels of trust and morale among staff, enhancing school performance.

The lowest indicator is the Internal Stakeholder.

Participation, with a mean score of 4.06, is still categorized as High. While this score reflects a positive Perception, there may be room for improvement in involving internal stakeholders, such as teachers and staff, in decision-making processes. Effective participation is essential for ensuring that the voices of all stakeholders are heard and that decisions reflect the needs of the school community. Garcia (2020) emphasizes that schools with higher levels of stakeholder engagement often see increased commitment and better student outcomes.

The high score in School Leadership reinforces the importance of strong leadership in fostering a positive school culture and enhancing educational outcomes. However, the lower score in Internal Stakeholder Participation highlights a potential gap that school leaders should address. By increasing the involvement of teachers and staff in decision-making, school leaders can foster a more inclusive environment that promotes collaboration and shared responsibility.

Smith et al. (2019) found that effective school leaders who engage stakeholders in decision-making create a sense of ownership and commitment among teachers. Similarly, Reyes et al. (2021) highlight the importance of stakeholder participation in Philippine schools, noting that inclusive practices improve school performance and teacher satisfaction. Furthermore, Tan (2023) indicates that schools prioritizing stakeholder involvement in governance experience better alignment between school goals and community needs. Hwang and Lee (2022) point out that effective participation strategies enhance leadership effectiveness and lead to innovative solutions to educational challenges. Dela Cruz et al. (2022) also found that strong leadership combined with active stakeholder engagement contributes significantly to positive educational outcomes in the Philippines.

School-based management indicators provide valuable insights into school leaders' leadership competence. While strong school leadership is evident, enhancing internal stakeholder participation through structured engagement can further improve school management's overall effectiveness.

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Table 3 Summary of Administrative Techno-Stress of School Leaders in Leadership Competence

Indicators	Mean	Qualitative Interpretation
Process-Oriented Techno-Stress	4.07	*High Level*
Technical Issue-Oriented Techno-Stress	3.93	*High Level*
Profession-Oriented Techno-Stress	3.84	*High Level*
Personal-Oriented Techno-Stress	3.84	*High Level*
Social-Oriented Techno-Stress	3.82	*High Level*
Overall Mean	3.90	*High Level*

NUMERICAL RATING	RANGE	DECRIPTIVE RATING	QUALITATIVE INTERPRETATION
5	4.51-5.0	Strongly Agree	Very High Level
4	3.51-4.50	Agree	High Level
3	2.51-3.50	Neither	Moderate Level
2	1.51-2.50	Disagree	Low Level
1	1.0-1.50	Strongly Disagree	Very Low Level

Table 3. Presents an overview of Administrative Techno-Stress experienced by school leaders and its relationship with their leadership competence. The overall mean score of 3.90 indicates a High Level of techno-stress among school leaders, suggesting that while they manage their responsibilities effectively, they are still facing significant technology-related stress.

The highest indicator in the table is Process-Oriented Techno-Stress, with a mean score of 4.07, classified as a High Level. This indicates that school leaders are particularly stressed about the processes involved in integrating technology into their administrative duties. This techno-stress often arises from challenges adapting to new systems and ensuring that technology enhances rather than hinders their work. Research by Hwang and Lee (2022) highlights that leaders who struggle with process-oriented issues may find it difficult to implement technology effectively, subsequently impacting their leadership effectiveness and the overall school environment.

The lowest indicators are Profession-Oriented Techno-Stress and Personal-Oriented Techno-Stress, with a mean score of 3.84, still categorized as a High Level.

These scores suggest that while school leaders experience significant stress related to their professional roles and personal lives, the impact may not be as pronounced as process-oriented stress. This indicates that school leaders are better equipped to handle the pressures associated with their professional responsibilities and personal lives compared to the challenges of integrating technology into their processes. Garcia (2020) supports this notion, suggesting that effective stress management techniques can help leaders mitigate the impacts of professional and personal stressors.

The high level of process-oriented techno-stress highlights the need for targeted support and training for school leaders to enhance their technological skills and reduce the stress associated with new processes. Providing professional development opportunities focused on technology integration could alleviate some of the burdens school leaders face, allowing them to focus more on their leadership roles. Meanwhile, the lower yet significant levels of profession-oriented and personal-oriented techno-stress suggest that while these areas may be manageable, ongoing support could further enhance leaders' well-being and effectiveness.

Reyes et al. (2021) highlight that effective stress management strategies in Philippine schools can significantly enhance leadership performance. Tan (2023) indicates that when school leaders receive adequate support for technological integration, their overall stress levels decrease, leading to improved outcomes for teachers and students. Adams and Becker (2018) also emphasize the importance of addressing techno-stress through training and resources, which can lead to more effective leadership. Finally, Dela Cruz et al. (2022) discuss the critical role of supportive school environments in reducing the impact of techno-stress on educational leaders.

Administrative techno-stress indicators reveal important insights into the challenges faced by school leaders. Addressing the high levels of process-oriented techno-stress through targeted training and support can enhance leadership effectiveness and improve the overall school climate.

Table 4 Summary of Leadership Competence of School Leaders

Indicators	Mean	Qualitative Interpretation
Building Rapport and Support	4.46	*High Level*
Communication and Presentation	4.43	*High Level*
Leadership and Decision-Making	4.22	*High Level*
Implementation and Improvement	4.40	*High Level*
Development and Change Management	4.36	*High Level*
Strategic and Creative Thinking	4.36	*High Level*
Overall Mean	4.37	*High Level*

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NUMERICAL RATING	RANGE	DECRIPTIVE RATING	QUALITATIVE INTERPRETATION
5	4.51-5.0	Strongly Agree	Very High Level
4	3.51-4.50	Agree	High Level
3	2.51-3.50	Neither	Moderate Level
2	1.51-2.50	Disagree	Low Level
1	1.0-1.50	Strongly Disagree	Very Low Level

Table 4. Presents an overview of school leaders' leadership competence. The overall mean score of 4.37 indicates a High Level of leadership competence. This suggests that school leaders generally possess the skills and qualities necessary to effectively guide their institutions and support their staff.

The highest indicator in the table is Building Rapport and Support, which has a mean score of 4.46 and is classified as a High Level. This indicates that school leaders excel in establishing positive relationships with their staff, which is crucial for fostering a supportive school environment. Building rapport enhances trust and collaboration, enabling teachers to feel valued and engaged in their work. Research by Johnson and Lee (2022) emphasizes that strong interpersonal relationships between leaders and staff significantly contribute to a positive school culture and improved student outcomes.

The lowest indicator is Leadership and Decision-

With a mean score of 4.22, it is still categorized as a High Level. While this score reflects competence in decision-making, it is the lowest among the indicators, suggesting that school leaders may face challenges when making critical decisions. Effective decision-making is essential for navigating complex situations within schools. Garcia (2020) notes that leaders who engage their teams in decision-making can enhance buy-in and commitment, resulting in more effective implementation of policies and initiatives.

The high level of competence in building rapport and support highlights the importance of interpersonal skills in leadership roles. School leaders who prioritize relationship-building create environments where teachers feel supported, leading to higher morale and better performance. However, the slightly lower score in leadership and decision-making suggests a need for further development in this area. Training and resources focused on decision-making strategies could enhance leaders' abilities to navigate challenges effectively.

Smith et al. (2019) found that effective leadership is strongly linked to building trust and rapport with staff, essential for fostering collaboration. Similarly,

Reyes et al. (2021) highlight the importance of communication and decision-making in Philippine schools, noting that leaders who involve their staff in decisions tend to achieve better educational outcomes. Tan (2023) indicates that strong decision-making skills are critical for managing change and improving school performance. Furthermore, Hwang and Lee (2022) argue that leaders who demonstrate strategic and creative thinking can respond more effectively to the evolving educational landscape. Dela Cruz et al. (2022) also found that training programs focused on leadership skills, including decision-making, significantly enhance the effectiveness of school leaders in the Philippines. Leadership competence indicators reveal important insights into school leaders' strengths and areas for improvement. While building rapport is a notable strength, enhancing decision-making skills through targeted training can further elevate the overall effectiveness of school leadership.

Table 5 Correlation Analysis of Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on Leadership Competence of School Leaders

Independent Variables Correlated with Leadership Competence of School Leaders	Correlation Coefficient (r)	p-value
Organizational Culture		
Collaborative Leadership	0.606	0.000
Teacher Collaboration	0.560	0.000
Unity of Purpose	0.704	0.000
School-Based Management System		
School Leadership	0.610	0.000
Internal Stakeholder Participation	0.574	0.000
School-Based Resources	0.538	0.000
School Performance Accountability	0.477	0.000
Administrative Techno-Stress		
Process-Oriented Techno Stress	0.248	0.000
Technical Issue-Oriented Techno-Stress	0.210	0.000
Personal-Oriented Techno-Stress	0.196	0.000
** Correlation is significant at the 0.01 level (2tailed ns - not significant		

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Pearson Product-Moment Correlation was used to determine the degree or strength of the variables used in this research paper. More precisely, Pearson's correlation was run to find out the relationship between the dependent variable, which is the leadership competence resulting from strategic and creative thinking, leadership and decision-making, development and change management, implication and improvement, communication and presentation, building rapport and support and the independent variables namely: organizational culture, school-based management practices which was based on the opinions of the participants through the use of survey questionnaires in the Department of Education (DepEd) 3 divisions namely: Division of Valencia City, Division of Malaybalay City and Division of Bukidnon perspectives.

Table 5. Indicates a high level of leadership competence among school leaders regarding unity of purpose, with an overall mean score of 4.47. This score suggests a strong consensus among respondents about the clarity and shared understanding of the School's goals and objectives.

The indicator with the highest mean score is "Effective communication allows the principal to build a sense of teamwork so change can be successful," which received a mean of 4.54. This high rating reflects the critical role of communication in fostering collaboration and teamwork among staff. When school leaders effectively communicate, it builds trust and encourages collective efforts toward achieving common goals. Research by Schein and Schein (2019) supports this, highlighting that effective communication is fundamental for establishing a cohesive organizational culture.

The indicator with the lowest mean score is

"Teachers are generally aware of what other teachers are teaching," scoring 4.41. While this score still indicates a high level of awareness, there may be opportunities to enhance collaboration and information sharing among teachers. If teachers are not fully aware of each other's teaching practices, it can lead to missed opportunities for collaboration and support. A Reyes (2023) study found that increased awareness among teachers about their peers' methods correlates with improved instructional practices and student outcomes.

The results indicate that while there is strong communication and a sense of teamwork in schools, enhancing awareness among teachers about each other's activities could further strengthen unity of purpose. School leaders should consider implementing more structured opportunities for teachers to share their plans and strategies, such as collaborative planning meetings or peer observation sessions.

Al-Malki and Fitz-enz (2018) found a significant relationship between effective communication and employee engagement, suggesting that clear communication fosters a more engaged workforce. Similarly, Tian et al. (2020) emphasized that leadership styles that promote open communication can significantly enhance organizational culture. Lok and Crawford (2004) noted that an organization's strong sense of unity leads to higher job satisfaction and commitment among employees. In the Philippine context, Garcia and Aquino (2019) established that a positive organizational culture is linked to job satisfaction among teachers, reinforcing the importance of communication and unity. Lastly, Torres and Mercado (2024) highlighted how unity of purpose impacts organizational commitment in NGOs, further illustrating the broader implications of a shared vision.

While the overall competence in fostering unity of purpose is commendable, there is potential for improvement in enhancing teachers' awareness of each other's work. By focusing on this area, school leaders can further strengthen collaboration and commitment to shared goals.

A robust body of literature supports leadership competence in educational settings and emphasizes the importance of organizational culture and collaboration. Vangrieken et al. (2015) conducted a systematic review demonstrating the positive effects of teacher collaboration on professional development and student achievement, highlighting the critical role that collaborative practices play in effective educational leadership. Similarly, Hattie's (2018) work on feedback underlines how collaborative environments enhance learning outcomes, reinforcing the need for leaders to foster shared learning and support among teachers.

Denison, Nieminen, and Kotrba (2014) discuss the Denison organizational culture model, which illustrates how a strong organizational culture positively influences performance, emphasizing leaders' need to cultivate a culture that encourages collaboration and engagement. Tian et al. (2020) add to this discourse by exploring how various leadership styles impact organizational culture, revealing that effective leaders can create environments that promote innovation and teamwork. In the context of the Philippines, Magno and Valdez (2022) highlight the significance of collaborative action research in enhancing teacher professional development, showcasing the essential role of school leaders in facilitating collaborative practices. Dizon (2020) further identifies various collaborative teaching practices in Philippine elementary schools and the challenges encountered, providing valuable insights into the influence of leadership on these practices. Additionally, Castroverde and Arandia (2019) find that a supportive school culture significantly enhances teacher collaboration, pointing to the pivotal role of school leaders in fostering such an environment. Lastly, Santos and Dela Cruz (2021) examine the relationship between leadership styles and organizational performance in Philippine private companies, reinforcing that leadership approaches can significantly influence organizational culture and effectiveness.

They underscore the interconnectedness of leadership competence, organizational culture, and collaboration, emphasizing the need for school leaders to actively promote a culture of teamwork and shared goals to enhance educational outcomes.

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Table 6 Regression Analysis of Organizational Culture, School-Based Management Practices, and Administrative Techno-Stress on Leadership Competence of School Leaders

IINDICATORS	Unstandardized Coefficient		Standardized Coefficient Beta	t	Sig
	B	Std. Error			
(Constant)	0.879	0.190		4.633	0.000
Organizational Culture					
Unity of Purpose	0.517	0.067	0.595	7.718	0.000
Collaborative Leadership	0.169	0.044	0.188	3.873	0.000
Teachers Collaboration	-0.238	0.072	-0.236	-3.306	0.001
School-Based Management Practices					
School Leadership	0.179	0.050	0.184	3.605	0.000
Internal Stakeholder Participation	0.147	0.041	0.176	3.591	0.000
Administrative Techno-Stress					
Personal-Oriented Techno-Stress	0.138	0.39	0.208	3.513	0.001
Social-Oriented Techno-Stress	-0.100	0.040	-0.149	-2.493	0.013
R=0.798	R^2 =0.637		F=73.074		Sig. 0.000

Regression Equation Model

$$Y = 0.879+0.517\ X_1 + 0.169\ X_2 + -0.238\ X_3 + 0.179\ X_4 + 0.147\ X_5 + 0.138\ X_6 + -0.100\ X_7$$

Where;

Y = Leadership Competence

X_1 = Unity of Purpose

X_2 = Collaborative Leadership

X_3 = Teacher Collaboration

X_4 = School Leadership

X_5 = Internal Stakeholder Participation

X_6 = Personal-Oriented Techno-Stress

X_7 = Social-Oriented Techno-Stress

Table 6. The regression analysis explores how different aspects of organizational culture, school-based management practices, and administrative techno-stress influence the leadership competence of school leaders. The overall model is strong, with an R-value of 0.798 and an R^2 of 0.637, indicating that approximately 63.7% of the variance in leadership competence can be explained by the combined effects of these variables. This high explanatory power suggests that these factors are crucial in shaping how effectively school leaders perform their roles.

Among the indicators, Unity of Purpose under organizational culture is the strongest positive predictor, with a standardized beta coefficient of 0.595 ($t = 7.718$, $p < 0.001$). School leaders are likelier to exhibit higher competence when school communities are united around common goals and a shared vision. International research, such as Hallinger and Liu (2023), supports this finding, showing that a unified school culture significantly boosts leadership effectiveness. Similarly, Tinio and Lagura (2024) found that Philippine schools with a strong shared purpose had higher-performing leaders. Collaborative leadership also contributes positively (beta = 0.188, $t = 3.873$, $p < 0.001$), indicating that leaders who engage others in decision-making and foster teamwork tend to be more competent. This aligns with Reimers and Schleicher (2020), who observed that collaborative leadership styles promote adaptability and resilience among school leaders. In the Philippine context, Mendoza et al. (2021) found that collaborative approaches were linked to improved school performance and leadership ratings.

Interestingly, teacher collaboration has a negative beta coefficient (-0.236, $t = -3.306$, $p = 0.001$), suggesting that not all teacher collaboration necessarily enhances leadership competence. This could be due to challenges such as unclear roles, resistance to change, or conflicts that arise when collaboration is not well-structured or supported. Gonzales and Calimbahin (2022) reported similar findings in the Philippines, noting that teacher collaboration without clear leadership direction sometimes led to inefficiency and lower overall school performance.

For school-based management practices, both

"School Leadership" (beta = 0.184, $t = 3.605$, $p < 0.001$) and "Internal Stakeholder Participation" (beta = 0.176, $t = 3.591$, $p < 0.001$) have significant positive effects. Leadership competence is enhanced when school leaders are proactive, and stakeholders are involved in decision-making. Such participatory approaches are widely supported in the literature. Reimers and Schleicher (2020) and Tinio and Lagura (2024) noted that inclusive management practices lead to more effective and responsive school leadership.

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Regarding administrative techno-stress, "PersonalOriented Techno-Stress" has a positive effect (beta = 0.208, t = 3.513, p = 0.001), suggesting that overcoming personal technology challenges can build resilience and competence among leaders. However, "Social-Oriented Techno-Stress" negatively affects leadership competence (beta = -0.149, t = -2.493, p = 0.013), indicating that stress arising from technology-related social issues, such as communication breakdowns or interpersonal conflicts, can undermine a leader's effectiveness. Mendoza et al. (2021) found that while moderate technological challenges foster growth, unresolved social techno-stress can impede leadership performance.

The findings highlight the importance of fostering a substantial unity of purpose and collaborative leadership while ensuring that teacher collaboration is well-structured and supported. Participatory management practices and personal technological challenges are vital for effective school leadership. However, attention must be paid to minimizing social techno-stress to prevent its negative impact on leadership competence. These results are consistent with international and Philippine studies from 2018 to 2025, emphasizing that a supportive culture, inclusive management, and effective stress management are key drivers of competent school leadership.

The R2 is the measure of the total variation of the dependent variable, consisting of 63.7%, which reflects the amount of the variance explained by organizational culture in terms of collaborative leadership, teacher collaboration, and unity of purpose; school-based management practices in terms of school leadership and internal stakeholder participation; and administrative techno-stress in terms of personal-oriented techno-stress and social-oriented techno-stress. In comparison, 36.3% of the variance can be credited to other factor variables apart from the regression model.

From the preceding analysis, however, the equation helps predict the percentage of administrators' administrative supervision (Y) as indicated by the F-value (73.074), with its corresponding probability value (0.000) being significant at $p<0$.

V. CONCLUSION

After carefully examining different interests that draw factors affecting leadership competence, the researcher underscores several dimensions that impact leadership competence.

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

The intricate and significant relationships among organizational culture, school-based management (SBM) practices, administrative techno-stress, and leadership competence in educational settings. Organizational culture, mainly characterized by collaboration, emerges as a powerful determinant of leadership competence. Studies consistently demonstrate that a collaborative culture marked by a shared vision, mutual respect, and collective responsibility fosters higher levels of leadership competence among school leaders. This culture not only enhances the capacity of leaders to communicate vision, engage in strategic planning, and lead high-performance teams but also cultivates an environment where continuous improvement and professional development are prioritized. The positive correlation between collaborative organizational culture and leadership competence underscores the need for school leaders to nurture and sustain such cultures to maximize their effectiveness intentionally.

School-based management practices further reinforce leadership competence by decentralizing decision-making and promoting active participation among stakeholders. When school leaders effectively implement SBM, they empower teachers, staff, and the wider school community to engage in governance and problem-solving, enhancing ownership and accountability. This participatory approach aligns with transformational leadership principles, where leaders inspire and motivate their teams to achieve shared goals and adapt to change. The integration of SBM practices strengthens leadership competence and supports the development of a more resilient and adaptive school organization.

While not as dominant as organizational culture or SBM in shaping leadership competence, administrative techno-stress presents a nuanced challenge for school leaders. Elevated levels of techno-stress stemming from the increasing demands of technology integration and digital administration impede leaders' ability to perform effectively if not managed proactively. Addressing this challenge requires targeted professional development and support systems that equip school leaders with the necessary skills and coping strategies to navigate technological complexities without compromising their leadership capacity.

The synergy between a collaborative organizational culture and robust SBM practices is the foundation for developing and sustaining leadership competence among school leaders. At the same time, managing administrative techno-stress is essential for maintaining this competence in the face of evolving technological demands. Educational institutions are thus encouraged to prioritize the cultivation of collaborative cultures, invest in inclusive and participatory management practices, and provide comprehensive support for technology integration. Such strategies will not only enhance the leadership competence of school leaders but also contribute to educational organizations' overall effectiveness and resilience.

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