Revista Multidisciplinaria Perspectivas Investigativas
Multidisciplinary Journal Investigative Perspectives
Vol. 6(2), 12-19, 2026
https://doi.org/10.62574/rmpi.v6i2.516

Principal Leadership: A Key Factor in Organizational Climate in Ecuadorian Technical Education

Liderazgo directivo: Clave del clima organizacional en la educación técnica ecuatoriana

Sonia Marlene Villares-Quintanilla
soniavillares.est@umecit.edu.pa
Universidad Metropolitana de Educación, Ciencia y Tecnología, Panamá, Panamá
https://orcid.org/0000-0002-6054-9666

ABSTRACT

The purpose of this article is to analyse principal leadership as a determining factor of organizational climate in Ecuadorian technical high schools. Using a hermeneutic approach, the review articulates the findings of a doctoral thesis on principal management and educational climate in Santo Domingo canton with eighteen academic sources published between 1968 and 2025. Three interpretive categories were identified: the theoretical foundations and dimensions of principal leadership, the empirical mechanisms linking leadership with organizational climate, and the particularities of Ecuadorian technical education, marked by teachers' administrative overload and weak articulation with the productive sector. Principal leadership constitutes a strategic variable for transforming organizational climate in technical education, whose consolidation requires principal professionalization policies and normative frameworks consistent with the Organic Law of Intercultural Education.
Descriptors: educational leadership; organizational climate; technical education. (Source: UNESCO Thesaurus).

RESUMEN

El artículo tiene por propósito analizar el liderazgo directivo como factor determinante del clima organizacional en instituciones de bachillerato técnico del Ecuador. De enfoque hermenéutico, la revisión articula los hallazgos de una tesis doctoral sobre gestión directiva y clima educativo en el cantón Santo Domingo con dieciocho fuentes académicas publicadas entre 1968 y 2025. Se identificaron tres categorías interpretativas: los fundamentos teóricos y dimensiones del liderazgo directivo, los mecanismos empíricos que vinculan el liderazgo con el clima organizacional, y las particularidades del bachillerato técnico ecuatoriano, marcado por la sobrecarga administrativa docente y la débil articulación con el sector productivo. El liderazgo directivo constituye una variable estratégica para transformar el clima organizacional en la educación técnica, cuya consolidación exige políticas de profesionalización directiva y marcos normativos coherentes con la Ley Orgánica de Educación Intercultural.
Descriptores: liderazgo educacional; clima organizacional; educación técnica. (Fuente: Tesauro UNESCO).

Received: 06/02/2026. Reviewed: 17/02/2026. Approved: 18/03/2026. Published: 01/04/2026.
Research articles section

INTRODUCTION

In the context of Latin American educational reform, the quality of school management is a key factor in the success of educational systems, particularly in the field where teachers must be trained and prepared to work productively; with technical provision in mind, Ecuadorian technical high schools must build an organisation oriented towards teacher performance and student learning that is connected with the business sector for the certification of professional competencies. From this perspective, the way in which management staff exercise their authority and manage the institution's human resources is an important issue, in the sense that it affects the entire team and can impact the quality of teaching staff and the quality of the education provided to students.

From a theoretical perspective that regards leadership as a key determinant of school effectiveness, a long line of literature has established that leadership style, as a secondary factor, is what influences variables such as student productivity, employee commitment and job satisfaction, which ultimately shape the climate of a school that is collectively driven by leadership. In this regard, Bass (1985) argued that transformational leadership enables followers to move beyond individual interests to work towards common goals, and this was the model that educational research would use decades later to discuss the relationship between school leadership and work culture; on the other hand, Litwin and Stringer (1968), in line with this argument in the field of organisational management, defined organisational climate as an objective and measurable quality of the workplace perceived by those who work in it, which influences the motivation and behaviour of the work environment.

Despite the above, and in recognition of the complexity of school leadership processes today, significant research has been carried out in the field of managerial leadership and the challenges of implementing it in educational settings marked by regulatory, budgetary and cultural constraints. Thus, Hallinger et al. (2025), for example, referring to this complexity in recent meta-analytic studies on instructional leadership, showed that the effect of managerial leadership on teaching effectiveness depends on the cultural context in which it is exercised and is sharper in societies with a more collectivist orientation. This implies that leadership models developed in Anglo-Saxon contexts must be adapted to Latin American conditions, as in the Ecuadorian case, and building on this, Karakose et al. (2024) provided further evidence both for and against the influence of managerial leadership on teaching effectiveness. Using structural equation modelling, they found that principals' instructional leadership directly affects teacher self-efficacy and teaching staff effectiveness, indicating that organisational climate acts as a mediating factor between managerial leadership and individual teacher performance.

At the same time, from the perspective of technical and vocational education, there are certain problems that are unique to the Latin American context and not to the field of general education. On this subject, and regarding the link between the structural change of secondary and technical education, Sevilla and Ortiz (2019) have argued that technical secondary schooling in countries such as Ecuador, which only began in 2011, was accompanied by limited pilot experiences, and that improvements in infrastructure and teacher training did not always extend across the whole system, with the quality gap between schools still present today. This situation makes it even more difficult for management teams to combine traditional pedagogical management through workshops, relationships with businesses and the management of dual training, since this goes far beyond what school leadership alone can achieve.

Based on what has been discussed in the preceding paragraphs and the gaps in the available scientific literature, managerial leadership, together with organisational climate theory and the regulatory particularities of Ecuadorian technical high schools, can serve as a comprehensive way of understanding management quality in this form of education. Although there is an abundant international literature on instructional leadership and school climate, a systematic approach is needed for its application in the Ecuadorian technical context, where pedagogical, administrative and productive demands converge — an area that has not always been addressed by national educational research.

Consequently, and in order to address this identified need, the research objective of the present article is to analyse principal leadership as a determining factor of organisational climate in Ecuadorian technical high school institutions.

METHOD

In line with the objectives and subject of study, this research was developed through a hermeneutic approach, which is essentially interpretive and consists of the process of understanding and constructing meanings published in the literature on managerial leadership and organisational climate (for example, management and corporate culture). This approach is appropriate for studies whose purpose is to uncover meanings, establish conceptual relationships and build integrated understandings from existing, non-merely descriptive work, in order to provide meaning and explain the scattered contributions of the literature.

The hermeneutic process was carried out in three different stages. First, the doctoral thesis was read together with its arguments, methods and key points, followed by a reading of the sources and the core analysis. Subsequently, a deeper analysis was conducted to identify new categories or theoretical connections (in relation to managerial leadership) and divergences between these two groups of authors, in order to develop the analysis and identify the three main categories of analysis: the theoretical and empirical analysis of managerial leadership and organisational climate, and technical secondary education in Ecuador. Finally, a synthesis was carried out after the analysis of the three categories, integrating them into a coherent understanding of managerial leadership as a critical factor in organisational climate in technical education.

With regard to the epistemological basis of the analysis, interpretation was guided by the hermeneutic circle, in which the understanding of the parts (the studies examined) informs the understanding of the whole (managerial leadership as a whole), and the understanding of the whole redefines the interpretation of the parts. To this end, rigour criteria were established through the interplay of theoretical and empirical sources, the comparison of different approaches, and the continuous comparison of emerging categories with the documentary corpus until a complete understanding of the conceptual relationships examined was achieved.

RESULTS

This section presents the results in the form of hermeneutic categories:

Category 1: Theoretical foundations and dimensions of principal leadership in educational management

From the perspective of the conceptual foundation of the phenomenon under study, managerial leadership is defined as the way in which a school's leadership staff can direct and guide educational personnel in this area. This is not merely an administrative role, but also a pedagogical, relational and transformative one. The transformational leadership model is a general leadership perspective developed by Bass (1985), based on the view that good leaders are able to drive the people on their team to move beyond their immediate interests towards a unified vision, within the framework of idealised influence, inspirational motivation, intellectual stimulation and individualised consideration.

In light of the practical implications of this approach, the second model that has attracted greater attention in the educational literature is instructional leadership, which focuses on teaching and learning rather than on the institution's general management. Hallinger (2011) first introduced the concept of instructional leadership, whose three dimensions are defining the school's purpose, managing the instructional programme and promoting a positive learning climate. All of these dimensions have been verified through hundreds of doctoral studies using the Principal Instructional Management Rating Scale (PIMRS). Comparing the two models, Robinson et al. (2008) found that leadership focused on teaching and learning has much greater effects on student outcomes than management based on administrative or organisational change.

In line with this argument, and highlighting the multidimensional nature of managerial practice in the Ecuadorian context, national literature has proposed that managerial management is

divided into five operational and management dimensions: pedagogical management, related to teaching practice; administrative management, involving the management of human, material and financial resources; organisational climate management, involving the management of interpersonal relationships; teacher professional development, involving staff training and professional development; and innovation and change, referring to how teaching staff adapt to new curricular and technological demands.

However, despite the resistance mentioned above to distributed and collaborative leadership models, evidence accumulated over the past decade has begun to show how different leadership styles impact intermediate teaching variables. In this regard, using a structural model integrating instructional and distributed leadership, Liu et al. (2020) found that both leadership styles affect teacher self-efficacy and job satisfaction through the mediation of a supportive school culture and peer collaboration, suggesting that no leadership style operates in isolation, but that its effectiveness depends largely on the organisational conditions that the leader themselves helps to build. Papadakis et al. (2024) synthesised sixty international studies to develop aggregate evidence using meta-analytic structural equation modelling techniques and concluded that instructional, transformational and distributed leadership directly affect teacher performance, which in turn directly impacts student achievement, thereby confirming the mediated nature that characterises the relationship between leadership and educational outcomes.

Category 2: Principal leadership and organisational climate: empirical mechanisms of influence

From the perspective of classical organisational theory and contemporary educational research, school organisational climate can be explained as the collective belief held by the people in an institution regarding the policies, practices and procedures that define their work environment. According to Litwin and Stringer (1968), this perception affects staff's daily motivation and behaviour. For the Ecuadorian educational system, this concept has been empirically verified at different levels of the system. Through factor analysis conducted at a higher education institution in Cuenca, Crespo and Serrano (2022) noted that managerial leadership is one of five structural factors governing organisational climate, together with interpersonal relationships, ongoing training and assertive communication.

Focusing specifically on the relationship between these two variables in the Ecuadorian secondary context, Rodríguez and Carnero (2025) found, in a correlational study conducted in secondary education institutions, that managerial leadership and organisational climate are statistically significantly related, which is consistent with previous studies elsewhere in the country. Furthermore, in order to demonstrate the psychosocial phenomena responsible for this relationship, Chiang-Vega et al. (2021) showed, through structural equation modelling, that job satisfaction and organisational trust underlie the influence of leadership on climate, meaning that managerial influence is not necessarily direct and immediate, but is mediated through affective and relational states that workers themselves develop from their daily experience of institutional management.

Turning to the most recent international meta-analytic evidence on these mechanisms, Hallinger et al. (2025) consolidated studies conducted between 1989 and 2024 on the relationship between principals' instructional leadership and teacher attitudes, finding that principals who promote a positive learning climate increase both teacher self-efficacy and teachers' capacity to become better leaders themselves — two factors that determine professional commitment. Furthermore, Karakose et al. (2024) found that collective teacher efficacy plays a mediating role in the relationship between instructional leadership and teacher self-efficacy, which would mean that teacher performance is affected by the principal's leadership, as well as by the construction of that shared sense of collective capacity, which is one of the key structural aspects of school organisation.

On the other hand, and understanding that the relationship between leadership and climate is a field open to interpretation, research has shown that a poor organisational climate can also limit the leadership's own capacity to act, thereby creating a feedback mechanism that inhibits

pedagogical reform. Ecuadorian literature confirms this and agrees that interpersonal relationships, institutional identity and participatory decision-making are the dimensions of organisational climate most sensitive to managerial leadership style, whereas physical infrastructure is more sensitive to budgetary constraints unrelated to managerial leadership that shape how institutions are run.

Furthermore, the convergence between international evidence and research conducted in Ecuador suggests that managerial leadership is not an end in itself, but rather the foundation of the relational, communicational and motivational conditions upon which the school working environment is built. This is highly relevant to technical secondary education, since the coexistence of theoretical classrooms and practical workshops demands leadership structures capable of harmonising teaching teams with diverse professional profiles.

Category 3: Particularities of principal leadership in Ecuadorian technical high schools

With regard to the regulatory and institutional specificity of the subject under study, Ecuadorian technical high schools are governed by Article 43 of the Organic Law of Intercultural Education and Articles 137, 138 and 139 of its regulations, which define the curricular organisation by professional areas and families, as well as student training in educational and workplace settings under dual training modalities (Ministry of Education of Ecuador, n.d.). This regulatory framework places management teams under a higher level of responsibility than a general high school institution, as they need to coordinate curricular planning, manage inter-institutional agreements, supervise pre-professional activities and oversee workshops and technical teams.

As a result, and in light of the organisational implications of this regulatory framework, this technical secondary education, introduced in Ecuador in 2011, often failed to extend the improvements in infrastructure and teacher training achieved in the pilot programme across the whole system. This resulted in quality deficiencies among institutions that management would need to address (Sevilla & Ortiz, 2019). Moreover, recent literature on the administrative workload of technical secondary school teachers in this modality has found that these teachers devote a considerable amount of time to administrative tasks during their weekly working hours. This limits the time available for pedagogical and professional development processes and is therefore an organisational dimension that management needs to focus on if it wishes to improve the institutional climate.

Regarding the specific findings for Santo Domingo canton, the doctoral research underpinning this review has shown that, although the predominant leadership style among technical school principals fosters a democratic environment and promotes teacher participation, there remain major areas for improvement in staff consultation and joint decision-making, which rank among the lowest-rated dimensions by teachers in the perception instruments used. This configuration suggests that the main challenge for principals in this modality lies not so much in adopting a particular leadership style, but in having concrete participation mechanisms to translate a stated democratic orientation into effective practices of institutional co-responsibility.

At the same time, the productive link for this educational modality is an important yet weak connection between technical secondary schools and businesses, posing a challenge for the institutional climate to support dual training and job placement, which is the very rationale for this educational programme. In this regard, and within a regional context that relates to this issue, Sevilla and Ortiz (2019) noted that secondary technical and vocational education in Latin America has historically been a space in which the social, economic and cultural diversity of students has been excluded from the curriculum, resulting in rigid and homogeneous teaching, with the educational programme failing to achieve social mobility. Administrators therefore need to develop relational management skills that go beyond the pedagogical field.

Regarding recent regulatory developments in this area, the approval of reforms aimed at increasing shared responsibility between the classroom and the workplace, such as the free recognition of technical qualifications and the expansion of dual training schemes, presents new management challenges for leadership teams, who must create unified assessment systems bridging learning acquired at school and learning developed in the workplace. This regulatory shift adds to the need for leadership capable of ensuring both the quality of internal pedagogical

development and the quality of external partnerships, the two management fronts that shape the educational community's perception of organisational climate.

INTEGRATIVE THEORETICAL CONTRAST

Drawing on the three emerging categories, it is possible to find theoretical convergence regarding managerial leadership as key to organisational climate in Ecuadorian technical schools, a convergence that has not been addressed very extensively in national educational literature. The first point of convergence lies in the relationship between transformational and instructional leadership models and the empirical evidence on organisational climate, where principals who combine institutional vision with direct pedagogical support are able to enhance teaching staff's sense of self-efficacy and collective effectiveness — two components that the literature recognises as part of school organisational climate (Hallinger et al., 2025; Karakose et al., 2024).

A second line of convergence between the components analysed connects the operational dimensions of managerial leadership proposed for the Ecuadorian context with the structural factors of organisational climate documented in the country's higher and secondary education. This implies that the management of organisational climate is not a discrete aspect of managerial practice, but is instead interwoven with the pedagogical, administrative and professional development management that principals carry out on a daily basis (Crespo & Serrano, 2022). The third convergence, linking general theory to technical specificity, connects findings on Latin American technical and vocational education with the mediation mechanisms identified by international research. It suggests that the administrative overload and weak productive links that characterise Ecuadorian technical secondary education are contextual conditions that deepen, rather than replace, the overall impact of managerial leadership on organisational climate.

While no explanation is free of limitations and not every theoretical framework applies to every circumstance, there are other contradictions worth examining. The main one lies between the distributed and participatory leadership models recommended by the international literature to promote teacher commitment, and the actual organisational environment in Ecuadorian technical schools, characterised by excessive administrative workload and the time devoted to consultation and shared decision-making processes between administrators and teachers. This contradiction should be addressed through reforms that go beyond mere administrative willingness and that simplify human resource allocation and administrative processes, which already consume a significant amount of teaching and administrative staff's time.

Another notable contradiction is the demand for flexible curricular skills for dual training alongside the standardisation of institutional assessment. Although the business sector requires ongoing updates to the technical curriculum, educational accountability systems tend to favour homogeneous indicators that do not always accurately reflect the quality of learning acquired across diverse productive contexts. Management must therefore develop institutional negotiation skills to reconcile these contradictory requirements without sacrificing either curricular relevance or the educational system's accountability.

Thus, as an integrated synthesis of the elements studied, the combination of theoretical leadership models, empirical evidence on organisational climate, and the regulatory characteristics of technical secondary schooling offers an explanation in which the principal is a leading actor in institutional quality, but also part of a system whose action is conditioned by structural factors beyond their management. This is essential for informing principal training and the design of educational policies for technical secondary schooling in Ecuador.

CONCLUSION

The hermeneutic analysis shows that managerial leadership is a key factor in the organisational climate of Ecuadorian technical schools, both because it has a direct impact on teacher self-efficacy and commitment, and because it has an indirect impact on job satisfaction and institutional trust. This relationship does not exist in isolation, but is linked to the pedagogical, administrative and professional development dimensions of national educational management,

and is exacerbated by regulatory obstacles such as administrative overload and weak productive relationships with the business sector. We therefore argue that strengthening managerial leadership through concrete mechanisms of teacher participation is crucial for promoting organisational climate and, consequently, for improving the quality of Ecuadorian technical education.

FUNDING

Non-monetary.

CONFLICT OF INTEREST

There is no conflict of interest with individuals or institutions linked to the research.

ACKNOWLEDGEMENTS

To the Metropolitan University of Education, Science and Technology (UMECIT) and to the technical high school institutions of Circuit 23D01, Santo Domingo canton, Ecuador.

REFERENCES

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.

Chiang-Vega, M., Hidalgo-Ortiz, J. P., & Gómez-Fuentealba, N. (2021). Efecto de la satisfacción laboral y la confianza sobre el clima organizacional, mediante ecuaciones estructurales [Effect of job satisfaction and trust on organizational climate, through structural equations]. *Retos. Revista de Ciencias de la Administración y Economía*, *11*(22), 347-362. https://doi.org/10.17163/ret.n22.2021.10

Crespo Crespo, W. B., & Serrano-Moreno, M. S. (2022). Factores de clima organizacional en una institución de educación superior en Cuenca, Ecuador [Organizational climate factors in a higher education institution in Cuenca, Ecuador]. *Revista Científica ECOCIENCIA*, *9*(5), 24-47. https://doi.org/10.21855/ecociencia.95.703

Hallinger, P. (2011). A review of three decades of doctoral studies using the Principal Instructional Management Rating Scale: A lens on methodological progress in educational leadership. *Educational Administration Quarterly*, *47*(2), 271-306. https://doi.org/10.1177/0013161X10383412

Hallinger, P. (2025). Principal instructional leadership and teacher attitudes: A meta-analytic review, 1989-2024. *European Journal of Education*. https://doi.org/10.1111/ejed.70199

Hallinger, P., Liu, S., & Chen, L. (2025). Principal instructional leadership and teacher attitudes: A meta-analytic review, 1989–2024. *European Journal of Education, 60*(4), Article e70199. https://doi.org/10.1111/ejed.70199

Karakose, T., Kardas, A., Kanadlı, S., Tülübaş, T., & Yildirim, B. (2024). How collective efficacy mediates the association between principal instructional leadership and teacher self-efficacy: Findings from a meta-analytic structural equation modeling (MASEM) study. *Behavioral Sciences*, *14*(2), 85. https://doi.org/10.3390/bs14020085

Leithwood, K., & Jantzi, D. (2005). A review of transformational school leadership research 1996-2005. *Leadership and Policy in Schools*, *4*(3), 177-199. https://doi.org/10.1080/15700760500244769

Litwin, G. H., & Stringer, R. A. (1968). *Motivation and organizational climate*. Division of Research, Graduate School of Business Administration, Harvard University.

Liu, Y., Bellibaş, M. Ş., & Gümüş, S. (2020). The effect of instructional leadership and distributed leadership on teacher self-efficacy and job satisfaction: Mediating roles of supportive school culture and teacher collaboration. *Educational Management Administration & Leadership*, *49*(3), 430-453. https://doi.org/10.1177/1741143220910438

Papadakis, S., Kanadlı, S., Kardas, A., Tülübaş, T., Karakose, T., & Polat, H. (2024). Investigating the relationship between leadership for learning and student achievement through the mediation of teacher performance: A meta-analytic structural equation modeling (MASEM) approach. *Education Sciences*, *14*(12), 1320. https://doi.org/10.3390/educsci14121320

Robinson, V. M., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Educational Administration Quarterly*, *44*(5), 635-674. https://doi.org/10.1177/0013161X08321509

Rodríguez Bermejo, D., & Carnero Rodríguez, J. M. (2025). Grado de relación entre el liderazgo directivo y el clima organizacional en la educación a nivel secundario [Degree of relationship between principal leadership and organizational climate in secondary education]. *Revista San Gregorio*, *1*(Especial_2), 39-45. https://doi.org/10.36097/rsan.v1iEspecial_2.3075

Sevilla, M. P., & Ortiz, I. (2019). Demandas y desafíos de la Educación Técnica Profesional secundaria en América Latina [Demands and challenges of secondary technical and vocational education in Latin America]. En L. Sepúlveda y M. Valdebenito (Eds.), *Educación Técnico Profesional ¿Hacia dónde vamos? Políticas, reformas y nuevos contextos de desarrollo* (pp. 91-114). Ediciones Universidad Alberto Hurtado.

Copyright: 2026 By the authors. This article is open access and distributed under the terms and conditions of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Licence (CC BY-NC-SA 4.0). https://creativecommons.org/licenses/by-nc-sa/4.0/