



Community-Based Educational Leadership for Improving Teaching and Learning Quality in Timor-Leste Primary Schools: A Systematic Review

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ABSTRACT

Educational leadership plays a pivotal role in enhancing the quality of teaching and learning, particularly in developing countries such as Timor-Leste. This systematic review, guided by PRISMA standards, synthesizes findings from 42 empirical and policy studies published between 2015 and 2025. Three key themes emerged: (a) leadership practices that promote teacher professional development and instructional supervision, (b) distributed and community-based leadership that fosters collaboration and accountability, and (c) systemic challenges including limited infrastructure and inconsistent policy implementation. Results show that instructional and transformational leadership enhance teacher confidence and student engagement, while community participation strengthens school sustainability. The study concludes that educational transformation in Timor-Leste requires culturally responsive and community-driven leadership frameworks integrated with teacher training and policy coherence. This review highlights the importance of context-based leadership models that link education, community participation, and sustainable school improvement.

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1. INTRODUCTION

Educational leadership is widely recognized as a crucial factor in improving the quality of teaching and learning outcomes. Globally, leadership is ranked second only to classroom instruction in influencing student achievement (Leithwood *et al.*, 2021). Effective school leaders formulate strategic visions, create nurturing environments, and build accountability systems that sustain educational improvement. In developing and post-conflict nations such as Timor-Leste, the role of leadership is even more vital, as it bridges the gap between policy aspirations and classroom realities. Weak institutional structures, limited resources, and the continuing development of teacher competencies require leaders who can adapt to changing conditions, foster collaboration, and promote quality education provision.

Following independence in 2002, Timor-Leste undertook a series of education reforms to promote equity, decentralization, and quality. The 2014 curriculum reform, one of the most significant initiatives, emphasized student-centered, multilingual, and inclusive pedagogies as essential elements of effective teaching and learning (Shah & Quinn, 2016). These reforms aimed to align national education with global priorities while addressing the country's cultural and linguistic diversity. However, persistent challenges remain. Infrastructural limitations, teacher shortages, and unequal distribution of resources continue to hinder reform implementation (Ximenes, 2025). As a result, systemic inefficiencies have slowed educational progress, highlighting the urgent need for leadership that can contextualize national policies into effective school-level practices.

Recent literature has underscored a paradigm shift from hierarchical, principal-centered leadership models toward participatory, instructional, and community-based forms of school leadership. Effective leaders in both developed and developing contexts act as facilitators of professional learning communities, pedagogical mentors, and catalysts of accountability systems that support student achievement. In low- and middle-income countries, leadership entails managing limited resources, navigating linguistic plurality, and designing adaptive strategies that suit local conditions (Leithwood *et al.*, 2021; Taheri, 2022). Nevertheless, empirical research on leadership in post-conflict settings such as Timor-Leste remains fragmented, leaving a gap in understanding how leadership practices concretely affect teaching quality and learning outcomes.

School leaders in Timor-Leste play a crucial role in mediating between national reform agendas and daily classroom practices (Akoyt, 2024). Their responsibilities extend beyond administration to include pedagogical innovation, teacher mentoring, and community engagement. In schools where professional development opportunities are scarce, principals and teacher-leaders serve as motivators, instructional guides, and community liaisons who ensure accountability and continuous learning. Yet, research on leadership in Timor-Leste has not systematically captured these multidimensional roles, resulting in a limited evidence base to inform effective policy and practice.

This paper addresses that gap by conducting a systematic review of empirical and theoretical studies published between 2015 and 2025. Guided by PRISMA standards, it synthesizes international and national literature to identify effective leadership practices, contextual challenges, and policy implications for improving primary education in Timor-Leste. The review particularly emphasizes community-based and distributed leadership approaches that align with the cultural values of collectivism and shared responsibility. Through this lens, the study contributes to understanding how contextually responsive leadership can enhance teacher capacity, foster community participation, and promote sustainable educational transformation in Timor-Leste.

2. LITERATURE REVIEW

School leadership is widely acknowledged as a decisive determinant of educational quality, and its role has been firmly established in international literature. School leadership ranks second only to classroom teaching in influencing student achievement, reinforcing its strategic importance in education systems (Leithwood *et al.*, 2019). Effective leadership becomes even more crucial in low-resource environments where schools face challenges such as poor infrastructure, teacher shortages, and limited instructional materials (Taheri, 2022). In such contexts, leaders serve not merely as administrators but also as reformers, resource mobilizers, and morale boosters among teachers who may lack adequate support or training (Shah & Quinn, 2016).

Among the dominant paradigms in leadership studies, instructional leadership is one that directly links leadership behavior with classroom instruction and student learning outcomes (Ninković & Florić, 2024). This model emphasizes the active participation of school leaders in guiding instruction through lesson observation, professional development, and data-driven decision-making (Owen & Wong, 2020). Evidence from Timor-Leste supports this approach: instructional leadership significantly enhances teacher engagement and ensures more consistent implementation of the national curriculum. Instructional leadership thus serves not only as a managerial function but also as a pedagogical bridge connecting policy intent and classroom practice.

In addition, transformational leadership has emerged as a vital framework in contexts requiring large-scale reform and cultural change (Koçi, 2025). This leadership style focuses on vision-building, motivation, and shared commitment to institutional goals. It seeks to create a collective identity and inspire teachers to transcend individual constraints (Zhang, 2025). In Timor-Leste, transformational leadership has been found to foster staff commitment and maintain positive school climates during periods of uncertainty (Quinn & Buchanan, 2021). Similarly, the rise of distributed leadership models (where decision-making authority is shared among principals, teachers, and community stakeholders) has become increasingly relevant to the Timorese context (Printy & Liu, 2020). Distributed leadership encourages collaboration, shared accountability, and participatory school governance, aligning closely with Timor-Leste's collectivist traditions (Quinn, 2023; Ximenes & Da Silva, 2024a).

Community involvement in school governance has also been highlighted as a crucial factor for sustainability. Parent-teacher associations and local school councils strengthen transparency and foster mutual trust between schools and communities. These structures promote the collective monitoring of school progress, help resolve conflicts, and ensure that education responds to local needs. Thus, leadership in Timor-Leste cannot be viewed in isolation from community participation; rather, it should be understood as an integrated system of shared responsibility that extends beyond the boundaries of the school.

Despite these promising developments, Timor-Leste continues to face persistent barriers to effective leadership. Major challenges include inadequate professional development for school leaders, insufficient infrastructure, irregular teacher attendance, and inconsistent policy implementation (Shah & Quinn, 2016; Ximenes, 2025). Studies have reported misalignment between curriculum reforms and classroom practices, with teachers often lacking the skills and resources to apply student-centered methods effectively (Quinn, 2023; Ximenes, 2025). Leadership style has also proven to be a critical variable: Ximenes & Da Silva (2024a) found that democratic leadership significantly improves teacher performance and satisfaction compared to autocratic styles. Similarly, intrinsic motivation, leader

encouragement, and recognition are directly linked to teachers' professional fulfillment and commitment to educational improvement (Ximenes, 2024b).

Overall, the literature indicates that leadership exerts a substantial influence on educational outcomes in Timor-Leste but must be rooted in context-sensitive, community-based solutions. Effective leadership requires not only strategic management but also cultural understanding, collaboration, and systemic support. Therefore, leadership development in Timor-Leste must integrate instructional and transformational principles with local traditions of cooperation and collective responsibility. This integration ensures that leadership becomes not merely a mechanism for policy implementation but a culturally grounded process that empowers teachers, strengthens school-community partnerships, and sustains educational transformation.

3. METHODS

This study employed a systematic review design to synthesize and critically analyze empirical and theoretical research concerning educational leadership and its influence on the quality of teaching and learning. The systematic review method was selected because it allows the identification of knowledge gaps, the integration of diverse findings, and the development of a comprehensive understanding of how leadership practices shape educational outcomes (Page *et al.*, 2021; Parums, 2021). The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure methodological transparency, consistency, and reproducibility.

The literature search was conducted across multiple databases, including Scopus, Web of Science, ERIC, Google Scholar, and ResearchGate, using a combination of relevant keywords such as "educational leadership," "instructional leadership," "transformational leadership," "teaching quality," "primary education," "Timor-Leste," and "developing countries." Boolean operators (AND, OR, NOT) were employed to refine the search and ensure precision (Klerings *et al.*, 2023). In addition, citation chaining was used to track references from selected studies, thereby expanding the coverage and minimizing the likelihood of omitting significant contributions. The search process initially identified 75 documents, which were subsequently screened against inclusion criteria to determine their relevance and methodological rigor.

Only works published between 2015 and 2025 were included to ensure that the findings reflected contemporary educational practices and leadership reforms. Eligible studies comprised empirical research, theoretical analyses, and policy reviews that explicitly addressed the relationships among leadership, teaching practices, and learning outcomes. While priority was given to studies conducted in Timor-Leste, comparable evidence from other low- and middle-income countries (LMICs) was also incorporated to provide comparative insights applicable to the Timorese educational context (Patino & Ferreira, 2018). Studies that lacked methodological clarity or did not directly address leadership in relation to pedagogy were excluded from the analysis.

Following the selection process, 25 studies were retained for in-depth review. Data extraction and synthesis were carried out through thematic analysis, an approach that enables the identification and interpretation of patterns across the literature (Braun & Clarke, 2019). The analysis involved manual coding and categorization of findings into recurring themes, such as leadership practices, capacity building, distributed leadership, contextual challenges, and policy implications (Paul & Barari, 2022). The systematic classification of these themes provided a clear conceptual understanding of how leadership dynamics intersect with teacher development and instructional quality in Timor-Leste. The combination of empirical

and theoretical perspectives also allowed for a critical assessment of both the strengths and gaps in the existing research base.

In summary, this methodological approach ensured a rigorous and comprehensive synthesis of current evidence on educational leadership in Timor-Leste. By integrating findings from diverse contexts and sources, the study aimed to construct a contextually grounded knowledge framework that informs leadership practice, professional development, and community participation in primary education reform.

4. RESULTS AND DISCUSSION

The results of this systematic review reveal that educational leadership plays a pivotal role in shaping the quality of teaching and learning within the primary education system of Timor-Leste. The synthesis of reviewed literature indicates three interconnected thematic findings: (i) leadership practices that promote professional growth among teachers, (ii) distributed and collaborative leadership that fosters collective responsibility and community engagement, and (iii) contextual and systemic challenges that constrain leadership effectiveness. These findings together demonstrate that leadership development in Timor-Leste must be understood not merely as an administrative necessity but as a community-anchored, capacity-building process designed to ensure sustainable educational transformation.

4.1. Leadership Practices that Facilitate Professional Growth

Across the literature, one of the most consistent findings concerns the central role of school leaders in fostering professional development and pedagogical improvement among teachers. In the Timorese context, where teacher education programs remain relatively underdeveloped and opportunities for professional learning are limited, school principals often serve as instructional coaches who guide teachers in improving their classroom practices. Through informal mentoring, peer collaboration, and classroom observation, school leaders help teachers build confidence, refine instructional methods, and integrate student-centered learning strategies. These leadership actions not only compensate for structural limitations but also cultivate a professional culture centered on continuous improvement and reflective practice.

Many principals in Timor-Leste employ informal coaching approaches that provide direct feedback on lesson planning, instructional delivery, and classroom organization (Owen & Wong, 2020). This aligns with broader evidence from low- and middle-income contexts, where leadership-driven professional learning is associated with measurable improvements in teacher self-efficacy and student learning outcomes. By creating spaces for ongoing professional dialogue and peer mentoring, school leaders help teachers transition from rote pedagogical methods toward more reflective, inquiry-based classroom practices.

A significant initiative supporting this development is the Aprender, Ler, Melhorar, Ajudar (ALMA) program (translated as “Learn, Read, Improve, Help”). This initiative promotes the establishment of school-based professional learning communities where teachers engage in collaborative reflection, share experiences, and receive structured mentoring. ALMA substantially enhanced teacher confidence in applying the 2014 curriculum, particularly in the use of active learning techniques, formative assessment, and multilingual instructional materials. Schools participating in ALMA experienced more sustainable improvements in classroom practice because professional development was embedded in the daily life of the school rather than confined to one-off workshops. These findings underscore the principle

that effective educational reform in Timor-Leste must be grounded in school-based capacity building and community-supported professional learning networks.

Leadership practices that emphasize continuous teacher growth also involve creating supportive environments where teachers are encouraged to experiment, learn from feedback, and innovate. Instructional leaders act as facilitators of pedagogical reflection and critical inquiry, enabling teachers to evaluate their own practice and identify strategies for improvement. In contexts such as Timor-Leste, where access to external training or pedagogical resources is limited, such leadership-driven professional learning becomes indispensable. The school leader thus functions as a catalyst for transforming classroom culture, fostering collaboration, accountability, and shared commitment to learning improvement.

The review also indicates that leadership interventions that prioritize mentoring and coaching produce tangible results in improving teacher motivation and instructional quality. When principals model effective teaching practices, recognize teacher achievements, and create a climate of mutual respect, teachers are more likely to adopt innovative methods and invest greater effort in student engagement. These professional growth mechanisms directly contribute to building teacher resilience and sustaining educational quality, even in challenging socio-economic conditions.

4.2. Distributed and Collaborative Leadership

A second major theme emerging from the review is the increasing prominence of distributed and collaborative leadership models that democratize school governance and reinforce community participation. Distributed leadership, as defined in the reviewed studies, refers to the delegation of leadership responsibilities among various stakeholders (including teachers, administrative staff, and community representatives) rather than concentrating authority in the principal alone. This model aligns with the collectivist social structures prevalent in Timor-Leste, where communal cooperation and shared decision-making are core cultural values.

In environments characterized by resource scarcity, distributed leadership has proven to be an effective strategy for promoting resilience and innovation. Distributed leadership strengthens teacher agency by involving them directly in decision-making processes, thereby enhancing motivation, trust, and accountability. Schools that foster collaborative leadership tend to develop stronger organizational cultures characterized by openness, collective responsibility, and mutual respect (Quinn, 2023). These schools exhibit a higher degree of adaptability, as decisions are informed by multiple perspectives and grounded in a shared understanding of contextual realities.

Community participation forms a vital component of this collaborative leadership paradigm. Parent-teacher associations, local education councils, and school committees play significant roles in bridging the gap between formal education structures and community needs. In the case of Timor-Leste, involving parents and community leaders in school management has improved transparency, encouraged accountability, and strengthened the local ownership of educational initiatives. Such participatory structures empower communities to contribute to problem-solving, resource mobilization, and curriculum implementation, thereby ensuring that educational practices remain culturally relevant and contextually grounded.

Distributed leadership also has long-term benefits for leadership succession and sustainability within the education system. Teachers who are entrusted with leadership roles—such as coordinating subject areas, mentoring new colleagues, or managing

extracurricular programs—gain valuable skills that prepare them for future leadership positions. This approach decentralizes authority, reduces dependency on a few individuals, and creates a continuous pipeline of competent leaders who understand the local educational context. In a system like Timor-Leste's, where formal leadership preparation programs are limited, distributed leadership offers a pragmatic pathway for cultivating future educational leaders.

The literature further suggests that distributed and collaborative leadership align closely with the community-based education philosophy promoted by development agencies in Southeast Asia. In the Timorese cultural context, community participation and consensus-based decision-making are long-standing traditions. Therefore, leadership practices that integrate these cultural norms are more likely to be accepted and sustained than imported hierarchical models. Schools that successfully embed collaborative governance structures report greater community trust, fewer conflicts, and improved student outcomes. These findings reinforce the argument that effective school leadership in Timor-Leste must be inherently participatory, contextually responsive, and culturally congruent.

Moreover, the success of distributed leadership depends on the development of mutual trust between principals, teachers, and community stakeholders. Trust functions as the foundation of collaboration, ensuring that leadership responsibilities are shared not as a means of delegation but as a genuine expression of collective agency. In this regard, leadership must be understood as a relational practice, an ongoing process of negotiation, communication, and shared vision-building that connects the school to its wider community. Through such collaborative practices, school leadership transforms from a position of authority into a participatory mechanism for community empowerment and educational improvement.

4.3. Contextual and Systemic Challenges

Despite these positive developments, the implementation of effective leadership practices in Timor-Leste continues to face significant contextual and systemic challenges. One of the most persistent obstacles is the limited formal preparation of school principals. Leadership appointments are often based on seniority or length of service rather than demonstrated leadership competencies (Quinn & Buchanan, 2021). Consequently, many principals lack formal training in instructional supervision, strategic planning, or contemporary pedagogical practices. While they may perform administrative tasks efficiently, they are often ill-equipped to guide teachers in instructional improvement or to translate policy into classroom practice. This leadership gap highlights the urgent need for structured leadership development programs that emphasize both pedagogical and managerial competencies.

In addition to leadership preparation, material constraints also impede the effectiveness of educational leadership. Many rural schools in Timor-Leste suffer from overcrowded classrooms, inadequate teaching resources, and fragile infrastructure. Limited access to electricity, technology, and internet connectivity further restricts opportunities for digital learning and professional collaboration. These resource limitations have undermined the implementation of the 2014 curriculum, particularly its emphasis on multilingual education and student-centered pedagogy (Shah & Quinn, 2016). Even when principals demonstrate strong commitment and motivation, these systemic constraints severely restrict their ability to enact instructional or transformational leadership practices.

The challenge of educational leadership in Timor-Leste is further compounded by systemic and policy-related issues that hinder consistent reform implementation. The education

system remains highly centralized, and while the Ministry of Education has articulated progressive reform goals, such as inclusive and multilingual education, these have often been implemented in fragmented and top-down ways. Teachers and school leaders frequently receive new directives without adequate preparation, resources, or sustained monitoring mechanisms. Consequently, the adoption of reform initiatives varies significantly from one school to another, leading to uneven educational quality and persistent inequities. The 2014 curriculum reform serves as a prime example: although its emphasis on student-centered learning aligns with global pedagogical trends, many schools have struggled to apply it due to limited teacher training and contextual adaptation (Shah & Quinn, 2016; Ximenes, 2025).

Furthermore, leadership effectiveness is closely linked to the availability of material and human resources. In most rural schools, teaching and learning are carried out in overcrowded classrooms with minimal instructional materials, creating environments that are not conducive to active learning. Poor infrastructure, such as leaking roofs, a lack of sanitation, and the absence of electricity, affects both the morale of teachers and the concentration of students. The scarcity of professional development opportunities exacerbates this situation. Leaders who seek to practice instructional or transformational leadership often find themselves constrained by limited autonomy and bureaucratic restrictions, leaving little room for innovation or context-driven problem-solving (Quinn & Buchanan, 2021; Taheri, 2022).

Despite these challenges, evidence from the reviewed studies suggests that leadership practices can still generate meaningful improvements when they are adapted to local realities. For example, in schools where principals encourage collaborative lesson planning and peer mentoring, teachers report higher engagement and satisfaction. In several cases, school leaders who involved community stakeholders in decision-making succeeded in mobilizing local resources to repair facilities, purchase materials, and support student welfare programs. This indicates that community-based leadership can partially offset systemic weaknesses by building local ownership and social capital. However, without supportive policies and structured training, such successes remain isolated rather than system-wide.

Another challenge identified is the misalignment between leadership models imported from developed nations and the socio-cultural context of Timor-Leste. Many training programs emphasize bureaucratic efficiency and performance measurement, often overlooking the relational and communal dimensions of leadership that are deeply rooted in Timorese culture. Consequently, school leaders may find themselves torn between the expectations of hierarchical administration and the cultural norms of participatory decision-making. This tension can result in reform fatigue and inconsistent leadership practices across schools (Owen & Wong, 2020; Quinn, 2023). To ensure sustainability, leadership frameworks must therefore integrate technical skills with cultural competence, recognizing the collective values that guide community interactions in Timor-Leste.

4.4. Discussion

The findings of this review collectively support the conclusion that effective school leadership is a cornerstone for improving the quality of teaching and learning in Timor-Leste. Instructional leadership, characterized by classroom observation, data-informed feedback, and continuous teacher mentoring, consistently correlates with better teacher performance and student engagement (Bellibaş *et al.*, 2020; Leithwood *et al.*, 2021). These results reinforce global evidence that leadership practices directly shape instructional quality by influencing teacher beliefs, classroom culture, and student motivation. In the context of Timor-Leste, where many educators lack formal pedagogical training, the presence of an instructional

leader who can guide lesson design, provide feedback, and encourage professional reflection becomes a critical catalyst for educational improvement.

Transformational leadership also emerges as essential in contexts marked by adversity and systemic instability. Transformational leaders inspire teachers to commit to reform goals and persist despite limited resources, bureaucratic inefficiencies, or resistance to change. Through shared vision-building and emotional support, these leaders can mitigate low morale and strengthen teachers' sense of professional purpose (Quinn & Buchanan, 2021; Zhang, 2025). In post-conflict societies like Timor-Leste, where the education system is still rebuilding institutional capacity, transformational leadership can provide the motivational foundation necessary to sustain long-term reform efforts.

Nevertheless, the review highlights that the direct transplanted leadership models from high-income countries into the Timorese education system is unlikely to yield effective results. Western models often emphasize managerial rationality and hierarchical efficiency, which may conflict with the communal and relational orientation of Timorese culture. Instead, contextually grounded leadership frameworks that integrate community participation and local cultural values are more likely to succeed. For instance, distributed and collaborative leadership approaches—where teachers, parents, and community leaders share decision-making—have demonstrated potential in improving transparency, resource mobilization, and accountability (Printy & Liu, 2020; Ximenes & Da Silva, 2024). Such approaches align naturally with Timor-Leste's traditions of collective dialogue (*lia-na'in*) and consensus-building, ensuring greater legitimacy and sustainability of educational reforms.

An additional insight from the literature is the necessity of aligning leadership development with systemic policy support. Isolated leadership interventions, while valuable, cannot sustain educational transformation without coherent national strategies and institutional backing. Programs such as ALMA illustrate how integrated initiatives that combine professional development, community participation, and policy alignment can produce more lasting improvements than fragmented training workshops. Therefore, the development of educational leadership must be embedded within a broader ecosystem that includes curriculum enhancement, teacher education, infrastructure investment, and robust monitoring and evaluation mechanisms.

The discussion also emphasizes the importance of viewing educational leadership as a community service function—a social contract between schools and their communities rather than a purely administrative role. School leaders act as mediators between national policies and local realities, ensuring that educational reforms reflect community aspirations and address local needs. This perspective is particularly relevant to Timor-Leste, where education is deeply interwoven with post-conflict reconstruction and nation-building. Leadership, therefore, must not only improve academic outcomes but also contribute to social cohesion, cultural preservation, and community empowerment. Integrating leadership development with community-based education programs can enhance social capital, encourage parental involvement, and strengthen the collective responsibility for educational quality.

Another dimension highlighted in the review is the interdependence between leadership and teacher motivation. Studies conducted in Timor-Leste reveal that teachers respond positively to leaders who provide recognition, empathy, and professional autonomy (Ximenes, 2024b). When school leaders acknowledge teachers' efforts and promote collaborative professional learning, educators feel valued and are more willing to innovate in their classrooms. Conversely, autocratic or indifferent leadership styles can lead to disengagement and high turnover rates, particularly in rural schools where conditions are

already difficult. This underscores the need for leadership models that balance accountability with emotional intelligence and relational trust.

The systemic integration of community-based leadership also holds promise for enhancing resilience and equity within the education system. Schools that successfully engage parents and community members in governance not only improve transparency but also expand their resource base. Communities contribute local knowledge, cultural understanding, and material support that complement formal educational structures. This participatory dynamic transforms leadership into a shared enterprise, where accountability and decision-making extend beyond the school walls. It also ensures that education remains responsive to cultural diversity and socio-economic variation—a critical factor for Timor-Leste’s multilingual and multicultural population.

Finally, the review identifies a pressing need for more empirical research on leadership practices tailored to the Timorese context. While existing studies provide valuable insights, the evidence base remains limited and largely qualitative. Future research should employ mixed-methods approaches to evaluate how specific leadership strategies—such as coaching, peer mentoring, or distributed decision-making—affect measurable learning outcomes. Moreover, longitudinal studies are required to assess the sustainability of leadership interventions and their long-term impact on teacher performance and student achievement. Building a robust body of context-specific evidence will not only strengthen theoretical frameworks but also guide policymakers in designing scalable and culturally sensitive leadership programs.

4.5. Integration and Implications

The implications of these findings extend beyond individual schools to the broader educational reform agenda in Timor-Leste. To achieve lasting improvement, leadership development must be conceptualized as part of a distributed educational ecosystem that integrates teacher training, curriculum support, infrastructure development, and policy coherence. Effective leadership frameworks should emphasize community participation, gender equity in leadership roles, and the inclusion of marginalized voices—particularly in rural and linguistically diverse areas. Policymakers must also prioritize leadership training programs that are iterative, context-based, and aligned with both national priorities and local cultural values.

In conclusion, the systematic review demonstrates that school leadership in Timor-Leste functions most effectively when it is instructional, transformational, and community-oriented. Educational transformation requires not only strong individual leaders but also supportive institutional systems and active community participation. By aligning leadership capacity with social and cultural realities, Timor-Leste can move toward an education system that is equitable, sustainable, and deeply rooted in the values of collective responsibility and community service.

5. CONCLUSION

This systematic review confirms that educational leadership is a determining factor in improving the quality of teaching and learning in Timor-Leste’s primary schools. The synthesis of findings reveals three interrelated dimensions that define effective leadership within this context: (i) instructional leadership that facilitates teacher professional development and pedagogical excellence; (ii) distributed and community-based leadership that promotes collaboration, transparency, and collective responsibility; and (iii) systemic and contextual barriers that continue to limit the full realization of leadership reform initiatives.

When school principals act as instructional mentors (observing classroom practices, providing formative feedback, and fostering professional learning communities), teachers report higher confidence, engagement, and pedagogical competence. Distributed and participatory leadership models also strengthen school culture by aligning with Timor-Leste's collectivist values and enhancing trust between schools and local communities. These practices, in turn, nurture environments where teaching becomes more reflective, inclusive, and student-centered.

However, the review also highlights persistent challenges, including limited formal leadership training, inadequate infrastructure, inconsistent policy enforcement, and resource scarcity. Imported leadership frameworks, although theoretically sound, often fail to reflect the socio-cultural and economic realities of Timor-Leste. Thus, leadership in this context must be reimagined as a community-centered ecosystem—one that integrates teacher motivation, cultural responsiveness, and community participation as essential components of sustainable educational reform.

Ultimately, the path toward educational transformation in Timor-Leste depends on leadership that not only manages systems but also inspires collective ownership of learning. Contextually grounded, participatory, and inclusive leadership models offer the most promising route toward building a resilient and equitable education system that advances the nation's long-term development goals.

Based on the synthesis of evidence and identified challenges, the following recommendations are proposed to strengthen educational leadership and foster sustainable improvement in Timor-Leste's primary education sector:

- (i) **Policy Alignment and Systemic Coherence.** The Ministry of Education should enhance the alignment between policy directives and school-level implementation. This includes providing clear operational frameworks, adequate funding, and consistent monitoring systems. Leadership reforms must be embedded within broader education policies to avoid fragmented or short-term initiatives. Sustained coherence between curriculum, teacher development, and leadership practice will ensure that reforms are effectively institutionalized.
- (ii) **Leadership Development and Professional Training.** Establish structured leadership training programs that combine instructional, transformational, and community-based leadership principles. These programs should be context-specific, reflecting Timor-Leste's linguistic and cultural diversity, and should include continuous mentoring, reflective practice, and peer exchange. A national leadership competency framework could be developed to guide recruitment, training, and professional advancement of school leaders.
- (iii) **Strengthening Teacher Professional Development.** Expand school-based professional learning communities inspired by initiatives like ALMA (Aprender, Ler, Melhorar, Ajudar). Continuous, collaborative, and practice-oriented development opportunities should replace isolated workshops. Encouraging peer mentoring and teacher-led innovation can enhance collective accountability and pedagogical improvement at the grassroots level.
- (iv) **Fostering Distributed and Community-Based Leadership.** Promote participatory governance through parent-teacher associations, school councils, and community education forums. Encouraging collaboration between schools and communities not only mobilizes local resources but also reinforces cultural relevance and transparency.

This approach aligns with the Timorese tradition of collective decision-making and enhances sustainability by integrating leadership into the fabric of community life.

- (v) Resource Mobilization and Infrastructure Support. Investment in physical infrastructure, digital connectivity, and teaching materials is essential to support effective leadership and learning. The government and development partners should prioritize equitable resource distribution, particularly in rural and underserved areas. Leveraging community partnerships for local construction, maintenance, and material provision can complement state efforts while fostering civic engagement.
- (vi) Research, Monitoring, and Evidence-Based Policy Development. Encourage more empirical and longitudinal studies to examine the impact of different leadership models on student learning and teacher performance. Partnerships between universities, educational research institutions, and schools should be strengthened to build local research capacity. Continuous data collection and feedback mechanisms will allow policymakers to refine leadership programs and ensure their contextual relevance.
- (vii) Integration with Sustainable Development Goals (SDGs). Position educational leadership initiatives within the broader framework of SDG 4 (Quality Education) and SDG 17 (Partnerships for the Goals). By linking school leadership to global and regional sustainability goals, Timor-Leste can enhance collaboration, attract funding, and benchmark progress in building inclusive, equitable, and community-responsive education systems.

Education leadership is not merely an administrative position but a transformative process of nurturing people, strengthening institutions, and empowering communities. In the case of Timor-Leste, effective leadership embodies both professional expertise and cultural wisdom—bridging the aspirations of national education reform with the lived realities of local communities. Through the integration of instructional quality, community engagement, and sustainable governance, educational leaders can serve as catalysts of social progress and human development.

The findings and recommendations of this review thus underscore the urgency of cultivating community-based leadership ecosystems that unite schools, teachers, and communities in a shared mission: to provide every Timorese child with access to high-quality, inclusive, and future-oriented education.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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