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# Transformational leadership and its impact on educational innovation in Ecuador: a systematic review

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**Introduction:** This study explores the impact of transformational leadership on educational innovation in Ecuador. Given the current demand for pedagogical transformation, transformational leadership has emerged as a key driver of innovation through practices such as inspirational motivation and idealized influence. However, existing literature shows gaps in rural applications and long-term assessments.

**Methods:** A systematic review was conducted following PRISMA guidelines, and a bibliometric analysis was performed using the Bibliometrix R-package. Peer-reviewed academic articles published between 2018 and 2024 were retrieved from indexed databases. The inclusion criteria focused on studies examining the relationship between transformational leadership and innovation in educational processes.

**Results:** Findings reveal a positive correlation between transformational leadership practices-particularly inspirational motivation and idealized influence-and the implementation of educational technologies and disruptive pedagogical methodologies. The review also highlights research gaps, particularly the lack of studies in rural contexts and limited longitudinal evaluations.

**Discussion:** The results underscore the importance of transformational leadership in fostering innovation in educational settings. Addressing the identified gaps may strengthen leadership strategies and support sustainable development in the education sector. This article offers a comprehensive synthesis that can inform future leadership practices and policymaking in educational institutions.

## KEYWORDS

transformational leadership, educational innovation, Ecuador, keyword, PRISMA, Bibliometrix, sustainability, education

# 1 Introduction

The change in people entails a new approach both in the way of working and in the relationship with peers, in personal development, in interaction with others, in continuous learning, in openness to constructive criticism, and in accepting the commitment to the work entrusted to them. Becoming an academic leader in the Ecuadorian university context represents a great challenge (Weston et al., 2021). The demands of the globalized world, a changing environment, and competitiveness to achieve strategic advantages are part of the dynamics of the academic environment.

The appropriation of leadership models under a given reality is a fundamental task to sustain change and highlight the adhesion of collaborators. In Ecuador, some studies explain the relationship of different leadership models with student performance and academic processes within universities; however, these have not been transferred to the executive or management area of universities, a situation that demands the identification of leadership strategies that will influence the performance of academic teams (Tiwasing and Sawang, 2022).

The departments or schools are the fundamental unit in the university environment that links the different strata of the institution and should be open environments for collaboration, where the actions of an academic leader will be fundamental to influence the personal, motivational, and professional performance aspects of their collaborators. Given this, through this review, we will seek to identify leadership strategies that influence the performance of academic teams in the local Ecuadorian environment (Sykes et al., 2023).

Leadership plays a fundamental role at all levels, being of particular relevance at the local level because decisions and actions in this context directly affect the quality of life of individuals and the economic development of the nation (Singh and Chaudhary, 2023). Leadership plays a crucial role in the progress of communities in Ecuador, given that decisions taken at this level can affect both the inhabitants' quality of life and the country's economic development (Castellani et al., 2024).

The development of leadership skills at the local level is critical to the growth and effectiveness of communities. To achieve effective leadership at the local level, it is essential to carefully analyze the needs and opportunities present at the local level, as pointed out by Derrington and Anderson (2020). In the Ecuadorian context, the development of leadership skills at the local level requires focusing on the education and training of local leaders, as well as the generation of opportunities that allow them to improve their skills and competencies (Takmasheva and Zelinskaya, 2023).

Training and capacity building of local leaders is a fundamental aspect of community development. It is important to provide local leaders with the necessary tools to enable them to perform their roles effectively and contribute to the progress of their communities.

Training and education of local leaders are essential for the development of leadership skills at the community level. In Ecuador, according to Brooke Friley in 2024 (Brooke Friley, 2024), several programs and initiatives have been implemented to train local leaders in skills such as project management, effective communication, conflict resolution, and decision-making (Ferdiansyah et al., 2022). Programs may include workshops,

courses, and seminars held in various locations throughout the country.

Opportunities for the development of leadership skills are fundamental in the academic and professional spheres. There are several opportunities for the development of leadership skills at the local level, in addition to the training and training of local leaders. In Stamatakis et al. (2023), some opportunities include participation in community development projects, management of non-governmental organizations, and intervention in decision-making processes at the local level (Snead et al., 2022).

The challenges and opportunities in the development of leadership skills at the local level are issues of great relevance today. Although there are opportunities for the development of leadership skills at the local level, several challenges that need to be overcome are identified. In Ecuador, the scarcity of financial and human resources, poor infrastructure, and lack of government support are identified as significant challenges (Trott et al., 2024).

The strengthening of pedagogical competencies in Basic Education teachers is considered essential to raise the educational level in Ecuador (Börü, 2024; Cairns et al., 2024). Improving the pedagogical competencies of elementary school teachers in Ecuador is fundamental to promote a more dynamic and enriching educational environment (Parreño and Pablo-Martí, 2024).

Providing teachers with the skills and knowledge required to effectively engage students not only increases the quality of education but also fosters a culture of constant improvement in the academic environment (Leung et al., 2021). Properly trained educators have greater abilities to adjust to different ways of learning (McDonald et al., 2024), apply novel teaching approaches, and create conducive learning environments that suit the needs of each student.

The drive to improve pedagogical competencies not only benefits teachers by fostering their professional growth and satisfaction but also positively impacts overall academic success and student development in Ecuador's schools (Waring et al., 2022).

Moving toward improved pedagogical competence not only benefits teachers by promoting their development and job satisfaction but also positively impacts overall academic achievement and student progress in Ecuador's educational institutions (Stylinski et al., 2021). Strengthening teachers' pedagogical competencies has a positive impact on educational quality and the effectiveness of the teaching-learning process at the national level (Hiremath et al., 2024).

## 2 Methodology

The present study used a methodological approach based on the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-analyses) to ensure transparency and reproducibility in the systematic review process, complemented by bibliometric analysis using the Bibliometrix tool (Lebow-Skelley et al., 2024; López Secanell et al., 2023).

### 2.1 Definition of scope and objectives

The main objective was to analyze the impact of transformational leadership on educational innovation in Ecuador.

The research questions focused on determining the trends, main findings, and gaps in the scientific literature on the subject.

### 2.1.1 Inclusion criteria

- Articles published between 2018 and 2024.
- Empirical, theoretical studies or reviews related to transformational leadership and educational innovation in Ecuador.
- Publications in journals indexed in Scopus or WoS.

### 2.1.2 Exclusion criteria

The exclusion criteria are detailed in [Table 1](#).

- Articles not available in full text.
- Publications in languages other than English or Spanish.
- Studies outside the Ecuadorian context.

### 2.1.3 Search strategy

The search was performed in the Scopus and WoS databases using the following keywords ([Joan Ferrés, 2022](#)).

- “Liderazgo transformacional” AND “innovación educativa” AND “Ecuador.”
- “Transformational leadership” AND “educational innovation” AND “Ecuador.”

Boolean operators and filters by language, publication period, and document type were used.

### 2.1.4 Selection process

The selection of articles followed the stages of the PRISMA method ([Enciso-Alfaro et al., 2024](#)). The selection process is illustrated in [Figure 1](#) using the PRISMA flow diagram.

This systematic research underscores the crucial influence of transformational leadership in promoting educational innovation in Ecuador ([Hidding et al., 2018](#)). The analyzed studies demonstrate that transformational leadership fosters a visionary, inclusive, and flexible educational atmosphere, essential for addressing the growing challenges of the 21st century ([García Castro et al., 2022](#)).

Transformational leaders in education promote substantial progress in teaching methods and institutional growth by prioritizing individual motivation, intellectual engagement, and a collective institutional vision ([Granados, 2020](#)).

TABLE 1 Exclusion criteria.

Item	N°
Not found in the base	7
Repeated	2
Did not correspond to the topic of EC	10
Studies in countries outside the selected region	13
Education and sports sectors	3
Total excluded	35

### 2.1.5 Potential selection biases

Despite the methodological rigor applied, it is necessary to recognize possible sources of bias in the selection process. First, the exclusive reliance on the Scopus and WoS databases may have limited the inclusion of relevant studies published in other academic platforms or in gray literature, such as these, technical reports or institutional publications. Second, the linguistic bias derived from the inclusion only of articles in English and Spanish may have excluded valuable research in other languages. Studies without full-text access were also excluded, which may have restricted the diversity of approaches and perspectives available. Finally, the strict focus on the Ecuadorian context, although relevant to the objectives of the study, limits the possibility of contrasting findings with regional experiences that could enrich the discussion.

## 3 Results

Using Bibliometrix, key metrics were analyzed such as ([León and Ramos, 2022](#)). [Figure 2](#) shows the productivity distribution by author, institution, and country. As presented in [Figure 3](#), the co-authorship and co-citation networks reveal the structure of collaboration.

The institutional analysis revealed that the majority of studies on transformational leadership and educational innovation in Ecuador are concentrated in universities located in the coastal region, particularly Universidad Estatal de Milagro (UNEMI), Universidad de Especialidades Espíritu Santo (UEES), and Escuela Superior Politécnica del Litoral (ESPOL). In contrast, institutions from the Andean region, such as Universidad de Cuenca and Universidad Técnica del Norte, contribute to a lesser extent. No records were identified from Amazonian institutions, exposing a territorial imbalance in the academic production on the topic. This concentration suggests unequal development of leadership research and educational innovation practices across regions. Therefore, it is necessary to promote interregional collaboration and strategic incentives to strengthen academic leadership capacities throughout the Ecuadorian territory.

They represent topics that are dense in development but have low centrality, i.e., they are well researched but not relevant to the field in general. In this graph, the theme “educational innovations, children with disabilities, disability” is in this quadrant ([Murillo-Rodríguez and Mora-Rivera, 2024](#)).

These are topics that have high centrality and density, being very relevant and with a high level of development ([Hafiar et al., 2024](#)). This graph shows no themes in this quadrant. Here are the topics with low centrality and low density, which are in initial development or in decline. In the graph, the “students” theme is in this quadrant. These are topics with high centrality but low density. They are relevant but with less development in the field. In the graph, the themes “teaching, decision-making, Ecuador” are in this quadrant ([Agra et al., 2019](#)).

Regarding the interpretation of the thematic clusters generated by the bibliometric analysis, different levels of development and conceptual relevance were identified. The theme “educational innovations, children with disabilities” is located in the quadrant

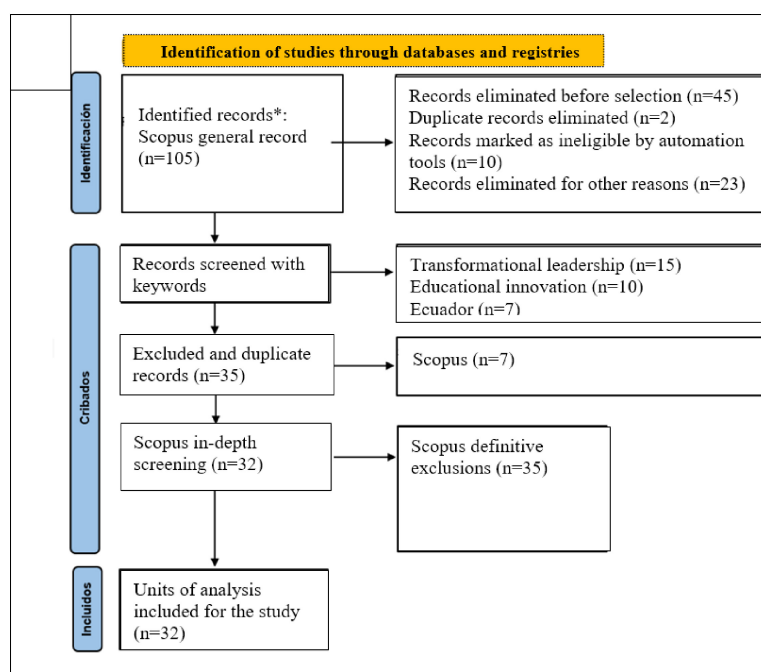


FIGURE 1

PRISMA flow diagram. Visual summary of the article selection process following PRISMA 2020 guidelines. The diagram details each phase of the review process, including the number of records identified ( $n = 105$ ), screened, excluded at various stages, and the final number of studies included ( $n = 32$ ). Reasons for exclusion are specified for greater transparency.

of high density but low centrality, which indicates that it is a well-developed line but little connected to other topics in the field, i.e., specialized. On the other hand, the cluster “teaching, decision-making, Ecuador” is located in the quadrant of high centrality and low density, which positions it as a basic developing topic that, although fundamental, still lacks conceptual and empirical depth. The presence of the “students” cluster in the low density and low centrality quadrant suggests that this topic, although present, is in an incipient or receding phase. Finally, it is important to highlight the absence of clusters in the high centrality and high density quadrant, which denotes the lack of consolidated driving themes in the field of transformational leadership applied to educational innovation in Ecuador. These findings indicate a still fragmented and emerging field, with opportunities to develop more robust theoretical frameworks and interdisciplinary lines of research.

Transformational leadership is essential for fostering educational innovation in Ecuador; yet its efficacy is contingent upon contextual elements such as policy endorsement, institutional framework, and teacher involvement (Díaz-Restrepo et al., 2023).

Ecuador has progressed in implementing transformational leadership models; nonetheless, it is crucial to tackle the structural problems that hinder their effectiveness for enduring educational reform (Christensen et al., 2020).

Future research ought to concentrate on quantitative evaluations and cross-national comparisons to cultivate a comprehensive grasp of transformational leadership’s potential within Ecuador’s dynamic educational environment (Mystakidis, 2019).

Case studies from various Latin American nations demonstrate that investment in leadership development and

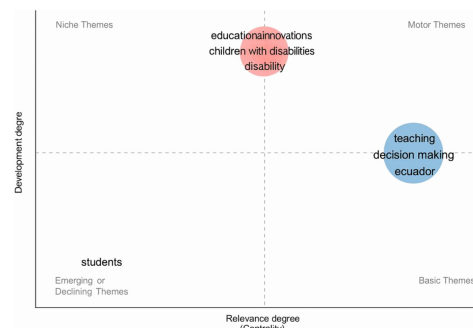


FIGURE 2

Productivity by author, institution, and country.



FIGURE 3

Co-authorship and co-citation networks.

digital learning infrastructure can markedly improve the efficacy of transformational leadership in education. Ecuador may gain from regional cooperation and the exchange of best practices to enhance its educational leadership strategy (Herrera and Aros, 2023).





## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Author contributions

KR-C: Supervision, Writing – original draft, Formal analysis, Conceptualization, Writing – review & editing. JC: Investigation, Writing – review & editing, Writing – original draft. CT: Formal analysis, Methodology, Writing – original draft. MC: Writing – original draft, Methodology.

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## Conflict of interest

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