

Process-Based Administrative Management in Higher Education: A SALSA-Guided Literature Review

Carolina Proaño^{1,2}, Giraldo León^{1,3}

¹ Universidad Internacional Iberoamericana (UNINI), México.

Email: carolina.proano@doctorado.unini.edu.mx (for Carolina Proaño)

Email: giraldo.leon@unini.edu.mx (for Giraldo León)

² Universidad Tecnológica Israel, Quito, Ecuador.

Email: caproanio@uisrael.edu.ec

³ Universidad ECOTEC, Ecuador.

Abstract: This article presents a systematic literature review on process-based administrative management in Higher Education Institutions (HEIs), employing the SALSA method (Search, Appraisal, Synthesis, and Analysis). The study spans publications from 2010 to 2024, selected from databases such as Scopus, Web of Science, and Google Scholar, as well as institutional and regulatory sources. An initial set of 150 documents was analyzed, of which 60 met the inclusion criteria, encompassing scientific articles, doctoral theses, books, and technical reports. The synthesis reveals that process-based administrative management enables more efficient resource alignment, fosters continuous improvement, and enhances the adaptive capacity of HEIs in dynamic environments. Moreover, this approach supports an organizational culture oriented toward results and educational quality. However, gaps persist regarding the systemic implementation of integrated models that articulate structural, human, and technological components, particularly in the Latin American context. The study concludes that a properly systematized process management model, supported by information technologies, can significantly strengthen operational efficiency, institutional sustainability, and the fulfillment of academic missions.

Keywords: Process-based administrative management, higher education, systematic review, SALSA method

1. Introduction

In recent decades, Higher Education Institutions (HEIs) have faced increasing pressure to respond efficiently and strategically to the challenges imposed by an academic, technological and social environment in constant transformation. This context has generated an urgent need to review and adapt their administrative management models, not only to guarantee institutional sustainability, but also to ensure quality education aligned with the requirements of a globalized society. Administrative management by processes thus emerges as a methodological alternative that allows for the reorganization of internal structures, strengthening operational efficiency, and increasing the capacity for institutional response to changes in the environment (Hernández et al., 2016).

Historically, administrative management has been understood as a set of articulated actions aimed at meeting institutional goals through planning, organizing, directing, and controlling resources (Abad, 2022). In the field of education, this conception is transformed, demanding a systemic approach that integrates the substantive functions of teaching, research and linkage with society, with an effective and flexible administration that enhances evidence-based decision-making. In this way, it seeks to overcome the limitations of traditional approaches focused on bureaucracy, to give way to management models oriented towards the achievement of results and continuous improvement (Roncal, 2020; Masaquiza et al., 2020).



This article is based on the recognition that administrative management by processes is a fundamental pillar for the organizational development of universities. This approach promotes a comprehensive vision in which each institutional process is conceived as a functional unit that adds value and contributes to the fulfillment of strategic objectives. In this sense, the need to design management systems that integrate interdependent processes, managed in a coordinated manner and based on principles of efficiency, effectiveness, and sustainability is recognized (Piñuela & Quito, 2020; Matute & Murillo, 2021).

One of the most relevant aspects that motivate this systematic review is the observation that, although there are multiple studies on the implementation of process-based management models in HEIs, there are still conceptual and operational gaps in terms of their comprehensive application. The experiences collected in Latin America, particularly in contexts such as Ecuador, show a tendency towards the partial adoption of such models, without an effective articulation between the structural, human, and technological dimensions of management (Acevedo et al., 2020; Campaña et al., 2020). This situation limits the impact of administrative reforms, generating fragmented processes that make it difficult to achieve the expected results in terms of educational quality and institutional efficiency.

In this context, the SALSA method (Search, Appraisal, Synthesis, and Analysis) is presented as a robust methodological tool for literature review, which allows integrating and critically evaluating existing knowledge on a specific topic. This methodology not only facilitates the identification of the main trends and theoretical approaches around administrative management by processes, but also allows establishing relationships between the findings and extracting practical implications for their application in HEIs. In this study, an exhaustive literature search was carried out between 2010 and 2024 in databases such as Scopus, Web of Science, and Google Scholar, as well as in institutional and regulatory documents, which allowed the selection of 60 relevant sources from scientific articles, books, doctoral theses and technical reports.

Several authors agree that the adoption of a process-based approach allows traditional administrative structures to be redefined, focusing on the generation of value for the institution's internal and external users (González et al., 2019; García & Ledesma, 2019). This customer orientation, in the case of HEIs, translates into greater student satisfaction, a better organization of human talent and greater transparency in the use of public resources. Additionally, process management enables the creation of more effective internal control systems, which allow institutional performance to be continuously monitored and evaluated, thus promoting a culture of continuous improvement (Ordóñez et al., 2021).

A process-based administrative management model must not only consider the reengineering of internal procedures, but also the strategic use of technological tools that facilitate the automation and digitization of processes. In this sense, initiatives such as the Integrated Strategic Management System (SIGE) of the Israel Technological University (UISRAEL) represent concrete examples of how technology can be used to improve decision-making, optimize planning, and ensure compliance with institutional objectives (Baldeón et al., 2019). These experiences reveal that the integration of digital management platforms allows universities to raise their quality standards, reduce operating costs and strengthen their institutional positioning.

On the other hand, the literature reviewed shows that the models of administrative management by processes have a strong theoretical basis in the general theory of systems, which proposes that organizations should be conceived as open systems, composed of multiple interrelated subsystems. This systemic vision allows us to understand that institutional results do not depend only on isolated actions, but on the effective interaction between administrative, academic, and support processes (Coria et al., 2023; Hernández et al., 2016). From this perspective, process management not only seeks to improve internal efficiency, but also to promote organizational adaptability to the challenges of the environment, which is especially critical in higher education institutions in contexts of high uncertainty and transformation.

The literature review also shows that HEIs have begun to adopt complementary methodologies such as Lean Management, Six Sigma and data analytics tools to enhance their management models. These approaches allow for greater institutional responsiveness, by identifying bottlenecks, eliminating waste, and anticipating trends through predictive analytics (Castanedo Abay, 2019; Grachev, 2025). Likewise, data mining and visualization techniques have been consolidated as key tools for evidence-based decision-making, contributing significantly to the monitoring of academic and administrative performance (Baldeón et al., 2019; Wang et al., 2018).

2. Materials and Methods

This study is part of a systematic review of the literature, aimed at analyzing and understanding the state of the art around administrative management by processes in Higher Education Institutions (HEIs). To this end, the SALSA method was adopted, an acronym for Search, Appraisal, Synthesis and Analysis, recognized for its logical and progressive structure in the critical approach to existing scientific knowledge (Booth et al., 2012). This methodology is ideal for research aimed at generating solid conceptual frameworks, evaluating academic trends, identifying gaps in the literature and proposing future orientations on complex topics in constant evolution.

The application of the SALSA method was structured in four sequential phases:

1. Search

The initial phase consisted of an exhaustive search for relevant academic sources, carried out between 2010 and 2024, which allowed covering a sufficiently wide time window to analyze the conceptual and methodological evolution of the topic. To this end, the following academic databases were consulted: Scopus, Web of Science (WoS), Google Scholar, RedALyC, Dialnet, as well as institutional repositories, technical reports and regulatory documents related to administrative management and process models in the field of higher education.

The key terms used in the search included combinations such as: "administrative management by processes", "higher education", "university institutions", "continuous improvement", "management model", "educational process", among others, both in Spanish and English. Boolean operators were used to refine the results and the "peer review" filter was included in the platforms that allowed it.

In this stage, a total of 150 relevant documents were identified, considering various types of publications: scientific articles, doctoral theses, books, book chapters, and normative technical documents.

2. Appraisal (Critical Evaluation and Selection)

The second phase of the process involved the application of inclusion and exclusion criteria, which would guarantee the relevance, timeliness, scientific rigor and thematic relevance of the sources. The inclusion criteria were: (i) publications related to administrative management in higher education, (ii) documents that explicitly addressed process management, (iii) empirical and theoretical studies with proven impact in university contexts, and (iv) documents published between 2010 and 2024.

The following exclusion criteria were considered: (i) duplication between databases, (ii) publications without peer review (when it came to articles), (iii) sources irrelevant to the objective of the study, and (iv) documents without access to the full text.

After applying these criteria, 60 final documents were selected for analysis, categorized as established in Table 1 as follows:

Table 1 Classification of documents included in the review

Document Type	Quantity
Scientific articles	35
Doctoral theses	10
Books and book chapters	8
Technical and regulatory reports	7
Total	60

Note. Generated from the documentary review (2010–2024).

This selection made it possible to ensure a solid, diverse and representative documentary base of the current state of knowledge on the subject addressed.

3. Synthesis (Synthesis of Information)

Once the sources were selected, they were critically read and content systematized. To facilitate this process, a documentary analysis matrix was designed, which allowed the studies to be classified according to: (i) type of publication, (ii) year of publication, (iii) country of origin, (iv) objectives of the study, (v) methodology used, (vi) main findings, and (vii) contributions to the field of administrative management by processes.

This systematization made it possible to identify the main theoretical currents, methodological approaches and emerging trends in the literature. Likewise, the key factors for the successful implementation of process management models in HEIs were recognized, as well as the common obstacles and persistent gaps in existing research.

The synthesis also included a thematic analysis, through which the documents were grouped into five broad categories:

- Theoretical foundations of administrative management.
- Process management approaches in higher education.
- Implementation models in HEIs.
- Institutional impact and continuous improvement.
- Innovation and technologies applied to administrative management.

4. Analysis

Finally, a critical and integrative analysis of the synthesized results was carried out. This stage was not limited to describing the individual contributions of each source, but also sought to establish relationships between studies, contrast theoretical approaches, and evaluate the applicability of the documented models in real contexts of university management.

The analysis allowed, among other aspects, to identify that HEIs that adopt a systemic and integrative approach to process management manage to improve their operational efficiency, strengthen their organizational structure, and increase their capacity to respond to the demands of the environment (Hernández et al., 2016; Gómez, 2021). It was also evident that the use of technological tools, such as integrated management systems, represents a decisive factor for the success of these models, facilitating automation, traceability, and data-based decision-making (Baldeón et al., 2019; Wang et al., 2018).

This phase culminated in the identification of gaps in the literature, especially in terms of the systematization of models applicable in Latin America, and the scarcity of studies that comprehensively articulate the human, technological, and strategic components of management in HEIs.

The complete process followed in this systematic review using the SALSA method is summarized in Figure 1.

Figure 1 Results of the SALSA Method. In the original Spanish language.

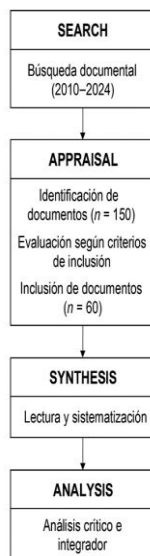


Figura 1. Resultados del método SALSA

5. Results

The application of the SALSA method allowed organizing and critically analyzing the existing literature on administrative management by processes in Higher Education Institutions (HEIs). Of the 150 documents initially identified, 60 met the inclusion criteria, which made it possible to make a synthesis in five thematic axes: (1) theoretical foundations of administrative management, (2) process management in higher education, (3) implementation models in HEIs, (4) institutional impact and continuous improvement, and (5) innovation and technologies applied to university management.

1. Theoretical foundations of administrative management

The literature reviewed highlights that administrative management has its roots in classic approaches to administration, but in the educational field it acquires a more complex connotation by integrating academic, social, and organizational dimensions (Morales & Márquez, 2014; Abad, 2022). It is recognized that it is not enough to apply traditional administrative tools; HEIs require adaptive structures, oriented to the achievement of institutional objectives and sustainability in dynamic environments (Masaquiza et al., 2020).

The theoretical discussion converges on the need to conceive administrative management as an open, flexible and articulated system, where each institutional component contributes to the overall functioning. This systemic approach is key to promoting both operational efficiency and academic quality, which marks an evolution with respect to the merely operational vision of management.

2. Process management in higher education

Process management has emerged as a dominant paradigm in university administration. Authors such as Hernández et al. (2016) and Huapaya (2019) highlight that this approach allows aligning activities with the institutional mission, reducing redundancies, and promoting interdisciplinary collaboration.

The literature analysis shows that the implementation of this approach in Latin American HEIs responds to the need to guarantee educational quality and at the same time optimize resources in contexts with financial constraints. However, studies also warn that the transition to a process-based model requires not only structural changes, but also cultural transformations that strengthen organizational commitment (González et al., 2019).

3. Implementation models in HEIs

Several studies describe methodological proposals to operationalize process management in universities. For example, Zaldumbide (2019) presents a methodology based on the identification of critical processes, the analysis of causes, and the formulation of improvement projects. Similarly, Matute and Murillo (2021) stress that models should be aimed at reducing internal inefficiencies and increasing the satisfaction of external users.

In this sense, process management models are not uniform; Its effectiveness depends on its adaptation to the institutional mission, socioeconomic context and level of technological development of each university. In the case of Ecuador, the studies reviewed show significant progress, but also a partial and fragmented implementation that limits its systemic impact.

4. Institutional impact and continuous improvement

The findings show that the adoption of a process-based administrative model generates positive impacts on operational efficiency, interdepartmental coordination, and transparency in the use of resources (Luciano et al., 2021). In addition, it fosters an organizational culture based on continuous improvement, aligned with the accreditation and accountability requirements of the education sector.

However, significant challenges remain. Lack of strategic leadership, resistance to change, and insufficient training of staff are recurrent obstacles that limit the sustainability of initiatives (Inciarte et al., 2006; Roncal, 2020). These limitations suggest that process management should be conceived as a long-term project, supported by institutional policies and permanent resources.

5. Innovation and technologies applied to university management

An emerging aspect in the literature is the incorporation of technological tools as facilitators of process management. The case of the Integrated Strategic Management System (SIGE) at the Israel Technological University demonstrates how process automation contributes to improving planning, generating real-time reports, and strengthening decision-making (Baldeón et al., 2019).

Likewise, recent studies highlight the importance of data analytics and information mining as mechanisms to anticipate academic problems, such as student dropout, and design timely interventions (Wang et al., 2018; Burgos et al., 2018). These technological innovations not only increase administrative efficiency, but also enhance the capacity of universities to respond to the demands of students and society in general.

Thus, the main findings by thematic categories are presented synthetically in Table 2.

Table 2 Thematic categories and main findings of the review

Category	Main contributions identified	Representative authors
Theoretical foundations of administrative management	Systemic conception of management; integration of human, financial and technological resources; need for organizational flexibility.	Morales & Márquez (2014), Abad (2022), Masaquiza et al. (2020)
Process management in higher education	Reduction of redundancies, orientation to results, alignment with the institutional mission, interdisciplinary collaboration.	Hernández et al. (2016), Huapaya (2019), González et al. (2019)
Implementation models in HEIs	Methodologies to identify critical processes, formulate improvement projects, reduce inefficiencies and increase user satisfaction.	Zaldumbide (2019), Matute & Murillo (2021)
Institutional impact and continuous improvement	Improved efficiency, transparency in the use of resources, quality-oriented organizational culture. Obstacles: resistance to change and lack of leadership.	Luciano et al. (2021), Roncal (2020), Inciarte et al. (2006)
Innovation and applied technologies	Use of integrated management systems, data analytics and information mining to strengthen decision-making and reduce student dropouts.	Baldeón et al. (2019), Wang et al. (2018), Burgos et al. (2018)

General discussion

The critical analysis of the results allows us to affirm that administrative management by processes is a key strategy for the systemic improvement of HEIs. However, the review shows that most of the documented experiences focus on partial aspects (academic, financial, or technological), without consolidating a comprehensive model that articulates the different institutional subsystems (Coria et al., 2023).

The literature also suggests that Latin American universities, unlike European universities, are in an intermediate stage of maturation in terms of process management, characterized by specific advances but limited systematization. Consequently, it is necessary to formulate adaptive and flexible models, capable of integrating administrative processes with the substantive functions of higher education, guaranteeing quality, relevance and long-term sustainability.

These findings are integrated into a conceptual scheme that relates the main categories of analysis identified in the review, as shown in Figure 2.

Figure 2 Relationship between thematic categories of administrative management by processes. In the original Spanish language.



6. Conclusions

The systematic review carried out using the SALSA method allowed to critically analyze the state of the art on administrative management by processes in Higher Education Institutions (HEIs), identifying contributions, limitations and emerging trends in the literature.

On the one hand, the results show that administrative management by processes is consolidated as an essential approach to strengthen organizational efficiency, guarantee institutional sustainability and improve educational quality. Its theoretical foundation, based on systems theory, highlights the importance of understanding the university as an open, dynamic and interdependent organization, where each process constitutes an articulating element of global functioning.

Likewise, it was identified that HEIs that implement process-based management models achieve significant advances in transparency, coordination, and optimization of resources. However, these efforts are often implemented in a fragmented manner, without fully integrating the structural, human and technological dimensions, which limits their systemic impact. The literature reviewed also indicates that factors such as resistance to change, lack of strategic leadership, and insufficient training of personnel represent recurrent obstacles.

Similarly, the analysis of international and regional experiences suggests that Latin America, compared to Europe, is at an intermediate stage of adoption of the process approach. Although important innovations have been documented, such as the use of digital platforms, data analytics and information mining, there is still a need to consolidate adaptive models that respond to the socioeconomic reality of the region.

Finally, this study highlights a gap in the systematization of integral models applicable in the Latin American context, which opens a relevant field of research for the design of conceptual and practical frameworks that integrate administrative processes with the substantive functions of teaching, research, and linkage. Future research is recommended to deepen the empirical evaluation of process management models, considering impact indicators on educational quality, innovation and institutional sustainability.

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