

Process Management in the Academic Field: A Brief Literature Review

Miguel Gaibor Saltos^{1,2}, Antonio Lucas Mármol¹

¹ Universidad Internacional Iberoamericana (UNINI), México.

Email: miguel.gaibor@doctorado.unini.edu.mx (for Miguel Gaibor Saltos)

Email: antonio.lucas@unini.edu.mx (for Antonio Lucas Mármol)

² Universidad Tecnológica Israel, Quito, Ecuador.

Email: canciller@uisrael.edu.ec

Abstract: Process management has grown significantly in the academic field, making it necessary to deepen the literature to identify its potential and limitations. In this regard, this study presents a systematic review based on the principles of the PRISMA method, focusing on process-based academic management in Higher Education Institutions (HEIs). The aim is to analyze how this approach contributes to optimizing the use of resources, integrating academic functions, and improving educational quality in a context marked by rapid technological evolution. The literature search was conducted in the Scopus database, using terms in English, Portuguese, and Spanish. A total of 251 works that met the search criteria were identified, of which 89 satisfied the defined inclusion and exclusion criteria. The findings show that process management helps overcome rigid departmental structures, promotes better coordination among departments, minimizes redundancies, and improves data-driven decision-making. It is concluded that process-based academic management emerges as an effective strategy to increase efficiency, traceability, and the responsiveness of HEIs.

Keywords: NA

1. Introduction

Currently, higher education faces a series of relevant challenges linked to the need to improve quality, efficiency and adaptability in an environment marked by accelerated technological transformation and social and economic changes. Higher Education Institutions (HEIs) are compelled to review and update their academic management schemes to adequately respond to the demands of students, society and the competitive international context in which they operate.

Process management has become a fundamental tool for improving the efficiency of institutions, optimizing the use of resources, and fostering a culture of continuous improvement (Albán et al., 2017). By implementing it, the integration of key functions is facilitated, effective coordination between the different academic areas is promoted, and duplication of efforts is reduced, which contributes to the achievement of institutional goals. Academic management is crucial to the functioning of all educational institutions. The planning, execution, evaluation, and constant feedback of programs have a direct impact on the quality of academic training (Blanco Hernández & Quesada Ibargüen, 2008).

Several studies indicate that well-organized academic management not only improves teaching, but also aligns internal processes with the mission and vision of the institution. The process-based approach has proven to be an effective strategy to achieve these goals, as it promotes transparency, collaborative work between departments, and a more efficient use of resources.

Based on this, it is necessary to move from traditional operating models to strategic and interconnected schemes that allow a comprehensive monitoring of academic activities. This involves the incorporation of quality criteria, systematic controls, organizational efficiency and technological support, in an increasingly demanding and dynamic



institutional context. This approach favors data-driven decision-making and reinforces an academic culture oriented towards constant improvement.

The most outstanding concepts of this work are:

Management: The process of planning, organizing, directing, and controlling an organization's resources with the aim of achieving certain results or goals in a given period of time.

Academic Management: According to Zamboni and Gorgone (2003, p. 1), academic management is "the set of activities aimed at facilitating the transformation of institutional conditions with a spirit of renewal, controversy and research."

Academic process management: It is a form of management that is being widely adopted in many educational institutions around the world as a way to improve the efficiency and quality of academic operations.

Adopting management approaches that promote efficiency, quality, and continuous improvement has become a strategic priority. Academic management by processes has emerged as a viable alternative to respond to these challenges. This systematic review of the literature, following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology, seeks to identify, evaluate and synthesize the existing scientific evidence on the foundations, benefits, limitations and applications of this approach in universities in various contexts.

2. Materials and Methods

In recent years, several works have been developed related to this topic. This robust literature has already been analyzed by academia from multiple perspectives with the aim of determining the state of academic management by processes, for example, Medina León et al. (2019) state that "the incorporation of process management in institutional management allows the activity to be provided with scientific value and provides improvement for team members and evidence-based decision-making for leaders" (p. 328). according to Hammer and Champy (2001), "process management is fundamental for the reengineering of business processes and can be effectively applied in the educational field to achieve significant improvements in academic management" (p. 112).

On the other hand, Albán et al. (2017, p. 140) mention:

Process management, an increasingly widespread paradigm in the business environment, has significant potential to optimize workflows and improve efficiency in higher education institutions, whose activities are focused on the training of highly qualified professionals.

Finally, Taday Calero (2021, p. 45) states that:

Process management in the academic field stands as a fundamental tool for optimizing workflows in institutions characterized by their complex structure and multiple functions, such as teaching, research, innovation and linkage with the environment.

This systematic review focuses on three key areas that guide the discussion of the results. First, the Fundamentals of Academic Management are examined, where its theoretical framework is analyzed, the concept is defined and its relevance for institutional management is highlighted. Secondly, Process Management Models are investigated, which encompass structured methodologies to standardize and optimize both academic and administrative processes. Finally, the Applications of Process Management in HEIs are presented, showing practical cases and the effects observed in real contexts. These three dimensions allow the synthesis to be organized in a clear and coherent way, aligning with the PRISMA approach, which facilitates the orderly presentation of the findings.

As part of the research strategy, a search was conducted in the Scopus database, using its online search tool. The choice of this database was based on its broad scope and relevance in the academic field, since it includes reference journals and catalogs such as IEEE, ACM and Elsevier, and is commonly used in bibliographic reviews of this type.

The search strategy included terms related to academic management, such as "academic management" AND "process management", "higher education" AND "business process management", "systemic improvement", and "academic process optimization". The scope of this search was limited to documents such as scientific journal articles and conferences, published in English, Portuguese or Spanish, and whose access was fully available. Thus, the final search statement used in the database was as follows:

A search was carried out combining several key terms, which led to more accurate results by preventing words from being interpreted in isolation. Once the articles were obtained, a manual review was carried out considering the

title, keywords, abstract and content of the full text. Based on this preliminary analysis, the database was consolidated by removing duplicate items.

Subsequently, the works were evaluated to verify their correspondence with the objectives of the study, considering valid only those that met the following criteria:

- a) they did not correspond to literature reviews or purely bibliographic studies;
- b) they were directly related to the subject matter investigated;
- c) were written in English, Portuguese or Spanish.

The complete procedure of searching and selecting articles followed a methodological sequence, summarized in Figure 1, which shows how the initial search yielded 251 articles. In the first phase, 120 papers that met all the criteria defined in the study were excluded, during the eligibility phase, the content of the 131 resulting articles was reviewed and classified using the same criteria used in the previous stage. Among the excluded jobs. As a result of this analysis, 89 articles were considered eligible and included as a sample for this study.

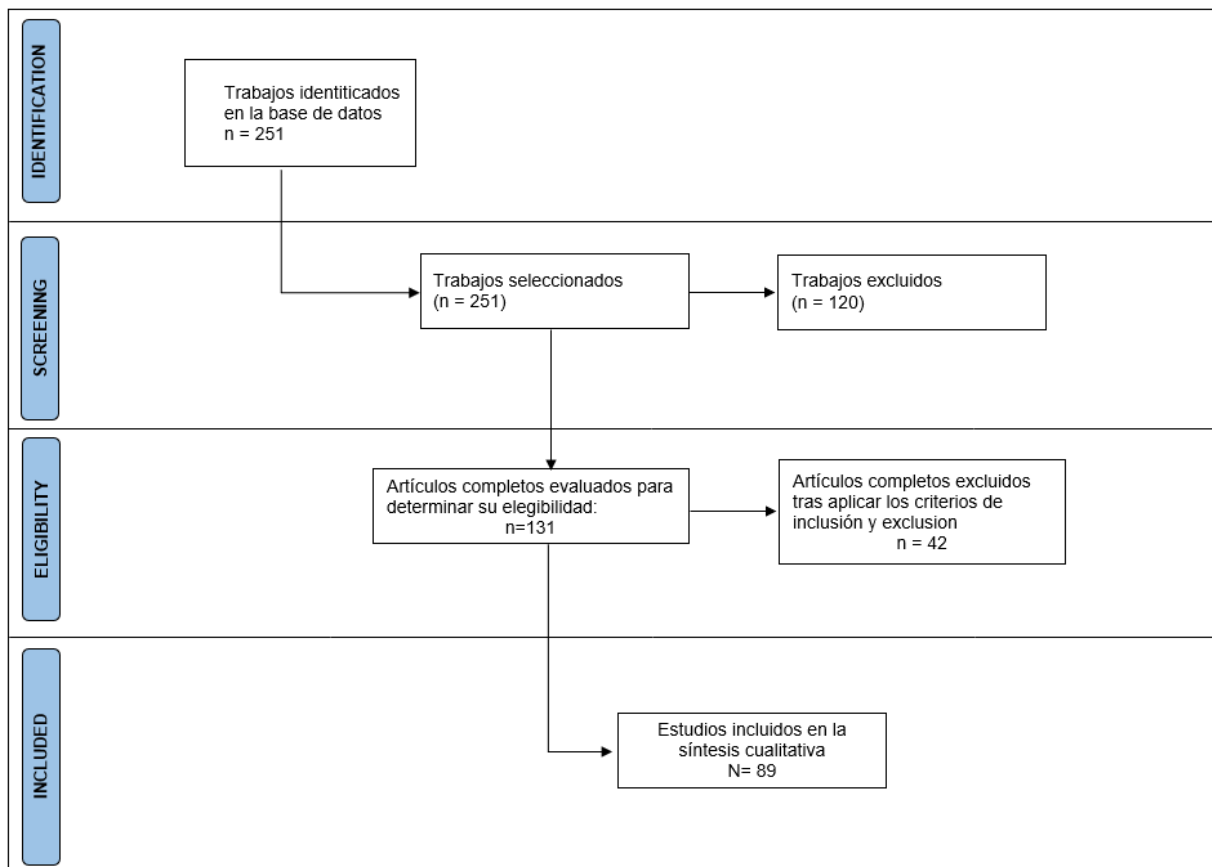


Figure 1. Prism Diagram. In the original Spanish language.

This study was conducted individually by the lead author, who autonomously carried out all stages of the systematic review process. Although the PRISMA 2020 guidelines recommend the involvement of at least two reviewers to minimise bias and improve the quality of the review, it is recognised that this is sometimes not possible due to human resource constraints. Therefore, this limitation is documented and it is ensured that the selection of studies was carried out in a rigorous and transparent manner.

In addition, strategies were applied to minimize possible personal biases, such as reviewing articles at different times and comparing the results obtained with those of similar studies previously published. Although the review was conducted by a single person, an objective and transparent approach was sought throughout.

This methodology allows for a coherent and well-documented systematic review, which provides a solid basis for interpreting the results and formulating conclusions.

3. Results

The following diagram (Figure 2) visually represents the three key dimensions that articulate academic management in Higher Education Institutions: the Fundamentals of Academic Management, which establish the conceptual and normative basis; the Process Management Models, which organize and optimize activities; and the Applications of process management in HEIs, which materialize these strategies in concrete actions for continuous improvement.

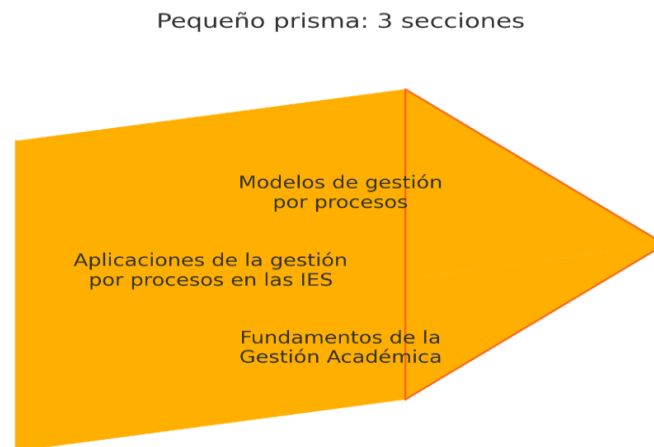


Figure 2. Identified dimensions . In the original Spanish language.

3.1. *Fundamentals of Academic Management*

Management can be defined as the process of planning, organizing, directing, and controlling the resources of an organization with the aim of achieving certain results or goals in a certain period of time, on the other hand, academia can be defined as an area that is associated with the educational field that seeks to promote learning, critical thinking, and the generation of new knowledge.

According to Birnbaum (2016, p. 2) "Higher education institutions are always under pressure to be more efficient and effective", many HEIs are adopting new management systems and processes in order to be at the forefront of new changes and market competition in higher education.

Academic process management is a form of management that is being widely adopted in many educational institutions around the world as a way to improve the efficiency and quality of academic operations.

Álvarez Basabe (2008) mentions that:

Universities are adopting process management as a strategy to improve their performance. This approach allows institutions to overcome the limits of traditional departmental structures and promote greater integration between different areas, with the aim of achieving established educational quality standards.

On the other hand, Voehl et al. (1997, p. 15) state that: "One of the purposes of this type of management is to ensure that all key processes work in harmony to maximize organizational effectiveness. The goal is to achieve a competitive advantage through greater customer satisfaction."

3.2. *Process Management Models*

Process Management is a methodology used in organizations to improve the efficiency, effectiveness, and quality of their operations.

Mallar (2010, p. 3) mentions that:

The Process-Based Management model is aimed at developing the organization's mission, by satisfying the expectations of its *stakeholders*: customers, suppliers, shareholders, employees, society, and what the company does to satisfy them, instead of focusing on structural aspects such as what its chain of command is and the function of each department.

In addition, it is stated that Process Management:

Process management is a discipline that seeks to continuously optimize and improve an organization's processes, with the aim of increasing their efficiency and effectiveness. Unlike more traditional approaches, process management views the organization as an integrated system of interconnected processes. (Maldonado, 2018)

In the management of processes managed by HEIs, it is important to update and continuously improve the activities that are developed to achieve the proposed mission, when talking about processes, we can mention process management and process management, in such a way that Medina et al. (2009, p. 65) mentions that:

Introducing process management is an arduous and difficult task. For centuries, important and decisive organizations in the history of humanity have presented a functional structure. More than a hundred years in the study and development of Scientific Management and the recognition of successful companies are compelling reasons for the rejection of change that is found in most institutions for process management.

Although a classification of processes (strategic, key and supportive) is not defined and generalized, it is considered that under these same criteria activities can be ordered in any type of organization.

Zaratiegui (1999), one of the most widespread classifications in the business field, divides processes into three categories: strategic, operational and support. Strategic processes, managed by senior management, set the strategic direction of the organization and define its goals and policies. Operational processes, on the other hand, are responsible for executing strategies and are oriented towards generating value for the customer. Finally, support processes, although not directly involved in the generation of value, are fundamental for the proper functioning of operational processes.

Ortiz-Pérez et al. (2015, pp. 91-103) consider that classification depends on the strategic projection of the organization, that is, its mission, vision, and policies. Thus, one process can be key, while the same process in another organization can be supportive, and the authors state that:

The determination of the relationships between processes is based on expert analysis, for which it is necessary to guarantee precise and accurate judgments. With this objective, the requirements that must be met by the set of experts are established, for this it is necessary to consider: years of experience, knowledge of the process and those responsible for it. Among the selected experts must be the rector of the university, the vice-rectors, deans and vice-deans, as well as the heads of departments, guaranteeing representativeness at all levels of decision-making.

3.3. Applications of Process Management in HEIs

Systematic improvement is an approach that seeks to improve and optimize the processes of an organization in a systematic and planned manner. This approach can be applied in different contexts, such as organizations, educational institutions, companies, projects, production systems, management systems, among others.

González et al. (2017, p. 5) analyze the process from school improvement to systemic improvement, where they mention that:

Through this strategy, academic directors assume a leading role in the transformation of their institutions, having the support of collaboration networks and technical resources to develop their capacities and lead improvement processes.

On the other hand, Carrasco Jiménez et al. (2003, p. 2) propose a Systemic Approach as a general method for the analysis of the structuring and functioning of the first academic year of a degree and state that:

The systems approach is the most general method for the study of the elements, processes and phenomena of objective reality. Its universality allows the object of study to be considered as a system and each of the elements that compose it will be subsystems of it, while at the same time they can be studied as a system.

Process Academic Management in Higher Education Institutions (HEIs) is a specific application of process management, focused on the administration and improvement of academic activities within the institution, its main

objective is to optimize the processes related to the planning, execution and evaluation of academic activities to improve the quality of education and the student experience.

"One of the problems that higher education faces in Latin America is the increase in the bureaucratic apparatus from the State for its regulation to the interior of the HEIs, making it difficult to participate in accreditation" (Martínez Iñiguez et al., 2017, p. 1665).

4. Conclusions

The literature review shows that process management in the academic field is consolidated as a strategic approach capable of improving the quality, efficiency and traceability of institutional activities. This approach, supported by robust conceptual and regulatory frameworks, allows academic objectives to be aligned with the demands of the environment and quality assurance standards, favoring transparency and accountability.

The adoption of process-based management models facilitates the integration and articulation of academic, administrative, and support functions, which reduces redundancies, optimizes resources, and enhances evidence-based decision-making. The literature reviewed agrees that this methodology increases the response capacity of Higher Education Institutions to changes in educational policies, labor market needs, and student expectations.

The sustained success of process management does not depend exclusively on the existence of methodologies and tools, but on human and organizational factors such as the commitment of leaders, the active participation of the academic community and the consolidation of an institutional culture oriented towards continuous improvement. Evidence indicates that, when these elements are aligned, HEIs are able to transform their processes into high-impact academic and social outcomes.

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