

Bibliometric analysis on information management and service quality in institutional administration

Análisis bibliométrico sobre la gestión de la información y la calidad del servicio en la gestión institucional

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Abstract

This study aimed to analyze scientific publications on institutional management and service quality using a bibliometric approach. A descriptive quantitative design was employed, and 477 documents indexed in Scopus were examined using the VOSviewer and Bibliometrix tools. The results reveal sustained growth in research in these areas, with an annual growth rate of 3.08% over the last decades. Scientific production has been primarily concentrated in the fields of education, health, and administration. Central thematic areas were identified, such as leadership, process management, human resources, and customer orientation, where information management plays a fundamental role in process optimization and service quality improvement. Furthermore, research has diversified in terms of approaches, formats (articles, chapters, conference papers), and geographic regions, with the United States, the United Kingdom, and Brazil standing out as leading contributors to scientific knowledge. This overview reflects the importance of institutional management and service quality for organizational transformation and global competitiveness. In summary, the bibliometric evidence confirms that this is a dynamic and expanding field, with an increasing emphasis on the role of information management as a driver of service quality improvement.

Keywords: quality, information management, research.

Resumen

El presente estudio tuvo como objetivo analizar la producción científica sobre gestión institucional y calidad del servicio desde un enfoque bibliométrico. Se utilizó un diseño cuantitativo descriptivo y se examinaron 477 documentos indexados en Scopus mediante las herramientas VOSviewer y Bibliometrix. Los resultados revelan un crecimiento sostenido de la investigación en estas áreas, con una tasa anual del 3.08 % en las últimas décadas. La producción científica se ha consolidado principalmente en los ámbitos de educación, salud y administración. Se identificaron líneas temáticas centrales, tales como liderazgo, gestión de procesos, talento humano y orientación al usuario, donde la gestión de la información juega un papel fundamental en la optimización de procesos y la mejora de la calidad del servicio. Además, la investigación se diversificó en cuanto a enfoques, formatos (artículos, capítulos, ponencias) y regiones geográficas, destacándose Estados Unidos, Reino Unido y Brasil como líderes en contribución científica. Este panorama refleja la importancia de la gestión institucional y la calidad del servicio para la transformación organizacional y la competitividad global. En suma, la evidencia

bibliométrica confirma que se trata de un campo dinámico y en expansión, con un énfasis creciente en el papel de la gestión de la información como motor del mejoramiento en la calidad de los servicios.

Palabras clave: calidad, gestión de la información, investigación.

Introduction

Management within an organization, entity, or institution constitutes a fundamental pillar for achieving quality in the services offered, regardless of their nature. Hernández et al. (2018) state that "quality management is a strategy to enhance business competitiveness that allows, from a comprehensive perspective, to view the organization as a set of interrelated processes whose ultimate goal is, among other things, to achieve customer satisfaction" (p. 180). In recent decades, this topic has gained significant relevance in research, originally propelled by Deming in the 1950s, who asserted in his works that making decisions without properly directing efforts toward clear goals inevitably leads to organizational failure. Rifo (2019) emphasizes that managing within an organization involves breaking down various tasks and effectively employing resources to achieve the established objectives. In this regard, information management emerges as an essential component, as it enables the optimization of data and resource flows, aligning activities with organizational purposes.

Currently, management requires leaders to plan, organize, execute, and evaluate their team's tasks to ensure the achievement of common goals. Bernasconi and Rodríguez (2018) define this dimension as a set of policies and mechanisms aimed at planning, organizing, executing, and controlling actions and resources according to the entity's mission and objectives. Similarly, Maldonado (2018) highlights that "the competitive market environment has led companies not only to be more productive and efficient but also to seek ways to meet, satisfy, and exceed customer expectations" (p. 10).

The concept of quality is complex due to its breadth and diversity of interpretations. Forrellat (2018) argues that achieving quality necessitates the use of science and technology to maximize benefits and minimize risks, defining quality as "doing the right thing in the right way the first time and improving on subsequent occasions," with the aim of satisfying the consumer. From our perspective, quality is related to meeting objectives that respond to the demands and interests of users. In the educational field, this implies that institutional actions must be oriented toward fulfilling their mission and goals, recognizing the indispensable role of human talent. In this regard, Fontalvo and Vergara (2010) define quality as "a series of inherent characteristics of a good or service that satisfies the needs and expectations of customers" (p. 22). Complementarily, Deming (1994) understands it as the organizational capacity to ensure customer satisfaction, which requires the active participation of all workers, common goals, and a focus on processes that integrate procedures and tasks systemically.

Adopting a quality management system implies a corporate commitment to ensure efficiency and effectiveness through the articulation of tasks aimed at customer satisfaction. In this framework, successful organizations are those that work collaboratively, aligning all their members toward a common purpose, fostering innovation, flexibility, and the capacity to adapt to market demands and expectations. In agreement, Salazar (2019) emphasizes the need for organizations to adapt to the transformations of the social environment to remain competitive.

Institutional management and service quality have become central themes for companies and organizations due to the widespread demand for high-quality products and services, as competition compels maintaining high standards to avoid falling behind. Efficiently managed processes are crucial, especially in systems that advocate for Total Quality, which has driven the development of multiple techniques aimed at optimization (Zaratiegui, 2018). However, in state entities, the challenge persists, as personal interests often prevail over institutional ones. In this sense, Ropa (2014) indicates that organizations face a context of continuous transformation to achieve their goals and satisfy their customers, where service quality is key to competitiveness. For their part, Acevedo et al. (2019) emphasize that leaders have the responsibility to promote teamwork, reach consensus on objectives, and supervise tasks to ensure the expected results.

Within this landscape arises the need to investigate the phenomenon in public entities, where institutional management tends to be relegated. Flores and Delgado (2020) criticize the current public management model, noting that it does not meet citizens' demands, and that administrative processes waste time and resources because many officials prioritize personal interests. Complementarily, Pérez and Barbarán (2021) argue that institutional management is a fundamental mechanism to ensure service efficiency and fulfill organizational objectives. However, it is necessary to deepen scientific knowledge regarding the evolution of this area, the actors involved, funding institutions, the topics addressed, and future trends.

Thus, the questions guiding this research seek to fill that gap: What has been the scientific evolution of institutional management aimed at service improvement? How many studies have been published over time? Who

are the most active authors? What are the main publication channels? From which knowledge areas is the topic addressed? What degrees of collaboration exist among authors, institutions, and countries? How has the semantic body related to this topic developed? Which institutions fund this line of study? These questions will facilitate a thorough analysis of the research dynamics surrounding institutional management and service quality, in addition to providing solid and applicable knowledge for owners, executives, academics, and professionals interested in strengthening management and quality in their organizations.

Methodology

To explore the scientific approach regarding the relationship between institutional management and service quality, bibliometrics was employed as the primary tool. In this context, Zhu et al. (2023) highlight the current importance of having indicators that allow for the measurement of scientific output; these bibliometric indicators, based on bibliographic characteristics, facilitate a systematic analysis of scientific activity. In alignment, Urbizagastegui (2019) notes that this methodology enables a quantitative description of authors and productions in specific areas over defined periods, helping to identify the most productive researchers, contributing institutions, and collaborating countries. Thus, this process provides valuable information about the state of science, essential not only for the formulation of informed scientific policies but also as a reference framework to guide the researcher's intervention, as bibliometrics offers the appropriate means for argumentation and action (Gómez, 2005).

The implementation of this technique requires a rigorous and orderly process, beginning with the formulation of a research question, identification of variables, construction of the canonical search equation, selection of databases, and finally, data processing to answer the posed questions. Oseda et al. (2020) point out that in the context of rapid scientific and technological advancement, as well as autonomy in management, organizations have the opportunity to reflect on their current situation and potential vision and mission within the framework of social responsibility. Consequently, this research is framed within a quantitative approach, adopting a descriptive level to analyze the scientific knowledge regarding the interrelationship between institutional management and service quality. Ochoa-Pachas and Yunkor-Romero (2020) explain that descriptive studies focus on analyzing a variable through its characteristics, properties, and components to identify its interaction with the environment. Additionally, this study is non-experimental and longitudinal in design; according to Hernández Sampieri (2014), "non-experimental research consists of observing phenomena as they occur in their natural context for subsequent analysis" (p. 214).

To answer the research question, the following canonical search equation was developed: "Institutional Management" AND ("Quality of services" OR "Quality services") AND Education. This equation did not consider temporal limits, intending to analyze scientific evolution over time. The database utilized was Scopus, recognized for its multidisciplinary nature and being the largest database of abstracts and scientific literature, as well as having intelligent tools for managing, analyzing, and visualizing academic research, according to the Spanish Foundation for Science and Technology (2018). The search strategy yielded 477 documents, including articles, book chapters, conference papers, reviews, and other types of publications. This initial phase, oriented toward information management, ensured the comprehensiveness of the collected metadata.

The records obtained from Scopus were exported in CSV (comma-separated values) format to facilitate processing in spreadsheets. This procedure allowed for the customization of tables and figures that effectively addressed the research questions. The raw and processed data are available at the following link: <https://zenodo.org/records/17138219>.

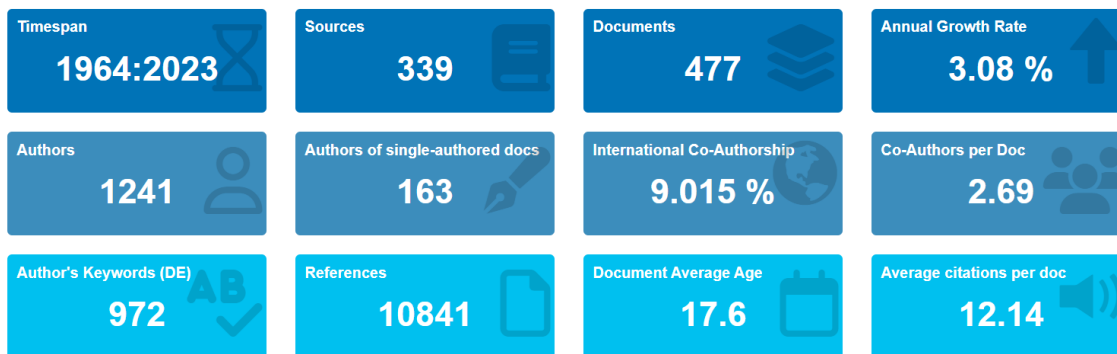
The bibliometric analysis included scientific mapping, conducted using the open-source software VOSviewer. In this regard, Orduña-Malea & Costas (2021) note that VOSviewer is primarily designed for analyzing bibliometric networks; it can be used to create maps of publications, authors, or journals based on citation networks, co-citations, or bibliographic couplings, as well as to generate keyword maps based on co-occurrence networks. However, the use of VOSviewer is not limited exclusively to bibliometric networks, as it also allows for the generation of maps based on any type of network.

Results and discussion

This section presents the findings of the bibliometric cartography, which provide an approximation of the state of the art regarding the relationship between institutional management and service quality in public entities. According to Machado (2018), this methodology serves as a bibliographic tracking strategy that facilitates a deep understanding of a specific topic. The data from the corpus (Figure 1) reveal that scientific production on institutional management and service quality indexed in Scopus, during the period 1964-2023, has shown

sustained growth at an annual rate of 3.08%. This collection, composed of 477 publications distributed across 339 sources and referenced 10,841 times, with an average of 12.14 citations per document, demonstrates the consolidation and academic relevance of this topic, particularly concerning information management and quality improvement in institutional contexts.

Figure 1
Summary of bibliometric indicators



Note. Summary extracted from Bibliometrix, based on the metadata regarding the scientific approach to the relationship between institutional management and service quality, extracted from Scopus

Figure 2 illustrates two distinct phases in scientific production. Between 2009 and 2015, there was irregular growth with a peak in 2013, indicating a nascent and limited interest in the subject. However, from 2016 to 2022, production grew dynamically, reflecting the increasing importance placed on quality within organizations. In this process, information management has proven to be crucial, optimizing the use of data to enhance services. Liu et al. (2023) highlight that service quality surpasses price as a fundamental priority, while Izquierdo (2021) emphasizes its role in institutional modernization in the face of globalization challenges. Among the most cited authors are Taylor J. (4 articles, 3.50 fractionalized), Kehm B. M. (3 articles, 2.33 fractionalized), and Silva A. A. (3 articles, 3.00 fractionalized), who focus their research on how information management optimizes processes and assesses its impact on service quality.

Regarding the most productive institutions, Universidad San Francisco de Quito and Universidade Federal de Minas Gerais each contributed 10 articles, followed by Universidad de Antioquia with 9 publications, particularly in the fields of medicine and business management. By country, the United States leads with 382 articles, followed by the United Kingdom (101) and Brazil (71), indicating a global interest in research on institutional management. Mejías et al. (2020) emphasize that quality fosters customer loyalty, while Senlle & Gutiérrez (2005) underline that an effective management system allows for the elimination of errors and costs, thereby improving quality. Additionally, Chiavenato (2006), as cited by Peña et al. (2022), reinforces the idea that management seeks effectiveness in results, a principle evident in this field of study.

Figure 3

Main journals and cited documents regarding the scientific approach to the relationship between institutional management and service quality

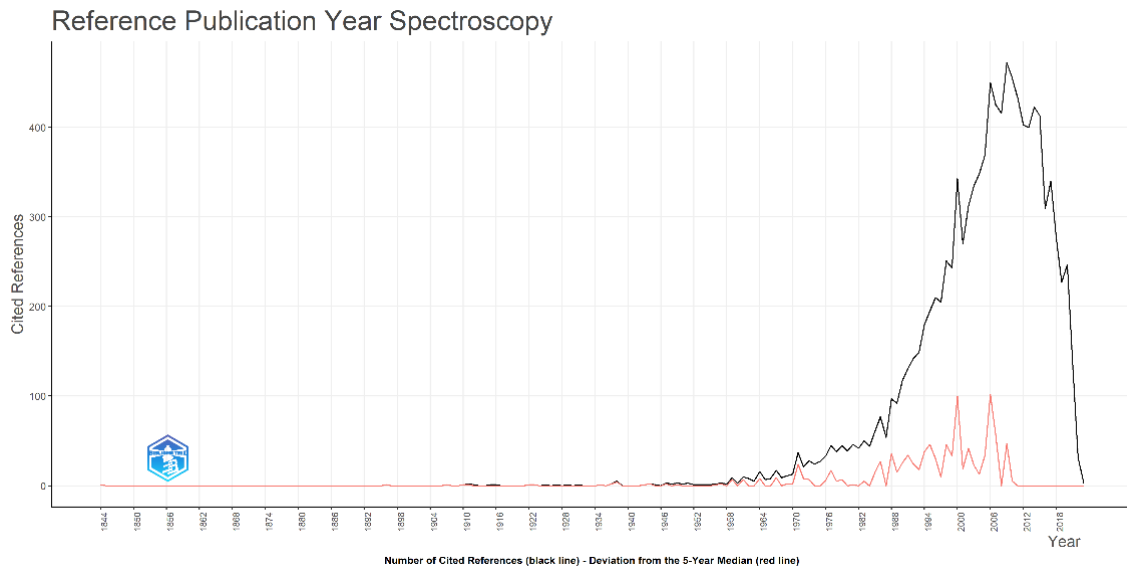


Note. Prepared based on the metadata obtained from Scopus up to 2023 and processed in Bibliometrix

The upward evolution in the reference spectroscopy, especially between 1990 and 2020 (Figure 4), indicates a sustained increase in scientific production related to institutional management and its influence on service quality, reflecting the ongoing interest of the scientific community in this topic. In alignment, Krupnov et al. (2023) state that the management approach must be tailored to the specific needs of each entity, as process management is closely linked to the workforce and employee skills.

Figure 4

Reference spectroscopy on the scientific approach to the relationship between institutional management and service quality



Note. Prepared based on the metadata obtained from Scopus up to 2023 and processed in Bibliometrix

The semantic map (Figure 5), generated from the analysis of keyword co-occurrence using VOSviewer, reveals the main trends in the publications studied. Milanés (2022) highlights that this tool facilitates the visual representation of relationships in scientific domains through maps based on publications, while Martí et al. (2022) emphasize that this technique quantifies the bibliographic material on a specific topic. The most prominent terms, such as institutional management, quality, services, and human talent, stand out due to their size and connections, indicating their relevance in the research culture of the area. This reinforces the idea that improving management

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