Methodology for the Design of an Integrated Management System Based on the ISO 9001: 2015 and GTC 180:2008 Standards for Higher Education Institutions

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Abstract

Objective: In order to propose a methodology for the design of the systems integration, the necessary steps are developed below, to propose the guidelines from the initial consultation of the standards, to the definition of the common documents that may be part of the IMS in the future. **Methodology:** Using a descriptive method, the aspects that recent research and international standards have proposed for the integration of norms in universities are reviewed. **Recommendations:** The Integrated Management Systems (IMS) offer an excellent theoretical and practical framework to empower institutions and offer results with a positive impact on the processes that are currently being developed. The integration of Quality Management and Corporate Social Responsibility (CSR) systems. **Conclusion:** The methodology presented here will allow us to meet the objective of developing the mission processes of any university, with a focus on competitiveness, ensuring documented levels of satisfaction of its students and stakeholders.

Keywords: Corporate Social Responsibility, Education, Integration, Quality

1. Introduction

The orientation towards excellence requires a permanent commitment to continuous improvement, so that academic and administrative processes are integrated effectively and coherently, thus achieving a management identity in all its functional areas. Higher education institutions are not unaware of these challenges, so that the study of the dynamics of their processes and the use of validated management methodologies allow for the design of a roadmap with the intervention of all the stakeholders involved. This research seeks to stimulate contributions in terms of quality and corporate social responsibility, from the perspective of process management and continuous improvement. This being so, this document proposes the design of a model for the design

of the Integrated Quality Management System based on the ISO 9001:2015 and GTC 180:2008 standards for the improvement and optimization of processes.

In a framework of articulation with the concepts incorporated in the related standards, a favorable environment can be created for any university to associate the necessary elements for the consolidation of management, allowing continuous improvement in terms of the satisfaction of its stakeholders³. The GTC 180:2008 standard was chosen because it is the regent in the Colombian context of Corporate Social Responsibility, in addition to its flexibility, its implementation seeks to impact missional aspects within an ethical duty within the framework of organizational improvement, consequently, it is the one that adjusts to the interests derived from the objectives of this research.

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2. Methodology

The methodology applied for the research presented was descriptive/explaining in nature, as it will show the stages to be considered for the implementation of systems integration. According to authors such as⁴, the descriptive/explaining approach makes it easier to deepen one's knowledge of aspects that are of interest, allowing one to characterize, detail and identify the essential or important aspects that must be taken into account in order to understand a phenomenon or a reality. In this way, it is proposed that an authoritative literature review be carried out, which also takes into account the aforementioned standards in order to generate a structured proposal and usefulness for the academic community.

3. Results

An Integrated Management System (IMS), as its name suggests, integrates harmoniously and complementarily standardization models, with the aim of achieving, at the organizational level, the optimization of a series of processes in terms of reference to ISO Standards. The IMS serves to achieve the satisfaction of the needs, expectations and requirements of customers, stakeholders, users, community, beneficiaries or recipients of the service³.

The ISO 9001:2015 Standard is a worldwide applicable standard, the essential objective of which is to consistently achieve user satisfaction in terms of the product or service, in accordance with the activity of each of the organizations, as well as the certification of entities wishing to have their management systems recognized⁵ through a process-based approach and to demonstrate the possibility of continuous improvement through the PHVA cycle (Plan, do, verify and act)6. In addition, GTC 180:2008 provides guidance on the principles underlying social responsibility, the recognition of these principles, and stakeholder engagement; it emphasizes the importance of results and improvements in social responsibility performance as a fundamental process for sustainable development and growth⁷. The GTC 180:2008 has the advantage over other standards related to the subject, of having been designed taking into account not only the basic principles of social responsibility, but also the context of a country such as Colombia, which makes its adoption easier, more useful and closer to the local reality.

With respect to the systemic perspective of integrated systems, proposed by⁸, it is important to highlight that organizations are open systems where the environment exerts a

great influence, immersed in social, economic and cultural systems; at the same time, they are formed by subsystems that must be taken into account. Under this approach, the behaviur of the subsystems affects the performance of the other subsystems and consequently affects the system in general. The phases for the design, implementation and maintenance of the integrated management system, from a systemic point of view, are shown in Figure 1.



Figure 1. Phases of the GIS design, implementation and maintenance process.

In the first instance, it should be borne in mind that both standards are based on the cycle of continuous improvement of authors such as Deming, a guideline that proposes a dynamic, flexible principle that can be applied to each of the processes and stages of planning, implementation, control and improvement of both the products and the processes of management systems². Some authors describe the Deming cycle from its most basic point of view as the way to apply logic and do things in an orderly and correct way¹⁰; from its current development the Deming continuous improvement cycle is known as the four-phase PHVA cycle: Plan, Do, Verify and Act, which is present in both normative references. Once the common structure implicit in the standards based on the continuous improvement of processes has been established, the common, homologous and specific requirements in each of the standards under study are identified, for which the Spanish Association for Standardization and Certification (AENOR) has defined each of these categories as follows in Figure 2^{11} .

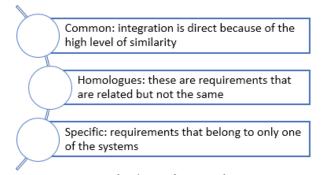


Figure 2. Categories for the unification of requirements.

Following these parameters, the integration matrix of the ISO 9001:2015 and GTC 180:2008 standards is elaborated; this process is carried out on the basis of the first of the aforementioned standards, which is evaluated by the directors of each unit in order to determine the shortcomings and determine the course of action for an integration plan. The integration matrix is quite useful in determining the state of development of compliance with the requirements of the standard in the organization, from which an action plan can be proposed to address the weaknesses found¹². This process is presented according to the scheme shown in Figure 3.

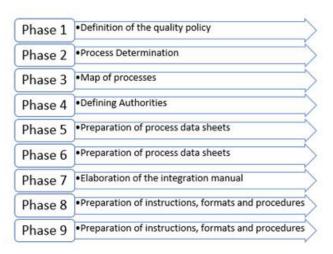


Figure 3. Phases for documenting the integration system.

To execute these steps, you define the following considerations to be taken into account⁷:

3.1 Stakeholders⁶

As required by the two standards discussed in this document, the stakeholders influencing the organization were analyzed, taking into account four groups, internal and external:

- Employee: An individual who has an employment relationship according to legal definitions.
- Customer: A natural or legal person who purchases property, products or services for commercial, private or public purposes.
- Supplier: A natural or legal person who supplies other companies with stocks, represented as inputs for subsequent use or transformation into finished products.
- Government entities: State entities responsible for the provision of standards, monitoring and control of private or public entities.

3.2 Analysis of the Environment⁸

In order to analyze the institutional environment, a DOFA matrix was developed to identify the Weaknesses, Opportunities, Strengths and Threats of the postgraduate area.

3.3 General Quality and Social Responsibility Policy and Objectives 10

In the first instance, it is necessary to review the strategic platform on which the Integrated Management System is based (quality and social responsibility policy and objectives), for which it is necessary to carry out an internal and external analysis of the organization by means of the use of tools such as the analysis of the environment.

3.4 Process Map¹¹

The process map of any organization is composed of:

- Strategic steering processes: Detail the activities related to management responsibility, which contribute to the establishment of the strategy and its alignment in the company.
- Missionary processes: In charge of describing the processes necessary for the provision of the service, which give the added value to the company.
- Support process: They describe processes related to resource management, measurement, analysis and improvementand support strategic and operational management processes.

Finally, the implementation of IMS is proposed in conjunction with the continuous improvement cycle, which is made up of the general activities of "Planning", "Doing", "Verifying" and "Acting", in such a way that it contributes to the solution of problems that may arise from the implementation of a management system¹³. The steps described in Figure 4 respond to compliance with the requirements of both ISO 9001:2015 and GTC Guide 180:2008. Therefore, the continuous development of the activities is sought in such a way that the continuous improvement of the organization's processes is developed.

According to what has been observed, the present methodology for the design of an IMS becomes an essential task to determine the shortcomings and interactions in order to optimize the resources involved in the budgetary allocation⁴. It is also wise to take advantage of the ideas that several authors have been developing on the

subject, such as the use of applications for online document review, in order to identify the aspects that influence the performance of operational tasks¹⁴.

On the other hand, there are also studies that highlight the importance of teamwork, since the development of an IMS brings together interdisciplinary teams that, when well managed, add great value to process improvement. Similarly, there are also adjectives focused on the strategic way in which it contributes to continuous improvement and the achievement of competitive advantages, contributing to sustainable development. The Integrated Management Systems, with a careful methodology, great interest and effort for their development are of great value for organizations of any kind, as expressed in studies conducted in consulting companies. mining. official entities such as the official fire department.



Figure 4. Steps in implementing an IMS.

4. Conclusion

The Integrated Management Systems respond to a need of higher education institutions today to reach levels of continuous improvement that allow them to respond in a timely and competitive manner to the stakeholders involved in the educational processes. As the various authors who were consulted during the research process have stated, the quality cycles focus on achieving excellence through a sequence of steps that can lead to the satisfaction of all the actors involved in a process of common interest.

The ISO 9001 and GTC 180 standards then become a fundamental tool to achieve corporate objectives in an orderly and strategic manner, the first working on quality standards in search of continuous improvement in the development of processes for the provision of services, observing excellence as a goal where the best educational, operational and economic performance is achieved in the institution; and the second norm seeks to establish in the entity the social sense in all operations, in such a way that it allows the organization to generate a positive impact on the organization by training people whose participation goes beyond an excellent professional performance to consider the society in which they are immersed and develop activities that positively impact those communities.

On the other hand, the use of the methodology proposed as it was presented ensures that all the aspects necessary for the implementation of these standards in the institution can be covered; the PHVA cycle itself contemplates the cyclical repetition of activities that only aim to achieve continuous improvement, since it is understood that a successful organization maintains its objectives, strategies and dynamic processes, since the factors are always changing as a function of the society that is permanently generating new challenges towards education.

Given the above considerations, it is worth mentioning that the factors associated with quality and corporate social responsibility can be observed today as facilitating components that, if incorporated into the daily activities of companies or any type of organization, can drive the structuring of processes and, consequently, contribute to the identification of diverse aspects that may interfere with the good performance, development and positioning of the provision of educational services.

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