



RESEARCH ARTICLE

Three Strategic Elements at Internal Quality Assurance System in Higher Education Institutions

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ABSTRACT

This article presents three strategic elements at Internal Quality Assurance System in Higher Education Institutions. For the above, a questionnaire was designed in order to apply six semi-structured interviews to directors of Internal Quality Assurance Systems in universities with high-quality accreditation. It was inquired these directors about three relevant categories or strategic elements: mission, strategic decisions, and decision-making methodologies. The relevance of addressing these three categories is based on the fact that purposes of higher education institutions differ from business or for-profit organizations. Therefore, an Internal Quality Assurance System, which is part of a higher education institution, has also a different logic than for-profit organizations. As a result, this study presents an analysis of the informants' opinions regarding the mission, strategic decisions, and methodologies for making strategic decisions in Internal Quality Assurance Systems in higher education institutions, which are considered critical strategic elements for designing or redesigning these systems. It was found that the mission of the IQAS in universities is "to ensure the achievement of the institutional mission". Three relevant strategic decisions at IQAS are "having an integrated information system that support self-evaluation processes, integrating the information requirements of accreditation agency with requirements of ISO 9001 standards from ICONTEC", "the leadership and support of quality assurance processes by the institution's high-level hierarchy", and "align institutional self-evaluation processes with the university's strategic planning processes". Regarding the use of any model or methodology for strategic decision-making in the IQAS, the use of the accreditation model designed by the accreditation agency of a country, as well as the Balanced Scorecard (BSC) were two common methodologies.

INTRODUCTION

Decision-making in Higher Education Institutions (HEIs) is an increasingly relevant topic, mainly due to the ever more complex and changing environment they face (Rodríguez Ponce, 2005). Besides, in recent decades, HEIs have been compelled to address to multiple stakeholders' interests and the increasing complexity of organizational decision-making (Tiron-Tudor, et al., 2022). Furthermore, the Internal Quality Assurance Systems (IQAS) of universities hold a strategic responsibility in achieving the mission and vision of these institutions, especially supporting quality improvement to maintain quality in higher education services (Nethravathi & Aithal, 2023). IQAS are offices considered part of education management, and its major goal is improving quality (Setyoningrum, et al., 2023).

This document was prepared under the project "designing a strategic decision-making method for Internal Quality Assurance Systems at universities in Colombia". The structure of the project has three stages: (1) identifying some critical management elements at Internal Quality Assurance Systems in universities in Bogota; (2) proposing some criteria for decision-making at Internal Quality Assurance Systems and their weighting based on Analytic Hierarchy Process (AHP); and (3)

designing a strategic decision-making method for Internal Quality Assurance Systems in universities. This article is related to the first stage of the research project.

According to (Cardoso, et al., 2017), institutional policy for quality assurance and its documentation includes the institutional mission, vision, objectives, and strategic plans. Coordination and support structures are organized at two levels: one related to the coordination and strategic decision-making regarding the internal quality assurance system and the other concerning the day-to-day management of the system (Cardoso, et al., 2017). Concerning the support information system, (Cardoso, et al., 2017) indicates that this information helps to support decision-making. Thus, several relevant elements are identified within an IQAS: mission, vision, objectives, strategic plans, and strategic decisions. This document addresses the mission, strategic decisions, and decision-making methodologies, which are considered critical strategic elements within an IQAS in HEIs. Hence, the research question is “what could be a critical mission, strategic decisions, and decision-making methodology within an IQAS in HEIs in Bogota?”

A questionnaire was designed to conduct a qualitative-descriptive study, and a semi-structured interview was applied to six directors of IQAS from high-quality accredited universities in Bogota, Colombia. This type of universities was selected under the assumption that high-quality accredited HEIs have better practices to maintain and improve their quality than HEIs without these credentials.

Concerning Colombian context, HEIs in Colombia are non-profit organizations. This is established by law. Besides, there are public and private universities. Both of them must obtain a Qualified Registry from the Ministry of National Education as a requirement to offer their academic programs (Ministerio de Educación Nacional, 2019) [Ministry of National Education]. It is mandatory. On the other hand, the application for High Quality Accreditation of academic programs or HEIs is optional. In Colombia, Law 30 of 1992 (Congreso de Colombia [Colombian Congress], 1992) mandated the creation of the National Accreditation System. Its fundamental objective is “to guarantee society that HEIs meet the highest quality requirements and that they fulfill their purposes and objectives” (CNA, 2009). The National Accreditation System created a National Accreditation Council that is responsible for verifying compliance with the high quality conditions of higher education programs and institutions in Colombia. This National Accreditation Council (CNA) (*Consejo Nacional de Acreditación*, by its acronym in Spanish) was commissioned by the National Council of Higher Education (Consejo Nacional de Educación Superior -CESU-, 2020) to design and apply a High-Quality Accreditation model. Thus, CNA is the national quality assurance agency, or in other words, the Colombian’s accrediting agency. CNA’s model has 12 factors, 48 characteristics, and 236 aspects to be used in each assessment (Consejo Nacional de Acreditación -CNA-, 2021). When faculty and staff of an academic program decide to begin their quality self-assessment process, they receive support from the IQAS of its respective HEI. Thus, IQAS has a critical role within a HEI to carry out continuous improvement and maintain or increase its quality (Mulyono, et al., 2021); (Legčević & Hećimović, 2016); (Sanchez-Puchol, et al., 2018). Regarding the hierarchical level of IQAS in Colombia, it is observed that, in most cases, it depends of the Academic Vice-Chancellor. In few cases it depends directly of the Chancellor. In any case, IQAS of universities are part of the strategic level, but they make decisions under the orders of Chancellor or Vice-Chancellor.

About the mission of an Internal Quality Assurance System in a Higher Education Institution, (McFarlan, 1999) asserts that there are significant differences between for-profit companies and non-profit institutions in the ways they develop and evaluate their missions, given that the latter's strategic purpose is not the pursuit of economic profitability. This statement is valid in countries like Colombia, where the law indicates that HEIs must be non-profit organizations. Similarly, (Henderson & Shrader, 2000) demonstrates that while the moral reasoning among executives of for-profit firms and non-profit organizations is equivalent, their strategic decision-making processes differ. For-profit firms exhibit a higher degree of rationality and greater decision-making attention than non-profit entities. This paper presents a potential mission for IQAS in universities, which are non-profit institutions and thus follow a different logic than for-profit companies. According to (Sanchez-Puchol, et al., 2018), the IQAS are responsible for establishing appropriate procedures and mechanisms to ensure and improve the quality and performance of the educational services delivered by HEIs. (Mulyono, et al., 2020) state that the mission of an IQAS is to support HEIs to provide an excellent service to students, so that they produce high-quality graduates, capable of competing in the world

of work. Likewise, (Nethravathi & Aithal, 2023) consider that the mission of an IQAS is to support HEIs to maintain and improve educational services quality they provide.

Regarding strategic decisions, (Kaplan & Norton, 2004) posit that an organization's strategy describes how it plans to create value for its shareholders and customers. It is also pertinent to recall that Alfred Chandler defined strategy as determining a company's primary long-term goals, adopting courses of action, and allocating necessary resources to achieve these goals (Mintzberg, et al., 1997). Similarly, (Mintzberg, 1994) proposed that strategies can emerge from within an organization without any formal plan; they can arise from the grassroots of an organization. Indeed, strategies are often the emergent response to unforeseen circumstances. (Mintzberg, et al., 1997) assert that strategy is "a pattern in a stream of decisions or actions"; that is, the pattern is constituted by any intended (planned) strategy, actually carried out, and any emergent (unplanned) strategy. This paper offers some alternatives or ideas for potential strategic decisions within universities' IQAS. In this context, these potential decisions are more varied because they often arise from unforeseen circumstances.

Concerning management models and decision-making in universities, (De Vries & Ibarra Colado, 2004, p. 579) assert that universities differ from governmental organizations and businesses because work is organized into disciplines, power is decentralized, and their central product is knowledge. Furthermore, in relation with university management, (C. de Donini & Donini, 2003) notes that in the 1990s, new demands for accountability, social relevance, and competitiveness emerged, accompanied by budget reductions. Therefore, (C. de Donini & Donini, 2003) poses the following question: How can we strategically manage our universities to evolve towards competitiveness, academic excellence, and social relevance, and what are the consensuses regarding the type of university we want? According to (C. de Donini & Donini, 2003, p. 13), the Institutional Project and the Strategic Plan are two instruments for a more professionalized management style. This study explored models or methodologies for management and decision-making within IQAS. It was found that, for these systems, it is beneficial to use the accreditation agency model of each country, as well as the Balanced Scorecard, as evidenced in the results section.

From the perspective of managerial decision-making in Universities, (Pont Vidal & Andre, 2016) addresses the logic, rationalities, and decision-making processes by exploring three questions: i) What kind of rationality do managers assume when making decisions? ii) How are information systems used in decision-making? iii) Do decisions depend on the manager's experience or on the rationality with which they are made? On the other hand, (Rodríguez Ponce, 2005) proposes strategic imperatives for higher education institutions (HEIs) to achieve high quality in formulating and implementing strategic decisions. In the strategic decision-making process, they should promote rationality, reduce the level of politicization, encourage cognitive conflict and reduce affective conflict, foster flexibility, promote procedural justice, encourage functional and knowledge diversity, and promote a participatory and collaborative leadership style (Rodríguez Ponce, 2005). Similarly, (Rivera, et al., 2023) presents criteria for decision-making in higher education institutions. These criteria relate to the rational use of resources for sustainability, aligning decisions with mission and strategy, ethics in decision-making, and the contribution of decisions to high-quality student education. Additionally, (Zhang, et al., 2020) proposed an integrated decision-making model to analyze key performance indicators (KPIs) in university performance management. The article's main objective is to present a model for identifying key performance indicators (KPIs), and how they relate to university performance management.

Regarding to studies on IQAS in universities, (Sanchez-Puchol, et al., 2018) proposed a definition of an IQAS for HEIs as a structured framework where human participants and/or machines perform tasks (processes and activities) using information, technology, and other resources to produce informational quality assurance products and/or services for the internal and/or external customers of a HEI. Besides, Higher Education Institutions are expected to build an internal culture of quality that contributes to the fulfillment of their vision of development as well as better recognition at both national and international levels (Legčević & Hećimović, 2016). For example, (Agasisti, et al., 2019) analyzed the functioning of internal quality assurance areas in Italian universities since 2010, when a new quality assurance system was introduced in Italy. (Agasisti, et al., 2019) Identified the factors influencing the effective functioning of internal quality assurance committees in Italian universities. Another study related to quality assurance in higher education was conducted by (Bornmann, et al.,

2006), who analyzed the procedures carried out by IQAS in German higher education institutions. Furthermore, (Kurysheva, et al., 2022) described the potential of Signal Detection Theory (SDT) for informed decision-making in quality assurance systems in higher education. (Kurysheva, et al., 2022) Suggested that SDT can provide support in cost-benefit analysis in decision-making. Additionally, (Julian & Ofori-Dankwa, 2006) addressed the risks universities face in decision-making when adopting and applying guidelines from three major accreditation agencies for business schools: AACSB (AACSB, 2022), ACBSP (ACBSP, 2022), and IACBE (IACBE, 2022). According to (Julian & Ofori-Dankwa, 2006), while high-quality accreditation has several advantages, applying these accreditation agency standards has some adverse effects on decision-making within the business schools of the universities studied. Additionally, (Benmoussa, et al., 2019) proposed a model for designing academic courses that align with the standards set by the National Agency for Assessment and Quality Assurance in Higher Education and Scientific Research (ANEAQ, 2022). This organization is responsible for assessing the quality of academic programs in universities in Morocco. (Benmoussa, et al., 2019) analyzed various multi-criteria decision-making (MCDM) methods, modeled accreditation processes at some universities, developed a risk matrix for creating new courses in faculties, and interviewed university staff to identify internal and external criteria to consider when designing academic courses in Morocco universities. (Fitri, 2022) Carried out a research oriented towards identify some problems that obstruct the implementation of IQAS. Lack of fund, the lack understanding of the importance of IQAS implementation, and the lack of awareness from institution leaders about IQAS implementation were the problems founded.

Based on the literature review conducted, it is found that while there are some studies related to decision-making in IQAS in universities, there are no studies that provide an analysis of the most important strategic elements contributing to designing or redesigning IQAS in categories such as mission, strategic decisions, and methodologies for decision-making. This study focuses on these three categories and gathers insights through a semi-structured interview with professionals and experts in the field. The results are particularly relevant for contributing to designing or redesigning IQAS in higher education institutions.

This document is structured as follows: Section 2 presents methodology, Section 3 the results, and Section 4 presents the discussion, followed by the references.

METHODOLOGY

This document stems from research aimed at understanding the mission, strategies, and decision-making methodologies that can be used within university IQAS. A questionnaire was designed in order to apply semi-structured interviews to inquire experts about the mission IQAS should have, the most frequent strategic decisions, and decision-making methodologies commonly used. The population considered for the study consists of the directors of the IQAS of 20 high quality accredited universities in Bogota, Colombia. Invitations were sent to 17 of these directors to participate in the study. Out of these respondents, meetings, and interviews were successfully coordinated with six directors. After the interviews were conducted, responses were analyzed using Atlas ti software. Categories such as "mission of the Internal Quality Assurance System," "strategic decisions applied in Internal Quality Assurance Systems," and "model or methodology used in the decision-making process" was analyzed. From each of these categories, opinions on the IQAS mission were identified and recorded (see Table 1). The interviewees and their opinions were identified using columns labeled I1 through I6 (see Table 1), where I1 represents Interviewee 1, I2 represents Interviewee 2, and so on. The main strategic decisions within the quality assurance areas were also identified (see Table 2), as well as the models or methodologies applied in decision-making (see Table 3). Subsequently, the responses from each category were analyzed to provide corresponding results presented in this document's results section.

RESULTS

The following results were found after applying the interview designed for this study and obtaining the opinions of the surveyed informants according to the methodology described in the previous section.

Mission in IQAS in Universities

Regarding the question about the mission of the IQAS, it was found that the most frequent response concerning the mission of the IQAS in universities is "to ensure the achievement of the institutional mission," followed by "to address the processes of obtaining state authorization to operate and institutional and program accreditation" (see Table 1). Other missions considered for IQAS are presented in Table 1.

Table 1. Mission in IQAS in universities

| IQAS Mission | Interviewee | | | | | | Frequency |
|---|-------------|----|----|----|----|----|-----------|
| | I1 | I2 | I3 | I4 | I5 | I6 | |
| Ensure the achievement of the institutional mission | X | | X | | X | X | 4 |
| To address the processes of institutional and program accreditation | | X | X | X | | | 3 |
| To implement or maintain the ISO 9001 Quality Management System | | | X | X | | | 2 |
| Support the processes of program and institutional accreditation | X | | | | | | 1 |
| To respond to an institutional policy of continuous improvement and quality | | | X | | | | 1 |
| To coordinate self-assessment and planning processes | | | | X | | | 1 |
| Ensure the financial sustainability of the programs and the institution. | | X | | | | | 1 |

Source: the authors.

Strategic Decisions Made within the IQAS in Universities

Concerning the main strategic decisions made within the IQAS in universities (see Table 2), it was found that three decisions most informants considered necessary for their area are:

Having an integrated information system that supports self-evaluation processes, integrating the information requirements of the accreditation agency with the requirements of the ISO 9001:2015 standard from ICONTEC;

The leadership and support of quality assurance processes by the institution's high-level hierarchy; and aligning institutional self-evaluation processes with the university's strategic planning processes. These and other strategic decisions within IQAS are presented in Table 2.

Table 2. Main strategic decisions within IQAS in universities

| Main Strategic Decisions in the IQAS of Universities | Frequency |
|---|-----------|
| A single Integrated Assurance System that links self-assessment according to the CNA (Colombian accreditation agency) with the ISO 9001:2015 standard from ICONTEC. | 4 |
| Leadership and commitment from the executive level. The rector and vice-rectors must lead quality assurance processes. | 3 |
| Align the institutional self-evaluation process with the university's strategic planning process to design the improvement plan. | 3 |
| Use the accreditation report from an accreditation agency as a spearhead for designing the Development Plan. | 2 |
| Have a centralized information system with modules (students, teachers, finance, payroll, personnel) that consolidate the information. | 2 |
| Update the University's policies to align them with quality assurance. | 2 |
| Ensure that the job manuals for academic and administrative positions include functions aimed at strengthening the culture of quality. | 1 |
| Redesign the quality model so that decisions in IQAS also ensure the institution's financial sustainability. | 1 |
| Foster a culture of self-assessment and continuous improvement. | 1 |

| | |
|---|---|
| Strengthen and promote the university's competitive advantage and unique selling proposition to increase recognition. | 1 |
| Expand coverage through digital transformation with an intelligent campus in various national geographic locations. | 1 |
| Periodically train staff at all levels on continuous improvement topics. | 1 |

Source: the authors.

Models or Methodologies used for Strategic Decision-Making at IQAS in Universities

Regarding the use of any model or methodology for strategic decision-making in the IQAS, the relevance of the CNA accreditation model, which is the accreditation agency in Colombia, and the Balanced Scorecard (BSC) is evident (see Table 3). The CNA is the body responsible in Colombia for conducting the corresponding analysis regarding fulfilling its accreditation requirements by the programs and institutions that request it. Therefore, it is an accreditation agency. As for the BSC, this concept was proposed by David Norton and Robert Kaplan as a tool applied by various companies to evaluate their performance across four perspectives: learning and growth, internal processes, customers, and the financial perspective (Kaplan & Norton, 1992). Additionally, the BSC is a methodology used as a performance measurement and management system for successful organizations (Kaplan & Norton, 2008). Although the BSC was initially used in business enterprises, it was also adopted in higher education institutions (Fijałkowska & Oliveira, 2018); (Rošulj & Petrović, 2020). Therefore, just as the BSC can be used for the strategic management of universities, it can also be applied to the IQAS of universities.

The previous results can be used to designing or redesigning IQAS at universities. They can also be useful to internal quality assurance officials who wish to compare the findings of this document with their missions, strategies and decision-making methodologies within their IQAS in higher education institutions.

Table 3. Models or methodologies for decision-making at IQAS in universities

| Models/methodologies for decision-making in IQAS | Frequency |
|---|-----------|
| Apply the guidelines of the Colombian Accreditation Agency model (CNA for its initials in Spanish) | 2 |
| The Balanced Scorecard (BSC) facilitates formulating and controlling the development plan, the broader institutional framework that outlines the university's strategic decisions. Additionally, the BSC provides a systemic view of four aspects to identify where to focus efforts to achieve the desired impacts. The Balanced Scorecard allows measurement and management. | 2 |
| The improvement plan. Each academic program has an improvement plan, but it must be articulated with the strategic plans of the faculties or schools, which must be aligned with the institutional improvement plan. In other words, each project in a program must contribute to improving quality and be aligned with the school or faculty's improvement plans, which in turn contribute to the institutional goals. | 2 |
| Saint Thomas Aquinas' prudential method is used in strategic and operational planning. The stages are to see, judge, choose, and act. Seeing identifies the issues at hand. Judging involves understanding these issues. Choosing means identifying potential solutions and selecting one. Acting entails implementing the most suitable solution. | 1 |
| The Institutional Development Plan is a guide for making strategic decisions. | 1 |
| The CIMA Matrix (or Opportunities Matrix) for decision-making. In the CIMA matrix, strengths are considered opportunities for consolidation, weaknesses as opportunities for improvement, opportunities as opportunities for innovation, and environmental threats as opportunities for active adaptation. Therefore, the CIMA matrix helps determine whether to pursue consolidation, innovation, improvement, or active adaptation. | 1 |

Source: the authors

DISCUSSION

One initial aspect to note is the scope of the sample. The universe considered for the research consisted of twenty private universities accredited with high quality in Bogotá, Colombia. It was possible to contact and interview only six of the twenty directors of the IQAS of these universities. Generally, IQAS directors have many time constraints and it was difficult to get an appointment for

an interview. Therefore, this is a qualitative study, and it offers results to discuss about some strategic elements to be considered at IQAS useful in cases such as designing or redesigning IQAS of Universities.

Another aspect to consider in the results is the method or methodology for decision-making within the IQAS. Although inquiries were made about methods or methodologies, the result appears to be more about tools used for decision-making. Only one response from an interviewee aligns with the concept of a methodology for decision-making. The remaining responses fit better with tools for decision-making, such as the Balanced Scorecard (BSC) and the accreditation model of each country's accrediting agency; this opens up the possibility of conducting further research using a survey that considers response options for both specific methodologies for decision-making and decision-making tools in IQAS.

The results obtained regarding the mission of an IQAS in universities, strategic decisions, and decision-making methodologies should be tailored to each specific internal system. Applying these aspects without making necessary adjustments to align them with the institution's particularities and institutional strategy is not advisable. Indeed, within each of the three categories addressed, several alternative responses have been identified, which can be consulted in Tables 1 to 3 and can serve to choose the best options for each case.

Authors' Contribution

The authors worked collaboratively on all stages of this work. Contributions were equally distributed in the formulation of the research idea, methodological design, data collection, analysis and interpretation. All authors reviewed and approved the final version for submission.

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