Conceptual development of the Integral Management Model for the Faculty of Business Administration of ESPOCH

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\textbf{Abstract}

The vertiginous changes of the environment present to organizations of all kinds one of the biggest challenges for their administration, the update of their management model; Failure to do so could be condemning inefficiency and non-satisfaction of its stakeholders. An adequate identification of the situation, the applicable legislation and regulations can provide the necessary elements for an adequate organizational design. The present work explains the conceptual development of the integral management model for the Faculty of Business Administration of the Polytechnic School of Chimborazo and its elements as a strategy to improve its management and achieve higher levels of satisfaction in all those involved.

\textbf{Keywords:} Quality; Management; Management model; Strategic planning; Processes; Information systems

\section*{1. Introduction}

An organization’s environment comprises all tangible and intangible conditions under which it operates; Factors such as technological advances, the evolution of new paradigms in the management of human talent, updates to legislation, increase in customer requirements, shortage of resources, new actors, regulations in permanent readjustment, among others are responsible for the need for adjustments in the way of managing the organization.
These constantly changing scenarios motivate the development of the organization's ability to adapt to the environment, in doing so it will be "ensuring" its permanence in the market; Demil & Lecocq (2009) argue that:

"... The sustainability of an organization can be related to its ability to anticipate the consequences that changes in a certain component of its business model may entail for other components. Such capacity allows to adapt voluntarily to the changes that arise in the environment, ..." (Demil & Lecocq, 2009).

The Faculty of Business Administration of the Polytechnic School of Chimborazo (ESPOCH) is an academic unit subject to compliance with the Organic Law of Higher Education (LOES), the requirements for the institutional evaluation of universities and polytechnic schools within the framework of the quality assurance system of higher education, the Polytechnic Statute and the ESPOCH internal regulations.

The aforementioned documents are explicit in the management requirements that Higher Education Institutions (HEIs) must meet and the faculty in particular detailed in the last two.

This research is justified due to the need to meet the increasingly demanding quality standards raised not only by control bodies but by interested parties, who in their evolutionary process change the operating conditions of the faculty that must have implemented a management model that integrates all the axes and aspects necessary to meet the expectations that are generated in their environment.

The objective, therefore, is to carry out an in-depth investigation considering the sources of information necessary to provide the Faculty of Business Administration with a comprehensive management model for its implementation.

2. Methodology

For the realization of the proposal of this research, a bibliographic review of the literature was carried out with the aim of finding the fundamental elements (axes) required both by the legislation and regulations applicable to the Faculty of Business Administration of the Espoch; as well as the trends and contemporary proposals of administration and management that are applied in the business world.

The literature review considered different sources of information, which were grouped into three sets of documents; the first group was identified as mandatory documents; the second group as voluntary implementation documents, and the third group as specialized documents.
As mandatory documents, all those laws, rules and regulations, both national and internal of the institution that contain mandatory compliance requirements, were considered.

As documents of voluntary application, those that do not generate obligatory nature but that in the university environment and contemporary organizations are applying them were considered.

Finally, publications from reliable sources published by scientists whose recommendations supported the conclusions in the identification of the axes of the model were considered as specialists.

The following table shows the groups of documents reviewed and their identification:

Table 1: Documentation groups for literature review

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2.1 Literature review

The initial bibliographic review was carried out to determine which management model is mandatory, used as contemporary administrative practices by companies in the world, and what is recommended in the specialized literature.

2.1.1 The management model in Higher Education.

The first document analyzed was the Higher Education Law, because it is mandatory and contains all the generalities established for the higher education system.

The LOES (2018) establishes the freedom and autonomy that HEIs and their academic units have to manage their internal processes; this is indicated in article 18 literal e, which textually establishes "The freedom to manage their internal processes ;" (National Constituent Assembly, 2018).

In the document called Policy of Institutional Evaluation of Universities and Polytechnic Schools in the Framework of the System of Quality Assurance of Higher Education, prepared by the Council for Quality Assurance of Higher Education (CACES) recognizes and gives as a given that as an administrative principle of the HEIs process management is applied.

In this document and regarding the evaluation processes that the HEIs have gone through in recent years, he mentions that "The transit through these experiences has allowed him to generate reflections and institutional learning to improve the processes in his charge and
respond to the current needs of the Higher Education System (SES) of the country. (Higher Education Quality Assurance Council, 2018).

Another paragraph deals with the use of processes in administration and their usefulness by mentioning that their application will "allow to appreciate in depth the processes more than the results and will leave lessons to the HEIs on those critical knots that must be overcome for the improvement of quality. (Higher Education Quality Assurance Council, 2018).

This is emphasized when dealing with the Non-Accreditation External Evaluation (ESFA) it is explained that:

Focusing the ESFA on the management of processes involves analyzing forms of organization, intervening actors, work approaches, distribution of resources, aspects that enhance or hinder the fulfillment of what is proposed by each HEI for the fulfillment of its substantive functions. (Higher Education Quality Assurance Council, 2018).

Additionally, the Ecuadorian state with Ministerial Agreement 1573 issues the Technical Standard for the Provision of Services and Administration by Processes, which establishes that the administrative and management principles that must be applied in public organizations must be Process Management.

Article 2 states that "it will be applicable and mandatory for all entities of the Central and Institutional Public Administration and that depend on the Executive Function. (National Secretariat of Public Administration, 2016).

Therefore, it is highlighted that the standard of administration that the state through legislation poses to the HEIs is Process Management. This requirement, however, is not constituted as an objective in itself for a university or faculty, it is rather a mechanism and strategy to achieve the satisfaction of its stakeholders, that is, it poses quality as an organizational objective.

Article 173 of the LOES (2018) refers to it by establishing that higher education institutions, both public and private, their careers and programs "must organize the processes that contribute to internal quality assurance." (National Constituent Assembly, 2018).

Within the principles of the Higher Education System, article 12 of the LOES (2018) emphasizes on:

[...]

responsible autonomy, co-governance, equal opportunities, quality, relevance, integrality, self-determination for the production of thought and knowledge, within the framework of the dialogue of knowledge, universal thought and global scientific and technological production. (National Constituent Assembly, 2018).
The Higher Education Quality Assurance Council itself proposes "quality assurance as the central objective of CACES' work approach" (Higher Education Quality Assurance Council, 2018).

The internal regulations of the Espoch have not been alien to this trend, so title V of the Polytechnic Statute (2013) is called Of the Organizational Structure by Processes, and article 8 reaffirms the management by processes as the administrative basis of the organization. (Polytechnic School of Chimborazo, 2013).

Also and in the same national line, the institutional strategic decision of application of the management by processes is oriented towards compliance with quality standards and principles (article 8).

It should be noted that Espoch has currently approved a new Polytechnic Statute (2019) that is in the final phase of publication, it reaffirms process management as the management model selected and mandatory application in the institution.

In the international context, Process Management is widely recommended; it cites the provisions of the International Standard ISO 9001: 2018, which in point 0.3 "promotes the adoption of a process approach when developing, implementing and improving the effectiveness of a quality management system, to increase customer satisfaction by meeting customer requirements." (International Organization for Standardization ISO, 2015).

Finally, the Ibero-American Charter of Quality in Public Management approved at the X Ibero-American Conference of Ministers of Public Administration and State Reform, held in El Salvador on June 26 and 27, 2008; in Section I of Chapter Four establishes the Administration by Processes as one of the axes or strategic orientations to achieve a Quality Public Administration centered on the citizen. (Latin American Center for Development Administration, CLAD, 2008).

From this first analysis we find that process management is the administrative approach that must be applied not only to comply with the law and the statute (Alarcón Parra, Alarcón Parra, & Guadalupe Arias, The elaboration of the process map for an Ecuadorian university, 2019); also the contemporary business world is applying it, this being the first fundamental axis of the model. However, it was possible to identify that constantly in the documents analyzed process management is related to quality, this determined the next issue to be reviewed.

2.1.2 Quality management as the objective of an HEI

Every organization is conceived to offer a certain product or service to a group of individuals <<interested parties>> who to the extent of compliance with their standards evaluate it and assign it a certain degree of quality. So the ability of the organization and its products to satisfy its customers is the measure of quality it possesses.
It is then the fulfillment of quality standards the way in which the HEI and its faculties are evaluated by the control bodies. In the LOES (2018) the word quality is mentioned 159 times, in all of them it is presented as the objective of the university and the higher education system itself.

Article 2 of the LOES (2019) establishes as an object of the Higher Education System "... guarantee the right to quality higher education that tends to intercultural excellence" (National Constituent Assembly, 2018). In this way any administrative principle applied as well as the decisions taken in the faculties must "ensure" the satisfaction of their interested parties.

One of the main stakeholders of the Higher Education System (SEP) is the student, who has the right to "Access to quality higher education ...", article 5 literal b of the aforementioned law. Cited above, Article 12 establishes as one of the principles of the SEP the "... responsible autonomy, co-government, equal opportunities, quality,..."; later and within the same article corroborates indicating that the SEP "... will operate under the criteria of quality, efficiency, effectiveness...". (National Constituent Assembly, 2018).

Despite the existence of different definitions, all share the idea of stakeholder satisfaction (customers) as a concept of quality, however the LOES also expresses what judging by the Ecuadorian state is quality in higher education. Article 93 called the Quality Principle states that

The principle of quality establishes the continuous, self-reflective search for the improvement, assurance and collective construction of the culture of higher educational quality with the participation of all levels of higher education institutions and the Higher Education System, based on the balance of teaching, research and innovation and the link with society, oriented by relevance, inclusion, democratization of access and equity, diversity, responsible autonomy, integrality, democracy, knowledge production, dialogue of knowledge, and citizen values. (National Constituent Assembly, 2018).

However, in order to comply with the standards expressed in the law, it is necessary to implement quality assurance strategies, in article 94 of the aforementioned legal body refers to the establishment of the "... Inter-institutional Quality Assurance System. The purpose is to guarantee effective compliance with the principle of quality enshrined in the Constitution and in this law ..."; Later it establishes the body in charge of executing this aspect, called as The Council for Quality Assurance of Higher Education who "... plan and coordinate the operation of the Quality Assurance System; its decisions in this matter are mandatory for all the bodies and institutions that make up the Higher Education System". (National Constituent Assembly, 2018).

In quality assurance policies it refers to what was said by Kells, Massen & de Haan (1992); Kells (1995); Lemaitre & Mena (2012) who say that "The
fundamental purpose of quality assurance is to ensure that higher education institutions assume the responsibility of promoting their development and quality assurance, without external constraints". (Higher Education Quality Assurance Council, 2018).

It is then established that through the application of process management an HEI and / or its faculties must be prepared to meet quality standards, for which it is "recommended" that a strategy or methodology of "assurance" of quality be used, affirming by the CACES that "Quality assurance is not, then, an addition to evaluation and accreditation, but the conceptual and systemic umbrella of the purposes and processes indicated." (Higher Education Quality Assurance Council, 2018).

There are various forms and methodologies of quality assurance, however there is one that has been accepted worldwide and disseminated for its versatility and application to any type of organization and products; with tangible results, ISO 9001 occupies a preferential place among managers who seek to raise the performance of their organizations and meet higher levels of quality; Yáñez, C. (2008) comments that "There are more than 640,000 companies in the world that manage and administer their processes through a Quality Management System (QMS) and have ISO 9001 certification". (Yáñez, 2008).

A quality management system is an operational structure of work that allows the establishment of objectives, goals and procedures to meet the requirements of customers previously established; the website of the Qalliance certification body defines it as "A Quality Management System (QMS) could be defined as the set of orderly and coordinated activities that allow to offer quality products or services for the satisfaction of customers;...". (Qalliance, 2019).

ISO 9001 is a standard issued by the International Organization for Standardization (ISO), whose main purpose is to provide guidelines, requirements and the necessary elements for an organization to be able to design, develop, implement and maintain a Quality Management System (QMS). It is also used by certification bodies to evaluate the QMS and grant its certification in the case of meeting all the requirements of the standard.

The ISO 9001 standard has been updated since the first version published in 1987 in order to adapt to the conditions that the environment presents and ensure its relevance; currently available is the fifth version whose title is ISO 9001: 2015 Quality Management Systems – Requirements.

The analysis has allowed to establish the relationship between process management and quality, the second is the result of the efficient
application of the first, so that quality management is part of the application of process management.

As in the previous analysis, it was possible to identify in the documents a relationship of quality management with planning and strategy; the ISO 9001: 2015 quality standard on the implementation of quality management systems states that "The adoption of a quality management system is a strategic decision for an organization, which can help it improve its overall performance and provide a solid foundation for sustainable development initiatives” (International Organization for Standardization ISO, 2015).

It establishes in this way a close relationship between planning and achieving compliance with quality standards, determining the next topic in the bibliographic review.

2.1.3 Strategic planning in higher education.

The comprehensive management model for the Faculty of Business Administration must ensure compliance with applicable legislation and be in tune with contemporary trends in administration. The previous study made it possible to identify two fundamental elements for the proposal, the application of process management to ensure compliance with activities and as an assurance measure to meet future objectives with a focus on stakeholder satisfaction through quality management.

However, it is not possible to achieve quality parameters and adaptation to changes in the environment if you do not have an organizational strategy; The design and application of strategic planning becomes relevant, where not only the objectives for the organization are reflected, but also constitute a roadmap that guides actions, investments and efforts in an articulated way to the vision.

Ogliastri raises the importance of planning and strategy as a question:

How to guide and lead a company in the long term? This is the issue of strategy, the perennial problem of every organization and the essential responsibility of its managers, which involves coordinating the work of all people in the organization aligned by common criteria. The strategy provides these common criteria, which are concretized through objectives, policies and procedures (Ogliastri, 1985).

The use of this management tool is not recent, however its articulation to quality management is closer to our days.

The changes of the environment and its relationship with strategic planning is addressed by Almuiñás and López (2012), who in their analysis of the relevance of carrying out this planning activity in the university and its relationship with quality ensure that "... One of the approaches that has gained momentum in Latin American universities is strategic management, within which special attention is being paid to
strategic planning, as a tool to guide the institutional course" (Almuiñas Rivero & Galarza López, 2012).

The realization of strategic planning is one of the fundamental activities of an organization that seeks to be immersed in processes of evolution towards compliance with the highest quality standards. In another of the paragraphs Almuiñas and López (2012) indicate that "... Strategically directing a university means: (a) conceiving its future development becoming aware of the turbulent conditions that exist in the environment, trying to evaluate the changes that occur in it and go out to meet it (open system)..." (Almuiñas Rivero & Galarza López, 2012).

In the particular case of Ecuadorian universities and polytechnic schools, the use of strategic planning is not only a sample of "good practices" of management, but it is a legal requirement and is part of the principles of quality in higher education that are subject to evaluation to verify compliance.

The Generic Model of Evaluation of the Learning Environment of Face-to-face and Blended Careers of the Universities and Polytechnic Schools of Ecuador (2015) is a document approved and used for accreditation purposes by the Council for Evaluation, Accreditation and Quality Assurance of Higher Education Commission for Evaluation and Accreditation of Careers CEAACES that contains a set of indicators that must be met by HEIs and their careers on a mandatory basis.

In the text of the evaluation criterion A1 of the document it is indicated that "This sub criterion evaluates that the academic proposal is supported by planning, management processes, and is consistent with the general information, relevance and analysis of the prospective evolution of the career" (Council for Evaluation, Accreditation and Quality Assurance of Higher Education Commission for Evaluation and Accreditation of Careers CEAACES, 2015).

As part of the same criterion; the sub-criterion Current and Prospective State (A1.1) indicates as the conceptual basis of the CURRENT AND PROSPECTIVE STATE that the "... Situation of the career in a certain space and time, with a vision of the future, in relation to its environment and demands of the environment, based on processes of planning and institutional management".

Strategic planning is responsible for ensuring the relevance of the different careers, including and for evaluation purposes in this evaluation methodology it is requested that each career present the official strategic planning document (approved and socialized); as required in indicator A1.1, the following graph shows one of the pages of the document where you can see the above.
The same institution, now called the Council for Quality Assurance of Higher Education (CACES) published in June 2019 the updated version of the model of the Evaluation Model of Universities and Polytechnic Schools, an instrument that will allow to initiate a new evaluation process of the HEIs to ensure their quality, this does not evaluate the careers but the institution in general.

Again, strategic planning is presented as an essential requirement for quality university. Called The Institutional Conditions, on page 20 of the document you can read that:

They are essential scenarios and resources for the functioning of a U/EP and, therefore, for the implementation of its substantive functions. They include material aspects such as physical and computer infrastructure and equipment, libraries, student and university welfare services; organizational, such as strategic and operational planning, internal quality management, libraries; and axiological and social, such as equal opportunities, institutional ethics and immaterial dimensions of student and university well-being. Because of their character as "conditions", they must be given as starting points of institutional life and provide support for the three substantive functions. (Higher Education Quality Assurance Council (CACES), 2019).

The official document of strategic planning is required in this document on 23 occasions as evidence of compliance with the requested standards and as a basis for the actions executed.
With the above antecedents, it can be determined that strategic planning is another fundamental axis of the management model of an HEI and its academic units (faculties), which enables the fulfillment of the established objectives (Alarcón Parra & Alarcón Parra, El Palacio de Bellas Artes”/Analysis and proposal of promotion in the Gallery, 2016)).

A recurring aspect in the generic model of evaluation of both careers and institutional, is the management of information in digital format, whose purpose is to feed a national computer system for the evaluation of evidence and the assessment of indicators called the platform of the Information System of Higher Education Institutions (SIIES).

2.1.4 Computer management systems

We live in a computerized world, the use of these technologies is part of the lives not only of people but also of the organizational life of all companies in the world.

Its use in the company is related to the management of information that allows senior management to make more appropriate decisions; Hamidian and Ospino (2015) state that "Information systems play a very important role in society, as they are a powerful and alternative tool to support individual managers to make better decisions..." (Hamidian Fernández & Ospino Sumoza, 2015).

In another paragraph they claim that:

Information systems are currently changing the way organizations operate. Through its use, great improvements are obtained, since they automate the operational processes that can be carried out in any company, provide information to support the decision-making process and facilitate the achievement of competitive advantages through its implementation within the organization. Information systems are here
to stay because of their great usefulness as a complementary tool in
different areas, whether personal, business (human resources
management, transaction processing, managerial or administrative,
decision making) and communicational, among others. (Hamidian
Fernández & Ospino Sumoza, 2015).

In accordance with planning as a fundamental axis of a management
model, the use of information systems constitute a valid strategy to
ensure efficiency and competitiveness, Prieto and Martínez (2004) in
their publication emphasize:

It should be noted that information systems must be at the service of
the organization and thus establish its approach or business strategy, a
fact that is sometimes ignored by management and in many cases
manipulated to suit their interests. The information system should be
considered as one of the subsystems that make up the organization,
created by itself to be used in achieving its objectives, and as this system
serves as the basis in the business strategy can be used to achieve
competitive advantages. (Prieto & Martínez, 2004).

The importance of the use of information management systems and the
need for the use of digitized information management required in the
generic accreditation model allowed to establish a new axis of the
integral management model; computerized management systems.

The justification is abundant in the specialized literature, the ISO
organization presents its use as fundamental to business success:

In recent years, computerized information systems have become one of
the key pieces in the management and organization of companies,
especially in the so-called process management systems. Globalization
has pushed organizations to operate in an increasingly complex,
internationalized and competent environment. In this context,
information management has become a fundamental issue in the
complicated gear that drives business success. (ISOtools.org, 2015).

Once the bibliographic review was completed, the documents used for
this purpose were:

**Table 2: documents used by documentation groups for literature
review**

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### 3. Results

The work of bibliographic review and the analysis of the relationships between the topics analyzed allowed to identify the axes of which the integral management model of the faculty is composed; which will ensure not only compliance with applicable legislation but will enable you to initiate a process of continuous improvement with a focus on

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quality to sustainably raise the satisfaction of stakeholders and ensure organic evolution in tone to the changes posed by the environment.

The axes of the Integral Management model of the Faculty of Business Administration (FADE) are:

- Process Management (quality management).
- Strategic Planning
- Computerized Management Systems.

The following graph shows the axes of the integral management model for the Faculty of Business Administration of Espoch:

**Figure 3: Axes of the integral management model for the Faculty of Business Administration.**

4. Discussion

The generation of the management model for the Faculty of Business Administration must integrate the most relevant aspects of contemporary management trends, but that do not contradict or
contradict the applicable legislation and regulations. However, and given the need to update it as demanded by the evolution of the environment, this has not been done in recent years, since 2003 when the institution published the document called Functional Organic Structure, in which you can identify the functional administrative principles that were applied at that time, the image presented below (figure 4) illustrates the organizational chart not only for the faculty but also for all those that work in the Espoch.

Figure 4: Detail of the Faculty Organizational Chart of the Functional Organic Structure document. (Escuela Superior Politécnica de Chimborazo ESPOCH, 2003).

In 2012 the institution began to consider process management as the administrative principle to be applied, so in 2013 the Polytechnic Statute 2013 was approved and applied, which as mentioned in previous lines article 8 specifies that process management must be applied. Resolutions and documents approved and published in subsequent years by the highest body (Polytechnic Council), have had the purpose of generating the conditions and legal support for their application; In session of February 4, 2014, Resolution 44.CP.2014 is issued, by which the Organic Regulation of Organizational Management by Processes of the Polytechnic School of Chimborazo is approved; In the aforementioned document the existing processes in the institution are specified, the image (Figure 5) presents a chain of processes that as indicated in article 15, They are for the different faculties.
5. Conclusions

Both a university and its academic units (faculties) have the responsibility to manage themselves efficiently with the aim not only of complying with applicable and current legislation but also satisfying their stakeholders. This purpose is not achieved without an adequate management model that guides the actions of all faculty members and allows planning and objectives to be properly established. The study allowed to identify the necessary axes for the Faculty of Business Administration of the Espoch; Process and Quality Management, Strategic Planning, and computerized Management Systems duly developed, documented, integrated and put into use will achieve access to the desired levels of efficiency, complying with legal and statutory
requirements, according to environmental trends, but above all raising in a sustained manner the satisfaction of all its stakeholders, becoming the reference that should be according to its vision.

Bibliography


