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HISTORY AND EVOLUTION OF THE EVALUATION AND ACCREDITATION PROCESSES OF UNIVERSITIES IN ECUADOR

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Abstract

This paper, based on the perspective of comparative education, analyzes the processes of evaluation models of universities and the processes of accreditation and quality assurance in Ecuador, making an analogy from a chronological view of the different models with their characteristics, objectives, policies. and results of each of them. Addressing the three models of institutional accreditation experienced in Ecuador: i) Institutional performance evaluation model of higher education institutions of the National Council for Evaluation and Accreditation of Higher Education of Ecuador (CONEA) of the year 2009, ii) Evaluation model of institutional performance of higher education institutions of the Council for Evaluation, Accreditation and Quality Assurance of Higher Education of Ecuador (CEAACES) of the year 2015, iii) of the Council of Quality Assurance of Higher Education (CACES) of the Ecuador of the year 2019. All quality regulation agencies according to their time: CONEA, CEAACES and CACES have managed to establish mechanisms and procedures for the evaluation of universities, which have managed to institute systematic and periodic self-regulation processes as a result of their self-assessment processes, and this helps to improve higher education holistically. It is true that there is still a long way to go, knowing that to achieve high levels of quality, it is not only enough to comply with regulatory accreditation processes, but also to satisfy the needs and expectations of its stakeholders: the state, university authorities and teachers, students and society. usually.

KEY WORDS: Accreditation, Evaluation of Universities, Quality Assurance, Ecuador.

1. INTRODUCTION

This paper aims to address from the perspective of comparative education the processes of evaluation, accreditation and quality assurance in Ecuador, making an analogy from a chronological vision of the different models with their characteristics, objectives, policies and results of each of them.

For this we must start from the fact that comparative education according to Añorga, Valcárcel, & De Toro González (2006) has as its object of study the educational systems and processes of the different nations according to their temporality, objects of study and cultures; characterizing it as an investigative mechanism used for social phenomena that is based on the most important conceptions of dialectical and historical materialism, with the purpose of establishing trends of development and the generalities of systems. Ecuador does not have a long history in evaluation and accreditation processes of universities and polytechnic schools, it is only from the change of constitution in 2008 called "Constitution of Montecristi ", where article 353 (2) and article 354 state that:

"The higher education system shall be governed by: A technical public body for accreditation and quality assurance of institutions, careers and programs, which may not be made up of representatives of the institutions subject to regulation", (National Assembly of Ecuador, 2008), page 170

.... and Article 354 states that:

"The body responsible for planning, regulating and coordinating the system and the body responsible for accreditation and quality assurance may suspend, in accordance with the law, universities, polytechnic schools, higher, technological and pedagogical institutes, and conservatories, as well as request the repeal of those created by law. (National Assembly of Ecuador, 2008, p. 170).

Likewise, on July 22, 2008, the National Constituent Assembly issued Constituent Mandate No. 14 in which the First Transitory Provision provides that:

"The National Council of Higher Education CONESUP obligatorily within a year, must determine the academic and legal situation of all educational entities under its control based on compliance with its provisions and the rules on higher education are in force in the country ..... It will be obligatory that in the same period (one year) the CONEA delivers to CONESUP and to the Legislative Function, a technical report on the level of institutional performance of the higher education establishments, in order to guarantee their quality, promoting their purification and improvement, according to article 91 of the Organic Law of Higher Education " (CONEA, 2009, p. 4).

With the aforementioned background, and through the ministerial agreement for the creation of the accreditation and quality assurance body officially in Ecuador, the evaluation processes for higher education institutions (HEIs) begin.

This paper addresses the characteristics, objectives and policies of the three models of institutional accreditation experienced in Ecuador: i) Model of evaluation of institutional performance of higher education institutions of the National Council for Evaluation and Accreditation of Higher Education of Ecuador (CONEA) of 2009, ii) Model of evaluation of institutional performance of higher education institutions of the Evaluation Council, Accreditation and Quality Assurance of Higher Education of Ecuador (CEAACES) of 2015, iii) of the Council for Quality Assurance of Higher Education (CACES) of Ecuador of 2019.

It is important to emphasize and without the intention of praising who initiated the accreditation processes in the country, the so-called "government of the citizen revolution", who, despite the opposition, resistance and strong criticism from various sectors, marked a historic milestone in Ecuadorian higher education, which has led to the establishment of a system of accreditation and quality assurance in Ecuador, and to establish a culture of self-regulation and reflection of its processes aimed at permanent and systematic improvement in universities. (Moscoso et al., 2022) .

All the regulatory and control bodies according to the time: CONEA, CEAACES and CACES have managed to institute mechanisms and technical procedures for the evaluation of universities, which have managed to establish systematic and periodic processes of self-regulation as a result of their self-evaluation processes, and this will undoubtedly help to improve higher education holistically and in comparative terms in South America, But there is also still a long way to go and institutionalize knowing that to achieve high levels of quality it is not enough to comply with regulatory accreditation processes but also to meet the needs and expectations of its stakeholders: State, authorities and university teachers, students and society in general, in addition to the democratization and rigor of the elements used to measure educational quality. (Ayala, 2008)

The change in the management of the Ecuadorian university is important and significant, derived and motivated by the mandatory regulatory processes that through public policy the Ecuadorian state has executed, but awareness and self-criticism has also been generated in the HEIs for the permanent improvement of their academic and administrative processes. (Moscoso & Castro, 2022).

The road is not yet over, there is work to be done, even more so knowing that the concept of quality is dynamic over time and multidimensional, and when principles of continuous improvement are conceived there is always something to correct (Yarce, 1997); as British

mathematician and physicist William Thomson Kelvin points out: What is not defined cannot be measured. What is not measured cannot be improved. What is not improved, is always degraded.

2. HISTORY AND GENERALITIES OF ACCREDITATION PROCESSES IN ECUADOR.

In the vast majority of South American countries, the systems and institutions that ensure quality assurance began to consolidate in the mid-nineties, with the main purpose of promoting a permanent improvement of universities.

Already in the case of Ecuador, there was no policy and even less a regulatory or quality control body of the Ecuadorian system until 1966, when the National Council of Higher Education was born, with very brief regulatory functions and rather almost with the sole task of distributing economic resources among universities. Later and after the dictatorship of Velasco Ibarra in the eighties a law called "Law of Universities and Polytechnic Schools" is generated, which results in the creation of the National Council of Universities and Polytechnic Schools (CONUEP), which as it points out Ayala (2015) its functions and attributions are increased, especially in matters inherent to the planning, coordination and control of the HEIs, still its edges and axes of action are reduced and limited.

The first institutional evaluation of universities was carried out in 1989 by CONUEP; As a result of this process, 21 universities (6 private and 15 public) were evaluated; As a macro conclusion of this process, it is noted that: "In Ecuador there is no higher education system [...] strictly speaking. What there is is a set of university institutions independent of each other and that at the administrative level have certain mechanisms of cooperation [...]" (CONUEP, 1992, p. 29).

In Ecuador, the concepts of quality improvement and assurance began to be instituted in 1995, when CONUEP began structuring the National Evaluation and Accreditation System, in order to meet the recommendations arising from the study among several houses of higher education called: "Ecuadorian University: mission for the XXI Century, conclusions and proposals"(Rosemary, 2020).

After that in the year of 1997, the Constituent Assembly begins to analyze the higher education system and generates the law of Higher Education in the year 2000, which gives rise to the so-called National Council of Higher Education of Ecuador (CONESUP), this being the official entity for the direction, coordination and regulation for academic operation. in addition to incorporating technical and technological institutes into the higher education system. Likewise, this body establishes the principle of evaluation and accreditation independently, resulting in the creation of the National Council for Evaluation and

Accreditation (CONEA), which will be responsible for this policy and procedures.

Eleven years had to elapse since the first evaluation process in Ecuador, so that in 2000, and with the approval of the new Organic Law on Higher Education (LOES), the continuation of the work carried out by CONUEP and the formalization and operation of the "National System of Evaluation and Accreditation of Education" were contemplated. by CONEA (Government of Ecuador, 2010). After that and with the formation of CONEA in 2002, this body begins to generate the necessary standards and operationalize the processes of self-evaluation, external evaluation and accreditation of universities (Villavicencio, 2008).

Already in terms of operability and action scenarios, CONESUP lacks the necessary competences to, on the one hand, regulate the excessive increase of universities, and on the other, to control the level of quality of existing ones. On the other hand, the CONEA did not manage to constitute itself quickly since due to the complex and ambiguous regulations it remained as a provisional organization, adding to it problems of financing by the state to these institutions.

In the period between 2002 and 2008, the institutional evaluation processes are voluntary, that is, they were only executed at the express request of each HEI. In terms of results until 2008, of 71 existing universities, only 5 had completed the entire process and were accredited, which means 7.04%; 13 were in the process of external evaluation, equivalent to 18.31%; 26 universities carried out their self-evaluation process, which means 36.62%; 11 of them were just in the delineation phase of their self-assessment project, or 15.49 per cent; 9 universities had not even started self-evaluation, equivalent to 12.68%; and 7 did not adjust the time needed to start with this process, equivalent to 9.89% (Villavicencio, 2008).

For this same period, but in the case of the Higher Technical and Technological Institutes, the statistics are even worse, since only 15 of the 270 recognized in that period, carried out their self-evaluation, which is equivalent to 5.5%, and of them only one finished the external evaluation process, without being accredited. (CONEA, 2007).

The greatest difficulty of the evaluation processes carried out in 1989 and those carried out between 2002 and 2008 as indicated by Lucas Pacheco (2010) It's just:

[...] Certain sectors did not accept the corresponding reports, and put forward various arguments: that the evaluation does not work, that the methodology was not adequate, that there was no due process, in short, a whole set of obstacles that is leaving the aforementioned accountability in nothing. (Pacheco, 2010, p. 73).

With the difficulties and problems indicated, the evaluation and accreditation processes lacked legitimacy, let alone the acceptance of

the academic community and society in general, and despite not encouraging results, they did not generate substantive and representative changes in the HEIs.

With the background and statistical data described, it leads to the so-called "failure" of the regulatory and control bodies of higher education. In addition to what has been described Ayala (2015), points out that accreditation processes in Ecuador arise as a response to the lack of control and a vertiginous growth of undergraduate and postgraduate programs, and that while it is true that some meet high quality standards, there are also those that have taken root in the higher education system as a "fraudulent business"; and that there is no "ideal formula" or "recipe" to be able to discriminate the quality of institutions and their programs, it is important that the State leads evaluation and accreditation processes that contemplate minimum quality criteria and guarantee the development of the Ecuadorian higher education system.

Following the change of government of Rafael Correa, where one of his campaign offers was the strengthening and purification of the higher education system, the change of constitution in Ecuador occurs in 2008, where the obligation of universities to render accounts to society of their academic achievements is declared, their levels of effectiveness and efficiency through the establishment of evaluation and accreditation bodies, which begins to structure the model with which all HEIs will be evaluated in a mandatory manner, thus becoming the most important mechanism to date to evaluate the performance of universities and help them to direct their improvement actions, its planning and policies.

However, the principle of educational quality is complex to define, since it can be conceived from different edges and approaches, one of the most widespread is that of UNESCO , where he raises this principle from three perspectives: pedagogical, social interaction and rational – technical (Tawil et al., 2012). The first, the pedagogical approach focuses on students and teaching-learning processes, and conceives quality education when it is didactically good. The second approach, that of social interaction, considers quality education when it is good for society and in turn participates in its construction, that is, it contemplates the vision of all the actors of the educational task. The third approach, the rational-technical, is based on quantitative indicators and has the purpose of collating results, that is, it understands that an education is of quality when it is comparatively good. In Ecuador, both normatively and through quality instruments, such as evaluation models, there is a hybrid model between the social interaction approach and the rational-technical approach.

Finally, it is important to highlight the characteristics of each model: CONEA, CEAACES and CACES , the times in which each one was developed, its main characteristics, objectives and results.

3. MODEL OF THE NATIONAL COUNCIL FOR EVALUATION AND ACCREDITATION OF HIGHER EDUCATION OF ECUADOR (CONEA) OF THE YEAR 2009.

3.1. BACKGROUND AND OBJECTIVE

To address the CONEA model, it is necessary to keep in mind as a crucial antecedent that during the last decades (1980s and 1990s, before the model) Ecuadorian higher education sustained an exponential growth both in the number of universities and in the number of students.

In this context Enrique Ayala in his book "The Ecuadorian university between renewal and authoritarianism"/, points out that the number of universities has approximately tripled and that the number of technical and technological institutes exceeds three hundred, without having with precision and detail how many of them are in operation and with current academic offerings; In addition, the offer of careers such as: Law, Medicine, Administration and some Engineering has been overcrowded; most of it without responding to the needs of the environment and the national reality. In addition, it emphasizes that the growth of teaching has been incessant in previous years, the same has not happened with research, and that Ecuador has a marked deficit in terms of the development of scientific research, innovation and technological development processes, since graduation processes have become a mere administrative procedure and not contributions of original advances that consolidate research processes. Ayala (2015).

With the background indicated, the CONEA model of 2009, addresses quality from two premises. The first considers quality in a substantive way and this refers to all the proceedings, authorizations and requirements with which universities can operate legally, all based on the fact that the Ecuadorian state is committed in the constitution of the republic to guarantee quality from the authorization of operation, recognition and certification, to professional qualification and degrees. The second premise addresses quality as an adjective, in other words, it is an assessment, based on different degrees of conformity of a cluster of criteria and standards previously agreed and established by CONEA. (CONEA, 2009)

The construction of the model and its subsequent application of the evaluation of universities for accreditation purposes arises as an initiative aimed at rescuing the leading role of the State of orientation, regulation and verification of the quality of universities, and according to the report of the universities in its section <<the general problems of the Ecuadorian university>> points out that the role of the Ecuadorian State has evidently come deteriorating during the last two decades due to lack of policies of previous governments that allowed a commodification of higher education (NATIONAL COUNCIL FOR EVALUATION AND ACCREDITATION OF HIGHER EDUCATION, 2010).

Its primary objective is disaggregated from Mandate 14, product of the political decision of the government of the day and as a result of the lack of regulation and the proliferation of new universities and technological institutes especially in their academic offer; This objective can be summarized in producing a global evaluation of the system from the individualized evaluation of each higher education institution for the purification and improvement of the National Higher Education System.

3.2. CHARACTERISTICS

The model CONEA 2009 part of the conception of the UNESCO (1998) where he points out that the performance of higher education centers is a "... multidimensional concept that should include all its functions and activities: teaching and academic programs, research and scholarships, personnel, students, buildings, facilities, equipment and services to the community and the university world" (UNESCO, 1998, p. 17)

Likewise, it is based on what has been pointed out by Ruiz (2004) where, evaluation in the educational framework considers it as an indispensable and instrumental function that contributes to achieving the educational objectives and goals, and that its significant contribution is to help and facilitate decisions regarding the "Planning, media selection, resource allocation, choice of methodologies, promotion of students, organization of staff and improvement of their processes" (page 179)

The model can be synthesized in the following phases: i) design and elaboration of the model, ii) review and adjustments, iii) implementation of a computer platform for the reception of information, iv) pilot test to a group of universities, v) definitive adjustments to the model based on the results of the pilot test, vi) notification to the HEIs of the formal start of the process, vii) information collection, viii) analysis of information by peer evaluators and technicians of the control body, ix) field visit to the HEIs, x) preparation of the evaluation report xi) analysis of consistency of the information by the CONEA and x) delivery of results to the HEIs.(CONEA, 2009).

Additionally, the model has a strong quantitative accent based on criteria. and evaluation sub-criteria, which are then translated into indicators and utility or valuation functions . The scope of the evaluation process included the evaluation of 70 universities and polytechnics, 130 extensions and support centres and 290 higher educational, technical and technological, intercultural and arts institutes. (CONEA, 2009).

On the other hand, the model is based on three principles:

a) Principle of identity and decomposition, which establishes the possibility of identifying events and generating relationships between the elements that make up the model.

b) Principle of comparative discrimination, which allows to distinguish events according to the relationships and rates of occurrence of the same.

c) Principle of synthesis, which allows to simplify the relationships of the events. (Martinez A., 2012)

3.3. MODEL STRUCTURE

The evaluation model describes HEIs as an academic project, which proposes four axes that are then disaggregated into criteria and each one has a different weight or weighting: i) academia (41%); (ii) students and their learning environment (35.4 per cent); (iii) research (15.1%); and (iv) internal management of institutions (8.5%) (CONEA, 2009).

3.3.1. ACADEMY

This criterion focuses on a set of sub-criteria and indicators that guarantee fundamental quality conditions for the development of university teaching. This is based on 4 criteria: i) academic training, ii) teaching dedication, iii) teaching career and iv) link with the community; the disaggregation of these, are detailed below in Table 1

TABLE 1. Academy (CONEA MODEL 2009)

Criterion	Weighting	Sub-criterion	Indicator
Teaching staff/	32,10%	Academic Level	
		Postgraduate Category	Mastery
			Speciality
		Doctorate on loan	
Dedication	18,30%	Full Time (TC)	TC Teachers
			TC teaching load
			TC workload
		Part-Time (TP)	TP Teachers
			TP workload
		Quality of dedication	
Teaching career	40,20%	Duties and rights of teachers	Co-governance
			Contracting
			Labor Policy: Ladder and Wage Policy
		Institutional	Promotion: Promotion and evaluation
			Remuneration
Links with the community	9,40%	Programmes	
		Teacher Participation	

Student Participation

3.3.2. STUDENTS AND THEIR LEARNING ENVIRONMENT

This criterion addresses the management of universities in relation to the learning environments of students, specifically in terms of access, training (permanence) and qualification, integrating both technical and political aspects; its disaggregation is detailed in Table 2

TABLE 2. Students and their learning environment (CONEA MODEL 2009)

Criterion	Weighting	Sub-criterion	Indicator
Duties and rights	50%	Access	Admission
			Levelling
			Fellows
		Regulation	Co-governance
			Income
			Graduation
		Titration	Graduation rate
			Degree time
Academic Support	50%	Libraries	Spaces
			Titles
			Virtual libraries
		Laboratories	Sufficiency
			Functionality
			Renovation
		Tics	Access to ICTs
			Connectivity

3.3.3. RESEARCH

This criterion addresses the contribution of universities through research, based on the creation and transfer of scientific, technological and innovation products through clearly defined and relevant policies; its disaggregation is detailed in Table 3

TABLE 3. Research (CONEA MODEL 2009)

Criterion	Weighting	Sub-criterion	Indicator
Research policies	25%	Lines of research	
		Sabbatical leave	
		Research grants	
Investigative praxis	35%	Research funds	Own
			National
			International
		Research training	Projects
			Teaching research
			Formative research

Pertinence	40%	Publications	Books
			Journals reviewed
			Unreviewed journals
		Results	

3.3.4. INTERNAL MANAGEMENT OF THE INSTITUTIONS

This axis refers to the set of policies and actions to properly manage HEIs, including in this axis several indicators as detailed in Table 4.

TABLE 4. Internal management of institutions (CONEA MODEL 2009)

Criterion	Weighting	Sub-criterion	Indicator
Organization and management	75%	Institutional policies	Affirmative action
			Graduates
		Internal management	Budget management
			Heritage
			Administrative staff
			Communication
Infrastructure	25%	Accessibility	
		Wellness spaces	
		TC Teaching Offices	

3.4. RESULTS

In the results of the consolidated evaluation report of CONEA, it can be evidenced that the Ecuadorian university is too fragmented, caused by gaps that range from normative and democratic aspects <<election of authorities and co-governing bodies>>, through the qualification and dedication of professors, deficiencies in planning and research results, to deficiencies in learning scenarios <<physical and technological infrastructure, classrooms, laboratories, libraries, etc.>>; all derived from a lack of policies and demands of the governments of the day and bad practices of planning and execution of their internal processes that lead to achieving quality standards.

The university as a result of the change of the constitution is conceived as a space conducive to the creation of science and technology, but, however, very heterogeneous models coexist between public, co-financed and self-financed, without identity in their democratic principles << designation of authorities>>, policies and procedures for admission, training and qualification of their students, and in the selection and training of its teaching staff.

As a result of the application of the model in 2009, universities are categorized into 5 types: A, B, C, D and E, having: 11 universities in Category A, which represents 16.1%; 9 universities in category B which means 13.2%; 13 universities in Category C, representing 19.1%; 9 universities in Category D, which means 13.2%; and, 26 in Category E,

which is equivalent to 38.2%. (NATIONAL COUNCIL FOR EVALUATION AND ACCREDITATION OF HIGHER EDUCATION, 2009)

After this process, an additional period of time is granted to the 26 universities categorized in E, so that through tangible institutional improvements contemplated in a strengthening plan they can reach a better category and above all achieve minimum quality standards.

The categorization of universities of the CONEA was not the only consequence, on the one hand several universities generated criticism and opposition reactions to this model and process, even some of them coming to ignore the results; But on the other hand, there were also several education centers, which instead of opposing this "quality codification" found an opportunity to correct and improve their processes and transform their management, starting with the updating of their planning, the establishment of quality policies, the creation and / or consolidation of departments or areas of internal evaluation and accreditation, as well as worrying about improving its infrastructure, strengthening its teaching staff both in training and in training (masters and doctorates), in addition to rethinking and redefining its academic programs.

This process marks a historic milestone in Ecuadorian higher education, as the "robust and untouchable system" was evaluated, categorized and with tangible consequences. But this process not only serves for the above, it makes a strong and real wake-up call for other universities to begin to discuss and build management models and development of their substantive functions that guarantee quality, in the first instance to guarantee their operation before the control body and second to be able to endorse their academic quality before society in general.

4. MODEL OF THE COUNCIL FOR EVALUATION, ACCREDITATION AND QUALITY ASSURANCE OF HIGHER EDUCATION OF ECUADOR (CEAACES) OF THE YEAR 2015

4.1. BACKGROUND AND OBJECTIVE

After the chaotic process experienced with the evaluation of CONEA: categorization of universities, CONEA is extinguished and the Council for Evaluation, Accreditation and Quality Assurance of Higher Education of Ecuador (CEAACES) is born, with the main objective of favoring the permanent and sustained improvement of the quality of higher education.

The fundamental purpose of CEAACES was to consolidate accreditation processes to publicly guarantee the quality of higher education

institutions, with an orientation towards sanitation and improvement of the system.

It should also be noted that CEAACES in addition to the processes of evaluation and accreditation of universities develops models and executes processes of evaluation of careers (generic), and specific for the careers considered of public interest of the State: medicine, nursing, dentistry and law.

The CEAACES model, based on the principle of quality contemplated in Article 93 of the Organic Law of Higher Education (LOES) of 2010, which states that the principle of quality of the higher education system consists of:

... the constant and systematic search for excellence, relevance, optimal production, transmission of knowledge and development of thought through self-criticism, external criticism and permanent improvement (Government of Ecuador, 2010, Art. 93).

Its first debates before the structuring of the model focus on the definition of quality, understood as:

... The degree to which, in accordance with their mission, framed in the purposes and functions of the Ecuadorian higher education system, they achieve the objectives of teaching, research and linkage with society, through the execution of processes that observe the principles of the system and seek permanent improvement. (CEAACES, 2015, p. 4).

The primary objective of the model is directly related to article 100 of the LOES of 2010, allowing to determine the performance of the HEIs according to the quality attributes raised, in addition to evaluating the concordance between their processes and actions with the mission, vision, objectives and institutional purposes, in order to certify to society the institutional academic quality.

Its planning for the evaluation of universities includes the following stages: i) self-evaluation as a requirement of accreditation, ii) external evaluation for accreditation purposes, iii) categorization, iv) accreditation, and v) quality assurance.

4.2. CHARACTERISTICS

The CEAACES model compared to the CONEA model changes its essence, going from a quantitative model in the vast majority of indicators to a hybrid model (qualitative and quantitative), adding to it specific characteristics such as: type of indicator, evaluation periods, calculation formulas, standard, description of the standard and evidence; using for the weighting of indicators the "Multicriteria Decision Method (MDM) ".

The model also contemplates a particularity, which allows the delivery of preliminary reports and a phase of request for rectifications and / or

appeals by higher education institutions, all with the intention of making the process transparent by CEAACES.

The model uses six evaluation criteria: i) organization, ii) academia, iii) research, iv) linkage with society, v) resources and infrastructure and vi) students; These in turn are divided into fifteen sub-criteria, which in turn are composed of 44 variables to measure the performance of universities. For quantitative variables, the model works with utility curves determined by the control body; in the case of qualitative variables, they are also quantified according to parameters given by the group of evaluators according to defined standards: i) satisfactory: meets the defined standard, ii) moderately satisfactory: partially meets the defined standard, and, iii) deficient: does not meet the defined standard.

The evaluation process includes the following stages: i) definition of the model, ii) socialization of the model, iii) structuring of the computer platform, iv) call, selection and training of peer evaluators , v) establishment of schedule of on-site visits, vi) execution of visits to each of the universities, vii) analysis and evaluation of sources of information, viii) generation of the preliminary report by peer evaluators, ix) consistency analysis and validation of reports by the CACES, x) delivery of preliminary reports to the HEIs, xi) appeal phase and rectifications, and xii) delivery of final report to the universities.

4.3. MODEL STRUCTURE

The CEAACES presented three variants of the model according to its time and purpose, but above all product of the evolution of the higher education system and global trends in the definition of substantive functions; Thus, in 2012 the model aims to evaluate HEIs located in category E, and contemplated 4 criteria: i) academia with a weight of 45%, ii) pedagogical support with a weight of 20%, iii) curriculum and research with a weight of 15% and iv) institutional with a weight of 20%. Then the model was reformulated in 2013, whose objective was the evaluation for the categorization of the HEIs and now contemplated 5 criteria: i) academia with a weight of 40%, ii) academic efficiency with a weight of 10%, iii) research with a weight of 20% and iv) institutional organization with a weight of 10% and v) infrastructure with a weighting of 20%. Finally, the one executed in 2015, with the objective of recategorizing the HEIs and is broken down into 6 criteria: i) academia with a weight of 36%, ii) students with a weight of 12%, iii) research with a weight of 21%, iv) institutional organization with a weight of 8%, v) resources and infrastructure with a weight of 20% and vi) linkage with society with a weighting of 3%.

The last current model of the CEAACES of the year 2015, is the one that is considered to characterize them, since it optimizes the previous models based on the metrics obtained and the feedback of the actors of the higher education system. The model disaggregates the general

criteria and subdivides them into several levels, contemplating subcriteria that describe conceptual aspects with greater specificity, and these in turn are measured through evaluation indicators. The indicators, on the other hand, contemplate specific attributes that are evaluated through the evaluation standards that in turn personify the desired qualities of the different processes of the university, the resources assigned and the goals achieved.

The CEAACES in its latest model defined the quality standards, establishing the desirable values of the Ecuadorian higher education system, the same that derive from the analysis of the national context, and that is constituted as the first achievement of the accrediting body, to achieve excellence (CEAACES, 2015). It contemplates the criteria: academy ii) students, iii) research, iv) institutional organization, v) resources and infrastructure and vi) linkage with society.

4.3.1. CRITERION: ORGANISATION

Organization is the criterion that contemplates all the institutional processes that allow to create, control and evaluate the achievement of the institutional objectives taking into account the articulation with the current norms considering the current normative framework and the principles of quality (CEAACES, 2015).

This criterion is composed of 3 sub-criteria: institutional planning, institutional ethics and quality management. The detail is described in Table 5.

TABLE 5. Internal management of the institutions (CEAACES 2015)

Criterion	Weight	Sub-criterion	Indicator	Weight
Organization	8%	Institutional planning	Strategic Planning	1%
			Operational Planning	1%
		Institutional Ethics	Accountability	1%
			Ethics	1%
		Quality management	Policies and procedures	1%
			Information systems	0,80%
			Academic offer	0,80%
			Information for evaluation	1,40%

4.3.2. CRITERIA: ACADEMIC

This criterion makes it possible to evaluate the training, working conditions and recruitment of teachers; tending to ensure the execution of its activities for the proper development of substantive functions; It considers: the time of dedication: (full, medium or partial), their level of training (specialist, master's and doctorate) and scenarios necessary to ensure their professional career. The structure of the criterion can be seen more precisely in Table 6.

TABLE 6: Academy (CEAACES 2015)

Criterion	Weight	Sub-criterion	Indicator	Weight
Academy	36%	Graduate	Postgraduate Training	8%
			CT Doctors[1]	6,50%
			Postgraduate in Training	1,60%
		Dedication	Students per Teacher TC	2,70%
			TC Ownership	2%
			TC Class Hours	1,40%
			MT/TP [2]Class Hours[3]	1,20%
		Teaching career	Ownership	1,30%
			Teacher Evaluation	0,70%
			Women's Directorate	0,80%
			Teaching Women	0,80%
			TC Remuneration	7,20%
			Remuneration MT/TP	1,80%

4.3.3. CRITERION: RESEARCH

Through the research criterion, it allows to verify the objectives, plans, projects, resources and results (books, book chapters, presentations, scientific articles, etc.) of the research of the HEIs, that is, the institutionalization of the substantive research function. The detail of the composition of the research criterion is detailed in Table 7.

TABLE 7. Research (CEAACES 2015)

Criterion	Weight	Sub-criterion	Indicator	Weight
Research	21%	Institutionalization	Research planning	3%
			Management of research resources	1%
		Research results	Scientific production	9%
			Regional production	2%
			Peer-reviewed books or book chapters	6%

4.3.4. CRITERION: RELATIONSHIP WITH SOCIETY

The criterion of linkage with the community was born to respond to the conception of the university as a public good, allowing to solve the problems that afflict society through the link with the academy. Thus, the criterion includes the articulation between strategic planning (institutional objectives), resource management, for the planning and execution of linkage plans and projects. The specificity of the criterion structure is shown in Table 8.

[1] *TC: Full-Time Faculty*
[2] *MT: Part-Time Teachers*
[3] *TP: Part-time doentes*

TABLE 8. Linkage with society (CEAACES 2015)

Criterion	Weight	Sub-criterion	Indicator	Weight
Connection with society	3%	Institutionalization	Engagement Planning	1,5%
			Management of resources for linkage	0,5%
		Results	Outreach programmes and projects	1%

4.3.5. CRITERION: RESOURCES AND INFRASTRUCTURE

This criterion allows to guarantee the adequate conditions of the bibliographic resources, teaching-learning platforms and the physical and technological infrastructure as support for the development of teaching, both in quality (benefits and accessibility) and quantity according to the members of the educational community (CEAACES, 2016).

TABLE 9. Resources and Infrastructure (CEAACES 2015)

Criterion	Weight	Sub-criterion	Indicator	Weight
Resources and Infrastructure	20%	Infrastructure	Quality of classrooms	3,0%
			Wellness spaces	3,0%
			Offices to TC	3,0%
			MT and TP Rooms	1,2%
		TIC	Connectivity	1,8%
			Academic Management Platform	2,0%
		Libraries	Library Management	1,5%
			Books per student	2,5%
			Student spaces	2,0%

4.3.6. CRITERIA: STUDENTS

Through the student criteria, the articulation between the policies, procedures and actions planned and executed by the HEIs that allow the successful achievement of learning outcomes in the different careers is verified; It includes the admission processes up to the degree. The detail of the criterion is contemplated in Table 10

TABLE 10: Students (CEAACES 2015)

Criterion	Weight	Sub-criterion	Indicator	Weight
Students	12%	Conditions	Admission to postgraduate studies	1,5%
			Student Welfare	1,5%
			Affirmative Action	2,0%
		Academic Efficiency	Grade retention rate	2,5%
			Bachelor's degree fee	2,5%
			Postgraduate degree fee	2,0%

4.4. RESULTS

The first great result of CEAACES, is to have been able to continue and sustain the accreditation, evaluation and quality assurance processes after the disappearance of CONEA and despite the criticism and

resistance of several important groups. One of the main actions carried out is the planning and execution of the evaluation of the universities categorized E, who were granted a deadline to make and execute the recommendations established in their improvement plan, as a result of which it is concluded that fourteen centers of higher education did not exceed the minimum quality conditions and were cataloged as "not acceptable", determining its definitive closure. This decision led to the emergent structuring of a contingency plan to relocate the student population in accredited universities, so that they can continue their studies. (Cevallos & Romero, 2017).

On the other hand, a great result is to have been able to consolidate and optimize the evaluation model, in addition to sustaining and strengthening the training of human talent to lead the accreditation processes, and above all to generate a culture of quality in universities through the accompaniment to processes of: self-evaluation, improvement and strengthening plans.

In the first process of categorization of universities is obtained: five in category A which represents 5.7%, 24 in category B, which means 34.7%, 18 in category C representing 26%, 9 in category D which means 13.04% and 14 in category E (were closed on April 12, 2012) 20.2% (CEAACES, 2016); This moment of higher education is considered the most critical moment in Ecuador given the closure of universities, uncertainty of students and teachers of these houses of study, criticism of academics, press and several important sectors of the country.

After this process, the HEIs located in categories from A to C are urged to structure in a participatory manner and in line with their strategic planning an improvement plan that allows them to increase or at least maintain their quality levels. On the other hand, the HEIs categorized in D are obliged to institutionalize a strengthening plan that results in a sustained improvement in the short and medium term, based on the Deming cycle and in coherence to their educational project, in addition to this, it contemplates a special particularity for these universities, which have a defined period of time to request their recategorization.

After approximately three years, the new process of evaluation and categorization of Ecuadorian universities is carried out, resulting in: seven universities in category A which represents 13.2%, 27 in category B (CEAACES, 2016), which means 50.9%, 19 in category C representing 26%, there are no longer universities in category D. This leads to the conclusion that there was a sustained improvement in the quality of the higher education system given a quantitative improvement in almost all HEI indicators.

5. MODEL OF THE COUNCIL FOR QUALITY ASSURANCE OF HIGHER EDUCATION (CACES) OF THE YEAR 2019

5.1. BACKGROUND AND OBJECTIVE

The CACES arises to respond to the new LOES 2018 called Organic Law of Reformed Higher Education (LOESR), where it establishes the "Interinstitutional System of Quality Assurance (SIAC)", which as a fundamental purpose establishes the articulation of public higher education organizations: CES and CACES.

The 2010 LOES is based on four processes: evaluation, accreditation, quality assurance and categorization; however, the concept of quality assurance was conceived in relation to the levels of efficiency and effectiveness in the management of HEIs. On the other hand, the LOESR of the year 2018 states that the quality assurance process contemplates and articulates the processes of self-evaluation, external evaluation and accreditation, understanding the concept of quality assurance as an integrated system between higher education institutions and higher education control and planning bodies. In addition to this, the concept and procedure of categorization is suppressed and greater relevance is given to the self-evaluation process, as the heart of the quality assurance system, that is, this becomes the central objective and no longer a process based on continuous improvement based on the self-evaluation of careers.

The CACES model establishes three main axes: i) clear differences declared between evaluation processes with and without accreditation purposes, ii) strengthening of self-evaluation as a participatory process of self-reflection that results in the permanent improvement of HEIs, and iii) the participation of universities with the involvement of all actors that contribute to quality assurance.

The objective of the CACES model is directly articulated with the principle of quality declared in the LOESR, and is to: "Contribute to the quality assurance of the Higher Education System of Ecuador, enhancing the organic and synergistic articulation between the internal and external assurance processes of higher education institutions" (CACES, 2019, p. 30), as well as declares in its model that its objective is to evaluate for accreditation purposes to the HEIs in a balanced way the development of the three substantive axes: teaching, research and innovation and linkage with society supported in an axis of institutional conditions, emphasizing the non-categorization of the same, since it conceives that the ultimate goal of the system is the quality of the HEIs but not the accreditation.

5.2. CHARACTERISTICS

As one of the characteristics, the activities contemplated in its planning are emphasized, since they are diverse and cover both institutions in general (institutional evaluation) and careers of public interest (career

evaluation), The activities that stand out most are: i) reformulation of the evaluation model of universities and technical and technological institutes, ii) planning and execution of the evaluation process for the purpose of accreditation of the HEIs, iii) training and qualification of peer evaluators, strengthening of the GIES computer platform .

The main element that characterizes the CACES, is that it constitutes a quality assurance system; and according to the (CACES, 2018) This principle entails:

[...] the collaborative and permanent action carried out by the State and the institutions of higher education themselves, aimed at achieving an optimal harmonious development of the system and of each of the institutions that compose it, in order to give an adequate fulfillment to the mission that society has entrusted to them [...] Through quality assurance, it is intended to adequately satisfy the needs of the country, be more efficient in the use of available resources and deliver a satisfactory service, which guarantees citizens all (CACES, 2018, p. 19)

The model is based on the following principles:

i. Conceive of higher education as a right and a social public good; With this, the State undertakes to guarantee equal opportunities for access, training, permanence and qualification of those who opt for it;

ii. Education with relevance; that is, the HEIs through their academic offer must respond to national planning, to the expectations and needs of society and to scientific and technological development.

iii. As the Higher Education System of Ecuador is part of the National System of Inclusion and Social Equity, it is also governed by the principles of: universality, equality, equity, progressivity, solidarity, interculturality and non-discrimination" (Assembly of Ecuador, 2018, Article 12), and these principles in turn are consistent with the Sustainable Development Goals, specifically Goal No. 4: "Ensure inclusive, equitable and quality education and promote lifelong learning opportunities for all" (United Nations, 2015).

iv. Quality, this principle is expressly indicated and contemplated in the LOESR, where it describes as:

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 (Assembly of Ecuador, 2018, Art. 93).

One of the main strengths of this model is that there were processes of socialization and training of the structure and characteristics of the model to the accreditation and evaluation teams of the different universities, which in a certain way allowed the HEIs to prepare and adequately plan their actions to be able to accredit.

The model compared to that of CEAACES changes radically, from a quantitative approach to a qualitative approach, from understanding criteria with their various indicators, calculation formulas and utility curves, to establishing axes in relation to substantive functions under three dimensions: planning, execution and results, all supported by an axis called institutional conditions. Each of the standards covers fundamental elements and sources of information.

5.3. MODEL STRUCTURE

The CACES model contemplates 4 axes: teaching, research and innovation, linkage with society and institutional conditions, additionally contemplates a set of projective standards that will be evaluated not for accreditation purposes, but with the purpose of having a baseline for future processes.

For each of the standards, it contemplates five scales: i) Satisfactory compliance (it reaches all the components of the fundamental element). (ii) Approximation to compliance (achieves most of the components of the building block), (iii) Partial compliance (achieves half of the components of the building block), (iv) Insufficient compliance (achieves too few components of the building block) and (v) Non-compliance (fails to meet any of the components of the building block) (CACES, 2019).

The conditions for accreditation are:

The minimum condition for accreditation is that the institution achieves a minimum of ten standards assessed with a combination of "satisfactory compliance" or "approximation to compliance". The remaining ten may have a varied combination between the four levels of the assessment scale – except "non-compliance" – with the maximum eight standards valued with "partial compliance" and maximum two with "insufficient compliance". (CACES, 2019, p. 51)

The axes and their disaggregation both in standards and in the dimension to which they correspond are detailed below

5.3.1. TEACHING AXIS

The teaching axis includes two components: teaching staff and students, and covers all the processes that allow the construction of knowledge and development of the capacities and abilities of students through the development of activities of the teaching-learning process.

The terminal objective of this axis lies in guaranteeing the achievement of the learning results of the different careers that make up the training offer of the HEIs that allow the transformation of their environment. Shaft disaggregation is described in Table 11

TABLE 11. Teaching Axis (CACES, 2019)

Standard	Dimension	Key elements	Type of Indicator
Planning of teacher processes	Planning	Regulations and/or procedures for teacher selection processes.	Qualitative
		Regulations and/or procedures for the processes of tenure and promotion of teachers.	
		Postgraduate academic training plan for teachers.	
		Teacher training plan according to their academic offer.	
		Regulations and / or procedures, for the integral evaluation of the performance of the academic staff.	
Execution of teacher processes	Execution	Selection of its teaching staff according to the required profile, in coherence with its academic offer, taking into account their experience and training.	Qualitative
		Distribution of the activities of the teaching staff in coherence with their academic offer, research activities and academic management.	
		Execution of the processes of tenure and promotion of teachers in accordance with the regulations.	
		Execution of postgraduate academic training plans and teacher training.	
		Execution of the processes of integral evaluation of the performance of the teaching staff, which covers their professional and ethical actions.	
Ownership of undergraduate and postgraduate teaching staff)	Results	Have tenured professors to guarantee the development of substantive functions in the long term (Calculation formula).	Quantitative
Teacher training	Results	Have teachers with additional academic training to the fourth level required, (Calculation formula).	Quantitative
Planning of student processes	Planning	Regulations and / or procedures, for the processes of admission and / or leveling of the student body.	Qualitative
		Regulations and / or procedures, for the monitoring of student performance and academic tutoring of students.	
		Regulations and / or procedures, for the tutoring of the processes of qualification of the students.	
		Regulations and / or procedures, for the integration of students in the academic activities of the substantive functions.	
		Regulations and/or procedures, to promote student participation in university co-governance spaces.	

Execution of student processes	Execution	Execution of the processes of admission and / or leveling of students according to demand, infrastructure capacity and teachers.	Qualitative
		Monitoring student performance Taking actions to improve student retention and degree rates.	
		Execution of the tutoring processes for qualification by the teaching staff, and these have time allocation, spaces and resources required.	
		Integration of students in academic activities of the substantive functions, through teaching assistantships, research projects and linkage.	
		Proposals of the representatives of the student body in the co-government.	
Qualifications of students	Results	The institution achieves that its students complete their careers and graduate within the established period (Calculation formula)	Quantitative

5.3.2. RESEARCH AND INNOVATION AXIS

The research axis allows, through the articulation with strategic planning, the axes of teaching and linkage, and depending on the academic domains of the HEI, to strengthen scientific knowledge and intercultural and ancestral knowledge to solve the problems that afflict society.

In this axis, the congruence between the academic offer, plans and lines of research that land in the projects and research groups is evident, these must be translated into scientific production, books, book chapters, patents, prototypes, etc. (Moscoso Bernal et al., 2022) The detail of this axis is shown in Table 12.

TABLE 12. Research and Innovation Axis (CACES, 2019)

Standard	Dimension	Key elements	Type of Indicator
Planning of research processes	Planning	Planning of research programs and/or projects.	Qualitative
		Regulations and/or procedures for the selection, monitoring and evaluation of research programmes and/or projects.	
		Regulations and/or procedures for the allocation of economic resources for research.	
		Regulations and/or procedures for the recognition of teaching staff and students for their research results.	
		Regulations and/or procedures to guarantee ethics in research activities.	
Execution of research processes	Execution	Application of arbitration procedures for the selection of research projects	Qualitative
		Execution of resources from internal and/or external funds for the development of research	
		The programs and / or research projects have the assignment of workload	

		for teachers and the participation of students.	
		Monitoring the implementation of ethical procedures in research activities	
		Recognition of the achievements of research actors	
Results of academic and scientific production	Results	Production of literary works, books and book chapters, industrial property, artistic production, design, prototypes and plant varieties	Qualitative
		Published peer-reviewed books and book chapters	
Publication of articles in indexed journals	Results	The faculty of the public institution articles in journals indexed in databases (Calculation formula)	Quantitative

5.3.3. AXIS LINK WITH SOCIETY

The objective of this axis is to create exchange between academia and society based on their academic domains of the HEIs, in this way answers are given to the problems and needs that afflict the environment; This axis is deployed through programs and / or projects based on: community service, specialized services, continuing education, cooperation and development networks, consultancies, etc.

The articulation of teaching is key with the link with society for the integral formation of the student body, which allows the complement between theory and practice, the disaggregation of this axis is described in table 13.

TABLE 13. Axis Linkage with Society (CACES, 2019)

Standard	**Dimension**	**Key elements**	**Type of Indicator**
Planning of linking processes	Planning	Planning of projects linked to society linked to their academic domains	**Qualitative**
		Planning of projects to link with society, in coherence with its educational model, academic domains, national plans and social requirements	
		Planning of the monitoring and evaluation of the projects of linkage with society for what defines a methodology	
		Strategies to ensure the development of pre-professional practices	
		Participation of teachers, students, and / or required personnel, allocation of economic resources for the execution of projects linking with society.	
Execution of research processes	Execution	Execution of projects linked to society linked to academic domains	**Qualitative**
		Responsible bodies that monitor and evaluate projects linking with society based on a defined methodology	
		Execution of pre-professional practices within the framework of projects of linkage with society and its labor component	
		Involvement of teachers in projects linking with society with workload and students participate according to their career	
		Execution of the budget allocated for projects linking with society as planned	
Results of	Results	Evaluation of the projects of linkage with society, allow to verify the	**Qualitative**

academic and scientific production	fulfillment of the proposed objectives.	
	The evaluations of the projects of linkage with society show that they have responded to the needs of the environment, which is corroborated by participating external actors	
	The mechanisms developed ensure that the projects of linkage with society contribute to the teaching-learning process, to the development of lines and / or research projects.	
	The results of the follow-up to the graduates, contribute to the feedback of the academic offer, to the generation and / or strengthening of links with the environment	
	The results of the link with society contribute to the generation of new projects, and / or the reformulation of these in their various fields of action	

5.3.4. AXIS INSTITUTIONAL CONDITIONS

This axis includes a set of scenarios, processes, and essential resources to support the development of substantive functions and to guarantee the operation of the HEIs, it is made up of 6 standards that include material aspects: physical and technological infrastructure, university welfare services; organizational aspects such as: strategic and operational planning, quality management; and axiological and social aspects such as: equal opportunities.

This axis does not contemplate dimensions, but includes standards with their respective fundamental elements and a set of information sources. The detail of the standards is expressed in Table 14.

TABLE 14. Axis Institutional Conditions (CACES, 2019)

Standard	Key elements	Type of Indicator
Strategic and operational planning	Regulations and/or procedures, approved and in force, to plan their institutional development strategies.	Qualitative
	Body responsible for developing, monitoring and evaluating, at least annually, strategic and operational planning.	
	Strategic planning establishes guidelines for the continuous improvement of substantive functions; and operational planning provides for the financial and human resources necessary to implement the programme.	
	The strategic and operational planning integrates findings from the self-evaluation, external evaluations and is elaborated with the participation of the university community.	
	The institution applies strategies to promote the participation of the university community in institutional strategic and operational planning.	
IT infrastructure and equipment	Planning and monitoring of the construction, equipment, maintenance, security and cleaning of the institutional infrastructure.	Qualitative
	Classrooms with physical, technological and connectivity conditions necessary for the development of teaching-learning activities.	
	Exclusive workstations for full-time teachers and collective for part-time and part-time teachers, with physical, technological and connectivity conditions.	

	Sanitary batteries and sinks for men and women, sufficient, functional, clean, in good condition and with the necessary supplies.	
	Computer platform available and accessible to the university community for the management of academic and administrative processes.	
Libraries	Regulations, procedures and specialized personnel for the technical management of libraries	Qualitative
	Conservation and updating of the physical and digital bibliographic collection, including bibliographic resources in universally accessible formats	
	Physical and digital bibliographic collection consistent with the academic offer and is complemented by access to multidisciplinary and specialized scientific databases.	
	Physical libraries have individual and collective workstations, internet connectivity, lighting and environments appropriate for study.	
	Computer management system that facilitates remote access to the catalog and bibliographic resources and allows the use of physical and digital bibliographic resources	
Internal quality management	Regulations and/or procedures for quality assurance, which promote self-reflection and continuous improvement of the different academic and administrative processes.	Qualitative
	Bodies responsible for planning and monitoring quality assurance processes, including administrative management.	
	Institutional self-assessment processes of their careers and programs, to identify strengths and weaknesses that allow decisions to improve and ensure quality	
	Regulations and/or procedures for the management of information, so that it is organized, updated and accessible for quality assurance processes.	
	Regulations and/or procedures for documentary and archival management to guarantee the safekeeping, organization and availability of documentation.	
Student Welfare	Application of regulations and/or procedures to promote rights, prevent discrimination and ensure the well-being of students.	Qualitative
	It provides and disseminates vocational and professional guidance services, medical, dental, psychological and/or health insurance for students.	
	Multifunctional physical spaces of universal accessibility, intended for the development of cultural, sports, social and recreational activities of the student body	
	Drug and alcohol prevention projects	
	Regulations and protocols to prevent, attend and accompany cases of violence, sexual harassment, bullying and provides assistance to those who report these cases.	
Equal opportunities	Regulations and/or procedures that guarantee equal opportunities in the access, permanence and qualification of students, in the selection and exercise of teaching and in the appointment and hiring of employees and workers.	Qualitative
	Identification of characteristics of identity or socioeconomic condition of the members of the university community susceptible to generate discrimination.	
	Principles of gender parity and alternation in the election of academic authorities, and in the designation of academic and administrative authorities.	
	Regulations and/or procedures to promote and guarantee the equitable participation of historically excluded groups, at all levels and instances.	
	Regulations and/or procedures for the allocation of scholarships and financial aid.	

5.3.5. PROJECTIVE STANDARDS

The projective standards, although it is true that they are not quantified for the accreditation process, aim to raise a baseline of future purposes of higher education, comprising seven standards: i) articulation and synergies between substantive functions and between disciplines, ii) social use of knowledge, iii) innovation, iv) internationalization, v) university welfare, vi) inclusion and equity and vii) interculturality, Knowledge dialogue and environmental sustainability (CACES, 2019).

According to CACES, including projective standards in evaluation responds to a future perspective, which tends to promote quality with a medium or long-term perspective.

Each of the projective standards includes: i) description and/or definition of the standard, ii) the fundamental elements that comprise each standard, and iii) the description of the sources of information to assess the standard.

5.4. RESULTS

In figures the result is very encouraging, of the 55 universities evaluated 52 of them were accredited, representing 94.5%, and only 3 were not accredited, representing 5.5%, in addition to this, the HEIs that failed to accredit are required to formulate and implement an improvement plan of up to two years, to be able to be evaluated again.

The result beyond statistics and the number of accredited institutions, the main achievement lies in the new orientation and purpose of the model in correlation to the last modification of the regulations.

It is necessary to emphasize that, the Ecuadorian university has evolved favorably and much of these achievements is due to the policy and model implemented by the CACES, this has led to the consolidation of quality assurance departments in each of the HEIs, who are responsible for leading the internal processes of: self-evaluation in a participatory manner and evaluation with and without accreditation purposes; This has resulted in the generation of internal self-reflection, which have influenced the timely and adequate decision-making by the authorities based on the recommendations arising from these processes, which has allowed to lead to the permanent improvement of both qualitative and quantitative quality in the universities strengthening the culture of quality.

It cannot fail to recognize that the advances in quantifiable indicators of Ecuadorian universities have been the product only of the effort of CACES, rather it is the accumulation of efforts from the first trials and attempts of CONUEP, through mandate 14 and the evaluation process of CONEA, to its continuation with CEAACES through evaluation. categorization and until the closure of universities, and finally consolidation by CACES.

Another tangible result of CACES is to contribute to the consolidation of the evaluation processes of careers of public interest: medicine, dentistry, nursing and law, for which the specific evaluation models of each career have been updated in accordance with the public policy derived from the LOESR, which include: standards, fundamental elements, sources of information, calculation formulas, etc. Likewise, the professional room tests for the aforementioned races have been planned and executed; This has undoubtedly led to improving the academic processes of public interest careers, thus also favoring the establishment of a culture of quality.

6. COMPARATIVE ANALYSIS

Through the consolidation of a comparative table of each of the models of the quality control agencies of higher education in Ecuador, it is intended to summarize and establish the main characteristics, similarities and differences of each of the models according to their time, thus allowing to evidence the consolidation and maturity of the process and system.

For this, certain variables have been used such as: year of execution of the process, total number of HEIs, number of HEIs evaluated, the category obtained (if applicable), type of model, process and characteristics, the criteria or axes evaluated with their respective weightings; this is intended to summarize the particularities and results of each evaluation model in Ecuador.

TABLE 15. Comparative analysis of accreditation models (CACES, 2019)

YEAR	INSTITUTION	TOTAL IES	HEIs EVALUATED	MODEL	PROCESS AND FEATURES	CATEGORY					CRITERIA	WEIGHT
						To	B	C	D	And		
1989	CONUEP	N/A	21	Quantitative	It is the first process carried out in Ecuador, and as indicated Walls (2017) It's a *"Failed diagnostic process"*, also referred to as *"Hidden Report"* since it was never published *"...remained on government desks and only a summary was accessible (p. 25)."* This process shows that there is no higher education system, there are only independent universities that share certain characteristics in administrative management, and converge certain academic processes.	Not applicable					Institutional Organizational Academician	N/A
2002	CONEA	71	5	Quantitative	The institutional evaluation	Not applicable					Teaching	N/A

to 2008					processes are voluntary, that is, they were only executed at the express request of each HEI. It has two objectives: to ensure a level of quality based on the principles of the LOES of the year 2000 and the improvement of the quality of institutions, careers and programs (graduate, distance education). He never gained recognition from society or the academic community.						Research Social bonding Administrative Management	
2009	CONEA	71	68	Quantitative	First evaluation of CONEA, follows the change of constitution of 2008 (Mandate 14), and its main objective is to purify the higher education system and give quality assurance to society of the higher education system	11	9	13	9	26	Students and environment Research Management Management	35% 15% 9% 9%
2012	CEAACES	26	26	Quantitative	This evaluation has a specific purpose: to evaluate the universities and polytechnics categorized E, according to the CONEA report of 2009, the same ones that had to build an improvement plan. It does not apply categories in this process, only the HEIs that meet the minimum quality conditions are considered, this process leads to the closure of 14 universities. The evaluation model is updated both in criteria and their weights.						Academy Pedagogical support Curriculum and Research Institutional Management	45% 20% 15% 20%
2013	CEAACES	55	54	Mixed: Qualitative and Quantitative	Evaluation of universities and polytechnics; After the closure of the 14 universities, the governing body adjusts the accreditation model and carries out a new evaluation in order to categorize them, establishing four categories: A, B, C. and D	5	23	18	8	N/A	Academy Academic efficiency Research Organization Infrastructure	40% 10 20% 10% 20%
2015 to 2016	CEAACES	59	21	Mixed: Qualitative and Quantitative	This process can be classified into two phases: i) mandatory for universities that were not part of the previous process (University of the Armed Forces (ESPE) case), ii) optional for universities that require recategorization (improve the category obtained) and iii) mandatory for Category D universities that were required to build an institutional	8	28	19	0	N/A	Academy Students Research Institutional organization Resources and infrastructure Connection with society	36% 12% 21% 8% 20% 3%

					strengthening plan that results in an improvement in management and their substantive functions,						
2019	HUNTS	55	55	Qualitative	As a result of the creation of the CACES, the principle of quality assurance began to be established as the purpose of external evaluation processes for accreditation purposes, but not categorization, the self-evaluation processes of the HEIs were consolidated as a fundamental part of the continuous improvement of universities. The model has a radical change, it goes from being a mixed model (qualitative – quantitative) to being a qualitative model, the same that is built and enriched with the participation of all the universities of the country. It contemplates four axes and has standards that cover three dimensions: planning, execution and results. In addition, it takes into consideration seven projective standards that are not considered for accreditation, but aim to raise a baseline for future evaluations.	*Categories do not apply, there are only two accredited and non-accredited conditions*				Teaching (7 standards) Research (4 standards) Linkage with society (3 standards) Institutional conditions (6 standards) Projective standards (total of 7),	N/A

7. DISCUSSION AND CONCLUSIONS

Referring to the times of the accreditation processes, through a historical tour, it can be concluded that the evaluation and accreditation processes in Ecuador date from 1989, when CONUEP carried out the first evaluation of universities and polytechnic schools due to the proliferation of private HEIs, the weakening of public HEIs and the little interest of previous governments to regulate and control the quality of higher education. This process was voluntary and had very little recognition from the academic community and society at large.

After that and with the promulgation of the LOES of the year 2000, the CONEA is created, an organization that takes almost two years to conform, once formed, establishes an evaluation model and generates a voluntary accreditation process of the universities, and like the CONUEP

fails in its attempt, being questioned by several sectors, without being able to consolidate the evaluation process to the HEIs.

As of 2008, there is a turning point in Ecuadorian higher education, derived from the change of constitution and Mandate 14, where the state institutionalizes accreditation processes and consolidates its role as the guarantor of the higher equation system. The objective is to refine the higher education system and give quality assurance to society of the higher education system, after the execution of the process establishes five categories of universities.

After that, CEAACES emerges, which continues with the work undertaken by CONEA, and consummates the purification of the higher education system through a new categorization of universities including the closure of fourteen of them due to the "lack of academic quality". At the same time, it updates the accreditation models, strengthening the experiences of previous processes and institutionalizes the evaluation of careers of public interest.

As of 2018, and with the creation of CACES, there is a new moment of accreditation systems, where the model radically changes and consolidates the system under the principle of quality assurance, its university evaluation process is the most current, contemplating very flattering results, since 52 of the 55 HEIs were accredited. The model contemplates four axes: teaching, research, link with society and institutional conditions, based on three dimensions: planning, execution and results. It also establishes quality assurance plans in all universities, so that, through continuous and systematic processes of self-evaluation, they generate reflection within the higher education institutions and lead to timely and appropriate decision-making.

Currently, more than a decade after the formal advent of these processes, and according to criticism from locals and strangers, Ecuador already has a consolidated system of accreditation and quality assurance, which, however, the successes are numerous, there are still marked weaknesses, but it has allowed to generate experiences and has acquired a trajectory which has led it to reach a degree of maturity of the processes of Evaluation and accreditation.

The Ecuadorian university has taken firm and important steps with regard to the consolidation of the long-awaited "university educational quality", product of the impulse of public policy and regulations, on the one hand, but also by constant efforts of a significant improvement from the management, governance and academy of the universities; Among which stand out:

i) Greater level of education and training of teachers with permanent programs Financial aid and scholarships to pursue their postgraduate studies both masters and doctorates, changing the vision and practically consolidating the hypothesis that there is a direct relationship between

the time, quality and level of teacher training with the probability of success in the teaching-learning processes by the university authorities, Understanding this quality axis as an investment rather than an expense.

ii) Permanent improvement of the teaching-learning processes through the integral evaluation of university teachers, which aims to provide feedback to the educational task and timely correct deviations found through processes of training, training, affinity and relevance of teacher training (Moscoso Bernal et al., 2021)

iii) Articulation of strategic and operational plans with quality standards in universities, which has resulted in the establishment of improvement plans, strengthening and quality policies in the HEIs.

v) Efficiency and effectiveness of administrative processes that support substantive processes and functions: teaching, linkage with society and research, contributing to the establishment of comprehensive quality management models (Moscoso et al., 2021).

vi) Constant concern in the permanent improvement of the systems of: leveling, admission, training, graduation, degree and follow-up to graduates that guarantee not only efficiency and effectiveness, but also quality and satisfaction on the part of students and the community in general.

vii) Development with high levels of research growth, creating and readjusting lines, programs, projects, groups and research centers, which have resulted in an important and sustained increase in books, book chapters and scientific articles, but more than those indicated is on the way to establish relevant research and consolidate a teaching-research articulation that allows solving or helping to solve the problems that afflict society from the academy.

viii) Migrate the link with the community, previously understood as welfare projects, to become a substantive function of higher education, which responds to the link and link between academia and society through programs and projects with the participation of teachers and students that generate a significant impact on society, and that, respond in the first instance to the needs of the environment, but also respond and give an outlet to the professional profiles declared in undergraduate careers and postgraduate programs.

ix) Permanent improvement of the physical and technological infrastructure as an essential part of the educational work and permanent support of the teaching-learning processes.

x) Establishment of departments of internal quality management, evaluation and / or accreditation, as strategic arms of university management, which generate serious, periodic and self-reflective processes of self-evaluation and permanent evaluation in the face of

national or international accreditation processes and certifications of educational quality.

xi) Strengthening of actions and activities aimed at university welfare, aimed at all members of the educational community that allow equal opportunities through scholarships and affirmative action policies, in addition to the development of extracurricular activities for a comprehensive education.

xii) Articulation between strategic, operational, quality management and the processes that contemplate the substantive functions: teaching, linkage with society and research, supported by the management of: human, administrative, financial, technological talent, etc., that is, leaving aside the conception of isolated plots of educational management and analyzing it as an integrated system to university management, that is, that any action or execution of an activity or process is reflected in institutional planning and generates important results for HEIs, generating institutional identity and recognition by society.

With all the above, it can be concluded that the processes of accreditation and quality assurance in Ecuador, have contributed and significantly influenced the improvement in all academic and administrative processes and in university management models, and we can point out a before and after of the Ecuadorian university as a result of Mandate 14, Proof of this is the presence and vertiginous growth in international rankings and classifications of universities.

It is true that the task is not over and to reduce the gap with pioneer countries and leaders in the region, the system must continue to be consolidated, optimizing and building permanently and democratically the evaluation models, but the horizon is already drawn, in addition it is of vital importance to work together and generate symbiosis between the state, Regulatory body (accreditor) - University and society.

Quality, being a multidimensional and dynamic concept, must be rethought and innovated permanently, planning is the key to success, and international accreditation processes must begin to be institutionalized, both institutional and that of undergraduate careers and graduate programs.

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