

ΣΟΦΙΑ—SOPHIA

DOI: <http://dx.doi.org/10.18634/sophiaj.14v.2i.799>

Educational quality in Colombian higher education: a theoretical approach

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Article Information

Received: November 09, 2017

Revised: January 28, 2018

Accepted: June 30, 2018

How cite:

Martin, J.F. (2018) Educational quality in Colombian higher education: a theoretical approach. *Sophia*, 14 (2), 4-14



ISSN (electrónico): 2346-0806 ISSN (impreso): 1794-8932



UNIVERSIDAD
La Gran Colombia

Fundada en 1951

Sophia-Education, volumen 14 issue 2. English version

Abstract

In this theoretical article, Gowin's V heuristic tool was used to perform the review and documentary analysis on the generalities of educational quality in Colombian higher education, in order to critically explore the change that this has undergone since the Political Constitution of Colombia from 1991 until the National Development Plan 2014-2018, managing to interpret the relevant concepts in this field. On the other hand, it was obtained a theoretical foundation of the results produced in the area, which can be used as a reference in research around the subject and in the processes of qualified registration and accreditation. What is presented is a theoretical approach from the analysis of the veracity of the information and the description of the results in terms of the concept of educational quality and its antecedents in Colombian higher education; in this study, there are evidenced the limitations of the current system of assurance of quality, and the need to transform it.

Keywords: Educational quality, higher education, teacher training, educational policy, curricular reforms.

Introduction

It was applied Gowin's V heuristic tool, which is used for the documentary analysis; according to Novak and Gowin (1988), it is an instrument that is used for the critical analysis of academic texts that are later used to formalize research papers, monographs and articles. On the other hand, Guardian and Ballester (2011) suggest that this epistemological V originates from five questions to analyze works in a certain area. The five questions to apply to a text in which knowledge is presented are: What is the central question? What are the key concepts? What are the research methods used? What are the main assertions of knowledge? What are the main assertions of value? These questions summarize the construction of knowledge, in order to solve and understand a problem.

A theoretical approach to educational quality in higher education in Colombia is correct, because it must respond to the current requirements within the culture of education within the framework of the educational policies of the Colombian system. In this sense, it is generated the need to constitute a theoretical foundation that encourages the reflection of the protagonists who are related to quality processes, where the evolution, directionality and application of these concepts be evidenced, in order to generate debates in the field. This process of conceptual analysis was carried out taking into account political and normative aspects that govern higher education in the country, in order to make a theoretical approach in a given time, which allowed analyzing the change towards the contemporary, and to draw conclusions.

The legislative framework of the object of study begins with the Colombian Political Constitution

of 1991, then there was formulated the Law 30 of 1992, where the minimum guidelines for higher education were raised, which generated a reference work for the General Law of Education 115 of 1994, where the guidelines of this benefit were defined; then, it was created the Law 749 of 2002 in which higher education and the provision of services are regulated by propaedeutic cycles, passing through the laws 1188 of 2008 and the 1324 of 2009 where there were raised the requirements to obtain comprehensive qualifications, the compulsory learning of a second language and professional practice; after this, it was presented the Law 1740 of 2014, in which Decree 1075 of 2015 formulated the inspection and monitoring processes of Higher Education Institutions (IES, for its initials in Spanish). Until (arriving at) the National Development Plan 2014-2018, where an agreement is presented by the Higher Education Council (CESU) on the actions of the provision of quality educational service.

Theoretical foundation

The concept of educational quality

The change in the world economy generated an interest in the educational systems because they delineate the economic possibilities of a society, which generates a bureaucratic vision thought about the incorporation of the individuals to the society (and) marked by management, generating to this vision not only a problem in terms of coverage for expansion, but also questions in terms of quality and organization of educational systems.

Following Vásquez (2015), it is conceived that the formation of human capital required by the

labor market has been imposed as the social function that education must fulfill. Returning to the business practice that constitutes the quality of a product with inspections and tests based on the standards of what the market expects, the quality of education was associated with the evaluation, understood as measurement of the results. Conception that underlies the neoliberal conviction that the central task of institutions is not education, but the training of young people for performances of immediate application, or competences. For Vásquez (2015), the notion of competence has its origins in the business world, which is understood as those skills that the worker has to develop their work in a particular situation quickly, adequately and efficiently. Formulation that eliminates critical and creative training from educational practices, because it reduces competencies to automated procedures.

In this sense, the concept of quality of education comes from a model of results and, above all, from the fact that social efficiency lies below these ideas, which understands quality as performance, which generates an interpretation of this restricted concept tailored, which does not take into account the current low quality systems and the social context, aspects that generate the importance of raising non-economic arguments regarding the evaluation of educational quality. Reasons that make reference in the pedagogical logic and not economic, which allows to exceed the definition of quality from a bureaucratic vision. Based on the above, Aguerrondo (1993) raises a series of characteristics and usefulness of this concept, among these are: the complex and totalizing, where reference is made to the concept of quality as multidimensional; a second element is the socially and historically determined, which raises the importance of taking into account the specific realities of a given context; a third element refers to the educational transformation, where it becomes necessary to redefine the model in decision-making; a final element is the control of efficiency in the service, in this part it is raised the idea of educational quality in the adjustment of decisions, in order to improve processes.

After the previous reasoning about educational quality in general, emphasis is placed on the notion of quality in higher education, where a debate is generated based on aspects such as the human development index and the service provided by

higher education institutions. In this sense, Giraldo, Abad and Díaz, (s.f.) affirm that the variety of theories and definitions on this concept depend on the political interest and the academic community, which generates a lack of consensus. In this respect and according to Aguerrondo (1993), it is possible to affirm that quality is a relative concept that can be defined from a multidimensional perspective. The quality of an institution or a program refers to the universal characteristics corresponding to higher education in general, in which the evaluation is explicit and the country has the obligation to ensure that education be delivered with quality.

Antecedents of educational quality in Colombian higher education

As the object of study in this case is the educational quality of higher education in Colombia, some relevant background in the national context will be addressed from the educational policies; for the development of this, we will begin with the Political Constitution of 1991, where it is enshrined the freedom of education, and education is recognized as a right and a public service that can be provided by the State or by the private sector; the State was also assigned the function of inspection and surveillance. The Constitution guaranteed university autonomy and established that universities could issue their own statutes. Then, it was passed Law 30 of 1992, which establishes the normative basis of the higher education system. This norm defined the principles and objectives of the sector, classified the academic programs and the institutions that include professional technical institutions, universities or technological schools and universities. This law also defined the statute of the teaching staff and the rules on the administration of official entities, guaranteed the exercise of autonomy and the university government, allowing the institutions to create academic programs. With this law, the National Education Ministry (MEN, for its initials in Spanish) and the National Higher Education Council (CESU) were established as governing bodies. Within the CESU, it was included the organization of the National Accreditation System, as a strategy to improve the quality of higher education, and of the system.

According to Law 30 of 1992, higher education at undergraduate level is composed of three levels of training, corresponding to the technical,

technological and professional ones. In general, the teaching modalities offered are face-to-face, although some institutions offer programs in the form of distance education. Regarding the financing of the state universities, the law established increasing contributions of the National General Budget and of the territorial entities; regarding this, Melo, Ramos and Hernández (2017) consider that they began to generate the gaps between the budget of expenditure of the universities and the income defined in the law. According to (Gutiérrez, 2012), this is related to factors such as: the need to invest in physical and academic infrastructure to expand coverage, quality processes and the allocation of resources for research, among others

The Political Constitution of Colombia defines in articles 67 and 69 two critical issues: the role of the State and university autonomy; these aspects must be taken into account when debating a new law to replace Law 30 of 1992. The Political Constitution of Colombia defines education as part of the State, and it delegates responsibility for quality at all levels, through promotion, inspection, control and surveillance. The State, through the Ministry of National Education, carries out the aforementioned functions. University autonomy, as well as inspection and surveillance were initially regulated by Law 30 of 1992, in articles 28, 31 and 32 (Mejía and Duque, 2013). In general, IES in Colombia have preferentially developed an idea focused on professionalization, but for the most part, the research and social projection processes are still incipient and have little impact in their contexts. In this sense, Braslavsky and Cosse (1996) make evident the importance of generating research processes, on the practices of the participants in the daily life and the application of educational policies at higher and intermediate levels of public administration. Based on this, Mejía and others (2013) state the need to think of IES focused on intellectual work, and that not renounce their mission as institutions with social responsibility and education for peace.

During the 2000s (decade), technical and technological training was strengthened, some measures on accreditation and quality were adopted. Among these is the creation of the National Commission for Quality Assurance (CONACES) and the strengthening of the National Accreditation Council (CNA, for its initials in Spanish). The first body is mainly responsible for evaluating the

requirements for the creation of higher education institutions and programs; the second, for issuing an opinion for the accreditation of institutions and programs. During that decade, a set of information systems was also created in order to contribute to the knowledge and decision making of the sector, among which is the National Higher Education Information System (SNIES, for its initials in Spanish), the System for Prevention of Dropout in Higher Education (SPADIES) and the Labor Observatory for Education. On the other hand, the Colombian Institute for the Promotion of Higher Education (ICFES, for its initials in Spanish) became a public entity specialized in educational evaluation services. According to Miñana and Rodríguez (2011), (having to take) the state exams when finishing university studies as a condition to graduate (SABER-PRO in Colombia) constitute: a violation of university autonomy and indicate the distrust of the State in the capacity of universities to train professionals, making it unfeasible for institutions to explore new training modalities or propose relevant training; the exams are mandatory since 2009. For its part, the Colombian Institute of Educational Credit and Technical Studies Abroad (ICETEX) since 2010 strengthened its educational loan programs. Finally, it is worth noting that, despite the institutional advances, there is still great heterogeneity in the quality of the programs, inequity in access, and an insufficient supply of quotas.

The heterogeneity in the quality of the offered programs can be seen in (Melo and others 2017), where they compare the enrollment of institutions and academic programs with accreditation, which shows an unequal scenario. With information from 2015, of the total of higher education institutions, only 16% had high quality accreditation. Of the institutions with accreditation, 40% were from the official sector, while 73% of institutions without accreditation were from the private sector. In addition, according to the CNA, the enrollment coverage in higher education institutions and accredited programs was only 31% in 2014. It was also found that the coverage in accredited undergraduate programs was 19%, while in graduate programs was only 6%; a high percentage of students enrolled in more affordable universities, but of lower quality.

Higher education in Colombia faces important challenges. In Melo *et al.* (2017), for example,

there stands out the expansion of coverage levels and the improvement of IES. Even though the number of students enrolled has grown significantly during the last two decades, especially in technical and technological training, the coverage rates in an international context continue to be low and do not exceed 50%. In addition, the academic achievements in higher education depend on a wide range of elements associated with the institution and the students. Among the factors related to the institutions are the administrative management of physical, human and financial resources, the incentives for research and the quality of the teaching staff. The elements associated with the students include, among others, the socioeconomic conditions of their homes, the education of their parents and the development of cognitive abilities; the studies on efficiency in the education sector have focused on basic education and secondary education; they were not identified for higher education.

In general, the culture of quality in this educational level is incipient and produces the first results. In this regard, it was found in Mejía et al. (2013) that: studies and research on the quality assurance system, developed by the academic sector and state institutions, are still restricted, and are limited to some works of institutional accreditation processes and self-evaluation of the academic programs in the different IES in Colombia, during the period 2005-2010. All the participants of the system consider necessary the integration of the organizations and entities of the sector, the search for quality and excellence, the new role and the dignity of the academic communities, as well as a balance between autonomy and inspection and surveillance, as determining factors in the construction of a new law proposal for Higher Education

A tendency in education and particularly in Higher Education is the improvement of quality. In reality, it has to do with globalization and with the possibility of mobility of students and researchers. In this sense, Restrepo (2006) states that the measures that countries have been taking have to do mainly with accreditation, international tests, state tests in higher education, research, innovation and intellectual production. Another trend consists in requiring IES to generate knowledge and apply it to context problems. The institutional research is an indicator of the quality of the educational

system; formative research is being evaluated by the CNA and CONACES, while the production of knowledge is evaluated as scientific research, whose indicators are research groups, projects in progress or finished ones, and publications. Consequently, Restrepo (2006) considers that the country's research culture is consecrating the practice of publishing.

The problem of quality in Higher Education in Colombia arises from the inability of the educational and governmental community to face the challenges imposed by evolution in social, economic, cultural, scientific and political phenomena. This problem lies in the inability, on the part of the government, to respond to the expectations of the academic community, society, training processes, the extension of coverage, the relevance of the programs and the competencies of the graduates, among others. In Colombia, the quality of higher education is in a stage that is called *of transition* in (Ardila, 2011), in the conception of quality as everybody's responsibility, and between control and construction from perspectives and transdisciplinary approaches.

Accreditation, as a recognition the State makes of the quality of an institution's education and of the fulfillment of its objectives, is a quality assurance mechanism that has become widespread in the world. It has two manifestations: assurance of standards or basic conditions of quality, and assurance of standards of excellence or high quality. In Colombia, it was born with high quality accreditation. In Chile and Argentina, it started with basic quality standards. Colombia began its experience of the qualitative improvement of higher education through high quality accreditation arising from Law 30 of 1992. In (Restrepo, 2006), it is pointed out that given the demands, they realized the long time it would take the institutions to fill the requirements for accreditation, so it was created the mechanism of qualified registration, which ensures that technical, technological and professional programs have minimum quality conditions. Qualified registration is mandatory, while accreditation is voluntary. Both the CNA, accreditation coordinator; and CONACES, coordinator of the Qualified Registry, have developed self-evaluation and external evaluation models to assess the quality of programs. These models consider factors, aspects and indicators that are very similar to those evaluated by other

systems in the world, and which indicate criteria, standards and indicators that determine what is or is not valued in education.

The regulation of the Higher Education Quality System must allow new roles for the entities and dependencies of the system, and the role of the academic communities. These aspects, although most of them were initially established by Law 30 of 1992, played an important role in the first years of the activities, but today they show flaws that demand urgent adjustments, in order to adapt them to the new challenges of the knowledge society, to the developments required by university autonomy, and the balance required with the promotion and inspection and surveillance, as well as the need and urgency to reach a quality assurance system that allows a true strategic management of knowledge. The new norm must correct the inconsistencies of the quality system and must allow to rethink different elements of the system, including the validity of some of its institutions and dependencies, which have fallen short in their role and functions, and in many cases are bureaucratized entities, inferior to the new realities of Higher Education.

The subjects related to the Higher Education Quality System correspond to the most important for the future of IES in Colombia, but at the same time they belong to one of the least studied in recent years; however, this has been the protagonist in discussions at academic events, where proposals to reform Law 30 of 1992 are evaluated, on topics such as university autonomy, state and private funding of IES, typologies or ideas of organizations that make up the Colombian Higher Education system, among other topics; but it has been forgotten a reflection on quality and the system that should guide it. These issues about the quality system are analyzed by institutions and members of the academic communities. Consequently, with the new regulation that will replace Law 30 of 1992, it is necessary to address in a definitive way the scope of the criterion of university autonomy, the role that corresponds to the State in the inspection and surveillance, as well as the definition of a new system that ensures the quality of agile and effective higher education. It must also define which agencies decide within the system, which units would have advisory and planning character; and finally, which organizations could be created or (should) disappear, in order to generate a system that responds to the society that demands it (Mejía

and others, 2013). Regarding the current system of quality measurement, it can be established that there is a lack of coherence in the measurement of quality, the parameters for measuring quality are not institutionally clear, and IES must build an environment from the social projection; internationalization must be assimilated not only as learning a second language and strengthening research. In this process, the scope of the institution is often not taken into account; and in undergraduate studies, there is no appropriation of investigative knowledge.

In the 2010-2014 Development Plan, education is considered as an instrument to reduce poverty. Likewise, the State believes that science, technology and innovation are the bases for building a better country. The National Development Plan shows that innovation is a factor for economic and social strengthening. For this reason, one of the challenges of the State is to strengthen higher education. To achieve this, emphasis is placed on quality, the closing of gaps with a regional focus, (and) the relevance and efficiency in the management and use of resources.

According to the latest reports from the CNA, it is being carried out an analysis of the evolution of high-quality accreditation of academic programs, as well as of high-quality accredited institutions, which very little change the figures on the number of accredited programs and institutions in Colombia. The results of the studies show that from 1998 to 2010, 1,213 academic programs have been evaluated in 88 Universities, 41 University Institutions, 8 Technological Institutions and 4 Technical Institutions, of which 86% have been accredited; the remaining 14% gave rise to recommendations. According to MEN, there are 286 IES, of which 80 are state ones, and 206 private ones. In August 2011, there were offered a total of 10,772 higher education programs. According to MEN statistics in July 2012, there were 646 higher education programs with high quality accreditation; it is currently reported that there are a total of 729 accredited programs in Colombia at the various undergraduate and graduate levels in IES, which represent only 6.76% of the total of programs with qualified registration; likewise, only 22 IES have High Quality Institutional Accreditation, which represents only 7.7% of the total that offer this service; this is a low number compared to the universe of IES and Academic Programs

with recognition in the country. On the statistics, according to a report of *Universidad Nacional de Colombia*, until the years 2006-2007, there was a significant growth in the number of programs that were accredited for the first time. The study, with data as of January 2010, positions *Universidad Nacional de Colombia* with the highest number of accredited programs of high quality, being followed by *Universidad de Antioquia*, *Universidad del Valle*, *Universidad Javeriana* and *Universidad de los Andes* (Mejía and others, 2013).

In chapter 1 of the white book of *Universidad de los Andes*, the figures are described in terms of quality and compliance; the variables considered were: coverage, technical and technological, and university levels, regions, public-private sectors, students and teachers, education level, accreditation, secondary education, and the results of the *Saber Test II (Prueba Saber II)*, socio-economic strata, and coverage during 2002-2010. In this period the growth was 13 points in coverage of 24-37%, there was a decrease in coverage of the private sector and a rise in the public, this increase refers to the inclusion of the National Apprenticeship Service (SENA, for its initials in Spanish) in the education system. In this study, it was carried out a division by zones, being Bogotá the zone A, which has a coverage of 73%; zone B corresponds to the provinces of Antioquia, Atlántico, Caldas, Quindío, Risaralda, Santander and Valle, where coverage increased by 30%; zone C is integrated by provinces Bolívar, Boyacá, Cauca, Cesar, Cundinamarca, Huila, Magdalena, Nariño, Meta, Norte de Santander and Tolima, with an increase of 20%; and zone D is composed by provinces Amazonas, Arauca, Caquetá, Casanare, Choco, Córdoba, Guainía, Guajira, Guaviare, Putumayo, San Andrés, Sucre, Vaupes and Vichada, which coverage grew below 10%.

There is a huge private offer of higher education for Bogotá, in relation to the rest of the provinces, but the state one does not oscillate so much; with respect to institutional accreditation in zones C and D, they do not have accredited universities; what is appreciated is that there are accredited universities from the center of the country that have campuses in other regions; in zone B, there are more accredited universities than in Bogotá because the state universities in this area are more interested in this process. Regarding schooling, there is an advantage in the level of training of professors at

state universities compared to private ones, because they are lagging behind at doctoral level; there is an undoubted advantage of state universities and also in Master's degree programs; apparently private universities are managed in general with professors with undergraduate degrees, which is higher indicative of quality being state than private.

One aspect of Law 115 is the accreditation of education programs in Decrees 3012 of 1997 and 272 of 1998 these processes were delineated, causing normal schools (schools or colleges for the training of teachers) to change to higher normal schools and evaluative follow-up of degree programs and specialization programs. These decrees have been changing, for example, through Decree 2230 of 2003, the supervision of quality compliance of higher education at all levels of education is conferred on CONACES, a task that was previously carried out by CNA. The higher normal schools and the faculties of education were dedicated, before the year 2000, to fulfill the accreditation scenarios, with the objective of responding to the levels of quality in teachers training, and to mitigate the multiplication of these and of professors without sufficient professional quality. The work of monitoring and evaluation of the CNA is used for the CESU to grant or deny approval to these training programs. Then, in the sector plan for the period 2006 - 2010, reference is made to the need for a relevant education in a globalized world, with the objective of building a competitive country. That is why in the training sector plan, it was consolidated a quality assurance system, with the aim of generating better educational options for society, in order for the population to develop basic skills. This system consists of three components; they are the basic standards of competence, evaluation and improvement. Where the basic standards of competence refer to state criteria that establish the basic levels of quality, the evaluation component is about assessing the actions carried out to achieve the goals, and thereby improve the processes and achieve quality. With respect to improvement, it is proposed as the capacity of educational establishments to establish, execute and follow their plans, in accordance with the goals and proposed projects, in order to gradually achieve the quality levels.

MEN presented in 2007 a document on the quality assurance system of higher education, where it emphasizes that the quality system must be a

constant and permanent effort; it establishes 15 minimum quality conditions, among which are: the academic name of the program, the justification of the programs, curricular aspects, organization of training activities by academic credits, social projection, academic staff, infrastructure, self-assessment, monitoring of graduates and specific financial resources to support the program. Next, some figures that allow to see the status of the same: In Colombia, there are currently 634 accredited programs of high quality, which represents 6.18% of the total of programs with qualified registration, which are 10,253 in total. Teacher training has increased, increasing the number of teachers with specialization, masters and doctorate. The level of coverage has also increased and the level of desertion has decreased. The number of university institutions prevails over that of universities, and technology training centers have increased, as well as the increase in the number of full time professors. In this regard, Castaño and García (2012) consider that although there is evidence of progress in the different aspects, it is necessary to improve the coverage related to the number of students enrolled at the university level and in research.

In the regulations on the organization of the Colombian Higher Education System, there are considered the elements around the concept of academic peer. The peers of CONACES evaluate the quality conditions for the granting of qualified registration, they must be professors or researchers recognized for their ability to evaluate and verify conditions on the quality of academic programs in their area of knowledge. This academic peer is responsible for reviewing the information presented by the institution and conducting a verification visit. The peer does not represent any institution, but society; they should not make judgments about the program or about the institution before, during, or after the visit. Nor should they issue their concepts on quality conditions during the visit. They should not compare the program with other IES, should not make suggestions for improvement plans, or discuss the approaches of the programs; and their reports must contain all the conditions of quality to verify and sufficient and pertinent information, understandable, without subjective judgments and place it in SACES; so the chamber can value it.

The academic peers of the CNA are the support for the accreditation process, they are commissioned to

issue a judgment on quality, they are characterized by having the authority to issue that judgment, the peers perform research, teaching, social projection and are recognized as featured professionals. They must take into account the dimensions of the program, the academic and institutional tradition; understand the social task that the program meets and its response to community needs, the peer must comply with a communication in a correct language. There is a Code of Ethics for Academic Peers of the CNA, which takes into account respect for values. The academic peers for the definition of the quality of the program evaluate eight characteristics. On the other hand, we have Colciencias peers, who are evaluators of scientific communities, researchers, academics and the business community; these peers must be experts, who have academic training, professional and research experience and specialized production in the area for which they are evaluators (Mejía et al., 2013).

The evaluation methodology established by the CNA is constituted by a set of factors, characteristics and indicators that serve as an analytical instrument in the assessment of the various elements that intervene in the quality of an institution or its program; they are the factors, characteristics, aspects and indicators. This methodology of the CNA requires the use of quantitative and qualitative indicators that provide the empirical and allow observing the performance of a program. The CNA will consolidate a flexible accreditation model that recognizes the disciplinary and institutional characteristics and specificities supported by strategies and information systems that allow follow-up and monitoring of the improvement plans arising from the self-assessment and accreditation process. Recently the CNA, according to the document of Guidelines for the Accreditation of Undergraduate Programs, defined the new quality assessment factors, which change from 8 to 10 and with Law 1188 of 2008 it is regulated the qualified registration of education programs superior and there are dictated the 40 quality characteristics. These new factors are: Mission, vision and institutional and program project, students, professors, academic processes, research and artistic and cultural creation, national and international visibility; impact of graduates on the environment; institutional welfare, organization, administration and management, and physical and financial resources.

Currently there are nine evaluation chambers, defined by specialty, integrated between three 3 and five 5 participants; the chambers are: Health Sciences; Humanities; Social Sciences and Education; Institutional Procedures; Agronomy, Veterinary and Related; Economic and Administrative Sciences; Physical, Natural and Exact Sciences; Engineering; Arts and Architecture; Interdisciplinary ones; finally, it was defined the Coordinator's Chamber, which is made up of the coordinating delegates of each evaluation chamber, elected for periods of one year, renewable for one time.

In accordance with Resolution 5290 of 2012, CONACES is supported by national authorities of the higher education sector and up to seventy delegates who will meet in the chambers. The General Chamber shall ensure that the formation of the group of delegates includes experts in higher education, in virtual and distance education, experts in management of higher education institutions; experts at all levels of training and propaedeutic cycles.

The foundations of IES are knowledge, science, technology, arts and, in general, culture. This is why it is required to review the functions performed by other institutions in the sector, such as the Administrative Department of Science, Technology and Innovation (Colciencias), which was regulated by Law 1286 of 2009, in order to strengthen the National Science System. Technology and Innovation in Colombia (SNCTI, for its initials in Spanish); the National Fund for Financing for Science, Technology and Innovation (Francisco José de Caldas) was created article 22 of this law, which is in charge of Colciencias; the National Science System and Technology has established as a principle, the support to decisions in competitions, selection, staggering and accreditation, which are based on a set of research quality criteria that must be met by research products with technical parameters and international reference standards. Colciencias is formed by members of the academic community and the productive sector; its functions include: formulating and promoting policies in science, technology and innovation, international cooperation and the social appropriation of science; developing science, technology and innovation tasks, in Master's degree programs and doctorates, on the Colciencias website there are different information applications, such as

CvLAC, where the resumes of researchers are found; GrupLAC, which contains information from research groups; InstituLAC that contains information about the institutions; this page also has links such as Publindex, which corresponds to the System of Indexing and Homologation of Specialized Journals of Science, Technology and Innovation.

It is highlighted that in 2012, MEN made the first call for the presentation of research projects on topics related to Colombian Higher Education; however, it still does not have adequate funding for its development, in the period 2002-2010, there were followed up the results and analysis of the studies carried out in Colombia in the last ten years, in terms of accreditation, which have been systematized in the document: Impact of Accreditation in Colombia - Studies carried out in recent years, in this document is made a compilation of works such as the evaluation of the accreditation processes of academic programs in Colombia, Phases I and II; evaluation of the accreditation processes of academic programs in Colombia, University of the Andes and the Analysis of the impact of the System of Quality Assurance of Higher Education 2002-2010 among other works.

In the internal quality process in IES, they should ask themselves what the internal process of quality improvement has been like and what it has contributed to the programs. The common idea is that they strictly respond to the norms of MEN, there is a lack of feedback in the internal processes to facilitate the process, lack of culture in quality of the teachers, there exist the following barriers: delay in the delivery of information, lack of collaboration of the participants, lack of commitment, among others; regarding administrative processes and quality management it has been continuous with high peaks of work, lack of collaboration of the agencies, it is a process that is pushed by the Ministry and high accreditation not by the institution, technical and logistical difficulties arise.

In the external quality process, there must be improved in terms of optimizing the communication and dissemination channels, strengthening the information system that until now is weak, clarifying the response times of the accreditation entities, it must be clear in the way to verify the minimum quality conditions and give

greater relevance to the self-assessment process. In addition, the respective accompaniment to the process must be generated, it is also important to unify the criterion of academic peers, among others.

To meet the demand for higher education, during the last few years, the number of university institutions rose from 82 in the year 2000 to 119 in 2015. In this same period, the number of universities increased by 10, and that of the technological institutions by 4. The number of technical institutions, by contrast, decreased by 7 by 2015, the offer of academic programs with qualified registration of higher education institutions was 6,341 undergraduate programs. Also, 4,872 graduate programs were offered. It is worth noting that from the total of 11,213 academic programs with qualified undergraduate and graduate registration, only 8.5% are accredited with high quality. The different higher education programs registered 1,954,201 students in 2015. It is important to note that of the total number of students for 2015, 50.7% attend state institutions; regarding university enrollment at undergraduate level, it must be noted that the number of registered students rose from 582,672 in 2000 to 1,092,900 in 2015. Regarding state universities, enrollment increased from 234,210 students in 2000 to 553,197 in 2015. At graduate level, enrollments increased from 62,259 students in 2002 to 122,514 in 2015 (Melo, Ramos and Hernández, 2017). On an international scale, the *SCImago Research Group* classifies scientific production for the institutions that have published in the *Scopus* bibliographic database. The classification includes 130 Colombian institutions. In the indicator for the period 2007-2011 at the level of Iberian-America, the first institution is the University of São Paulo in Brazil, the second is the National Autonomous University of Mexico, and the third is the University of Barcelona. In this list, the first Colombian institution is the National University of Colombia, ranked 41, followed by the University of Antioquia, ranked 77, and by the Universidad de los Andes in the 92nd position (Melo and others 2017).

In higher education inclusion is understood as an action that seeks equal access to science, education and culture of some social groups (Briceño, 2011); today we know that this not only helps to level the different opportunities available for social sectors, but it (also) plays an important role

in the reproduction of inequalities. In terms of (Viveros, s.f), the majority of young people from social media high social strata who own capital may have access the university; and young people from popular sectors have difficulty accessing it, generating social differentiation in Colombia and in the countries of Latin America. However, the problem of social inequalities lies not only in the socio-economic, but also in the gender and ethnic order, displacement and disability.

Conclusions

The discussion of the theoretical approach performed here invites to transform the quality assurance system in force in Colombia and to re-signify the conceptual, theoretical, methodological and technical referents to evaluate and certify it.

The institutions must carry out processes to modernize their structure and operation. To generate a real commitment to quality, they must apply modern techniques of management, planning, evaluation and analysis of results; develop strategies for continuous improvement and productivity; articulate the planning with the investment for an efficiency in the execution of the budget and simplify the procedures.

Among the relevant achievements identified are: the strengthening of the self-evaluation culture was generated and the implementation of planning and quality assurance processes in higher education was promoted; progress is observed in the updating of study plans, in the search for greater relevance through pedagogical and methodological innovations; it was improved the epistemological foundation, curricular changes were introduced and study plans were made more flexible; plans and lines of improvement were created to optimize academic management; the links with the international environment were encouraged and strengthened; it is also reported that the level of teachers improved as well as their participation in networks, and the formation of research groups and their results; the number of full-time teachers and their level of education were increased, teaching support resources were (also) increased. However, progress on accreditation has been slow and of low coverage, contrary to the progress in qualified registration, which has been achieved in almost all programs in Colombia.

The application and results of the regulations on quality of higher education in Colombia are insufficient to generate a strong improvement in quality. The limitations shown by the Colombian higher education system, and especially the current system of quality assurance, are evident.

It is important to generate academic debates on equity and inclusion policies in higher education, taking into account the role of higher education in Colombia due to the post-conflict and how to address the reduction of inequality and social exclusion.

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