

The quality of higher education from the point of view of the contributions made by graduates in their work environment

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ABSTRACT

Objective: The objective of this paper was to analyze higher education quality, considering the contributions made by graduates in their work environment. The ontological context was determined by the Master's program in Education of the Caribbean University System (SUE Caribe) at the University of Sucre from Sincelejo, Colombia. **Method:** The study was developed within the framework of the qualitative approach, with a case study design, cross-sectional in two stages: documentary review and field research. A semi-structured interview was applied to an intentional sample of 13 graduates selected through cluster, proportional, and random sampling. Data analysis was executed using ATLAS Ti software version 7.5.4. It takes into account three levels of categories: core, relational, and descriptive. **Results:** the graduates interviewed are located in the educational sector, It shows good performance in the following competencies: research, educational management, and social projection, and are recognized by the community. **Discussion and Conclusions:** considering the graduate as the unit of analysis, the program exceeds the qualified registry requirements and meets the high-quality requisites.

Keywords: quality, higher education, graduates, labor environment.

I. Introduction

In the 21st century, the higher education context has been characterized, among other aspects, by the need for Higher Education Institutions (HEIs) to offer relevant training programs and the development of evaluation processes and continuous quality improvement (UNESCO-IESALC, 1998; Feixas, 2004). Quality is a concept that has become relevant in different fields of contemporary society, especially in the higher education activity area. In this sphere, the concept is quite controversial and complex, it considers that particular groups of actors tend to attribute different meanings to it (Acevedo et al., 2022). This polysemic and multifunctional

character is permeated by the actors who define it (Gil et al., 2018).

Something very recurrent has been the approaches and models used from the business studies field in the evaluation of higher education quality (Delahoz-Domínguez et al., 2022). This has generated some difficulties, considering that educational objectives are usually more intangible, less clear, and longer-term than business objectives (Svensson et al., 2015; Avci 2017).

When reviewing the theoretical framework in higher education quality area, it is found that the works of Burrows, et al. (1992) and Harvey and Green (1993) are widely accepted references in

the scientific community. In this context, Harvey and Green proposed five categories for analyzing quality: exceptional, perfection or consistency, fit - for purpose, value for money, and transformation. Among these categories, fitness for purpose suggests that quality is the fulfillment of specific results established in predetermined objectives.

On the other hand, Acevedo et al. (2022), shows among the findings of their work, that "the scientific community defines quality as a socially determined concept", which in the case of higher education presents two notions: one that thinks of quality as theoretically and empirically valid for any context and another that understands it through markedly subjective characteristics. In this sense, determining what is the best education corresponds to political-technical instances, in such a way that "the agents to whom the citizenship attributes the obligation, the power and the competence to define educational policies and make decisions" act. In this scene, the "fit - for purpose" dimension proposed by Harvey and Green (1993) becomes relevant, considering that it represents a pragmatic perspective that is generally applied to the control of educational processes and systems.

At the international level, the most widespread form of making visible higher education institutions and programs quality, which has the consensus of the academic community, is "accreditation", whose "social purpose is to publicly attest to a good education and to promote the improvement of its quality" (Marúm Espinosa, 2015). The accreditation functions are aimed at verifying educational standards and the efficiency of institutions, as well as promoting innovation, it stimulates the quality culture and above all analyzes the knowledge, competencies, contributions, and skills of students, teachers, and graduates as an indicator of curricula performance and quality in general (UNESCO-IESALC, 2020).

The internationalization of accreditation has given rise to "frameworks of processes and quality assurance" which take place at two levels: self-evaluation processes and review by external agencies. Likewise, the frameworks contemplate processes of institutions and program evaluation (Janssens et al., 2022).

In Colombia, the frameworks of quality processes and guarantees are materialized in the quality assurance system in higher education, which is developed through two processes: qualified registration and high-quality accreditation. These models recognize the key actor's importance such as students, and teachers, and the follow-up and impact of graduates as status indicators. In this sense, the legal framework of the qualified registration, Law 1188 of 2008 (Congress of Colombia, 2008), contemplates the long-term follow-up of institutional results that involves the graduate's experience in university life and makes real the requirement that learning should continue throughout life.

In the case of accreditation, reference is made to the "High Quality" concept, which refers to the characteristics that allow recognizing of an academic program or an institution and making a judgment, within the framework of continuous improvement and its diversity, on its capacity for transformation, it is given by the proximity between the optimum corresponding to the character of the academic program or the legal nature, identity, mission and typology of the institution, and the way in which it provides the public service of education, the achievements attained and the impacts generated (CESU, 2020).

In the same sense, for the qualified registration, the Colombian legislation contemplates a model for accreditation, which, according to Murillo-Vargas et al. (2020), an advance to highlight from the last update, consists in that "it integrates both the Institutional Accreditation, the High-Quality Accreditation of undergraduate and graduate academic programs and involves all levels of training, as well as the different modalities, in which the programs are developed".

It is important to highlight that in the scientific literature, there are works whose study object is the quality of programs at different levels and their analysis unit involves the graduates. For example, Quiñones et al. (2019), analyzed the master's degree status in education at the University of Las Tunas, Cuba, through the performance, among others, of its graduates, where they inquired about the importance of the program for their professional performance, scientific production, and professional prestige; as a self-evaluation, this

exercise was made to provide feedback to the training program.

For their part, Méndez Rebolledo et al. (2018), analyzed the generic competencies level of postgraduate graduates of the Universidad Veracruzana, Mexico, through self-reporting in three perspectives: before the postgraduate program, the level of competencies they needed in their work and to what extent the postgraduate program had contributed to the development of competencies. Finally, they determined, among other things, that it is possible to affirm that the contribution of the postgraduate program to the development of generic competencies does depend on variables such as the professional profile and the graduate profile, which is previously established as a guide for the training process and a quality and relevance indicator of the program. In all cases, graduate studies represent an excellent feedback reference for the programs.

Likewise, González et al. (2019), conducted a study with the purpose of estimating the academic and social impact of the Metropolitan Technological Institute graduates from Medellín, Colombia, in which they determined that the education offered by the institute has generated an academic impact and two social impacts. The academic impact is associated with updating studies and the social impacts are associated with the employment situation and the level of income received by the graduates.

In the same sense, Romero Álvarez et al. (2019), analyzed the relevance of the Business Administration program at the University of Sucre, through a competencies evaluation of the graduate that is perceived as important for the employer, it could be determined that the boss recognize the program graduates comply to a large extent with their competencies, but they should improve in Communication orally with clarity, capacity for abstraction analysis and synthesis and understanding of the surrounding reality. The results provided input for curriculum redesign.

With the background analyzed, it is evident that the quality concept in higher education is a widely debated topic and is in permanent development (Ramos Mendoza, 2015). Likewise, quality

studies of university programs that use the graduate as a unit of analysis seek to identify evidence of the transformations that the program managed to develop in the graduate from his or her role as a student to his or her professional development (Magaña et al., 2017), in such a way that it can be contrasted to what extent these transformations are consistent with the mission, vision, competencies, graduate profile, and professional profile that the program intends to develop. In addition, these studies implicitly carry the usefulness they offer to the programs, as an element of curriculum feedback (Rueda et al., 2020).

Within the framework of the theoretical references and background analyzed, this work objective was to analyze the higher education quality, considering the contributions made by graduates in their work environment. The ontological context was determined by the master's program in Education of the Caribbean University System (SUE Caribe) at the University of Sucre from Sincelejo, Colombia, and the gnoseological context was framed in the dimension of quality analysis "fit - for purpose" of Harvey and Green (1993).

2. Methodology

The work was developed within the framework of the qualitative approach (Méndez, 2015; Hernadez-Sampieri and Torres, 2018), with a case study design (Omura, 2014), cross-sectional in two stages. In the first stage, a documentary review was conducted, and in the second, field research. In the documentary review, the Qualified Registration renewal document of the master's degree Program in Education - Regional Master Report and of the University of Sucre (2011) of SUE Caribe were analyzed. This allowed identifying a possible competencies group of the program's graduates.

For the field research, the population under study consisted of the six (6) cohort graduates that the program has developed up to 2018, which include one hundred and twenty-five (125) university students. These were approached through an intentional sample of thirteen (13) people, corresponding to 10% of the population. For the

selection of the subjects that made up the sample, the cohorts were taken as clusters, subsequently through a stratified sampling by proportional fixation, the number of subjects per each cluster was determined, finally the subjects were selected within each cluster through a simple random sampling (Otzen and Manterola, 2017).

The semi-structured interview (Fábregues et al., 2016) was used as a technique for collecting

information; the instrument used as a guide for the interviews was subjected to a validation process by experts. The information collected through the interview with graduates was endorsed by their immediate supervisors.

For the analysis of the information, three levels of categories were established: core, relational, and descriptive, as shown in Table 1:

Table 1. Categories of analysis

| Core categories | Relational categories | Descriptive categories |
|--------------------------------|------------------------------|---|
| Potential graduate performance | From the Vision | <ul style="list-style-type: none"> • Educator of excellence. |
| | From the Mission | <ul style="list-style-type: none"> • Educator with research competencies |
| | From the objectives. | <ul style="list-style-type: none"> • Educator with educational management and innovation competencies. • Educator with research competencies. • Educator capable of promoting social development. |
| | From the graduate's profile. | <ul style="list-style-type: none"> • Educator of excellence. • Educator with research competencies. • Educator with educational management and innovation competencies • Educator capable of promoting social development. |
| | Position held | |
| | Research competencies | <ul style="list-style-type: none"> • Approach and intervention of educational and pedagogical problems. • Knowledge production visualized in socializations, publications, and participation in scientific-academic communities in education. • Activities in research groups. • Scientific contributions to the institution. |
| | Educational management | <ul style="list-style-type: none"> • Contributions to quality improvement and management. |

| | | |
|--------------------------------|-------------------|--|
| Real performance of graduates. | | <ul style="list-style-type: none"> • Consolidation of academic groups. • Contributions to strategic management. |
| | Social projection | <ul style="list-style-type: none"> • Participation in the formulation or implementation of educational policies in the department. • Research and/or consulting services performed. • Practical contributions (significant experiences of social projection). |

Source: own construction based on documentary review.

Finally, the actual performance findings of the field research were contrasted with the possible performances established in the documentary review. The analysis of the information was done through the ATLAS Ti software version 7.5.4.

3. Results

The analysis of the results is based on the core category "graduates actual performance", which includes four "relational categories": position held, research competencies, educational management, and social projection, each of these

relational categories has descriptive categories, which are shown in Table 1.

About the relational category of positions held, as shown in Figure 1, graduates were found working as PTA tutors, external advisors, classroom teachers, professors, and managers, among others. In addition, some of them expressed having worked as quality leaders, department heads, and area directors. It was also identified that, among the past work experiences, one graduate served as municipal and departmental education secretary, as well as another as advisor to the ONDAS program.

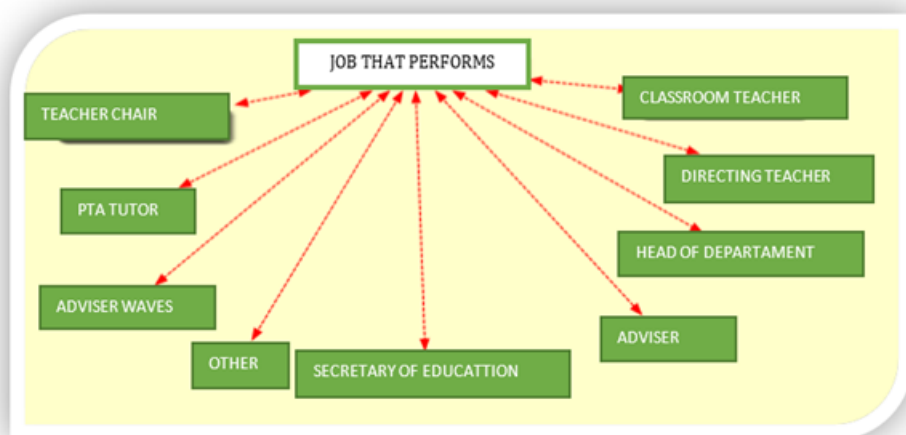


Figure 1. Map of the relational category of a position held by the graduates.

It is important to highlight that the environments where the graduate work are higher education

institutions, elementary and middle school educational institutions, teacher training colleges,

and rural technical-agricultural schools, in programs of the Ministry of Education (PTA), some stated that they have provided their services as advisors, in educational matters, to several mayors' offices, the Governor's Office of Sucre and the National Education Ministry (MEN). This shows that the graduates work in the context of the education sector, which is consistent with the training competencies offered by the program.

In accordance with the relational category of research competencies, it should be noted initially

that correspondences were found between the relational category and its respective descriptive categories, as shown in Figure 2. Two situations are specifically observed: the first, that both can emerge simultaneously and the second, that one can drive the creation of the other. It was also determined that both promote the research project's development, which allows valuable contributions to be made to the institutions through the production of knowledge, it is represented in scientific articles, didactic texts, and papers, among others.

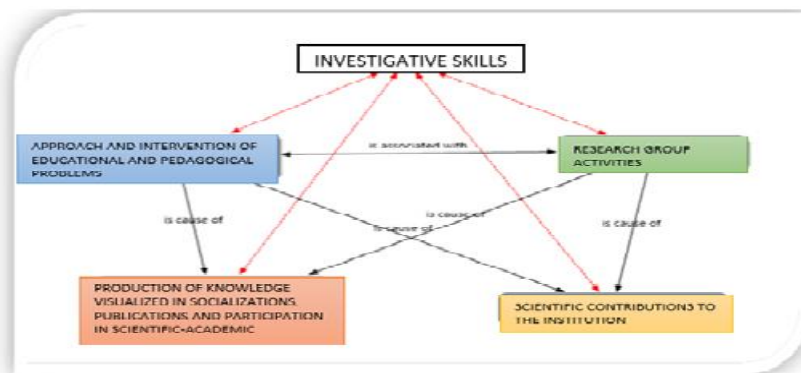


Figure 2. The map on the relational category of research competences

Each finding of the descriptive categories that make up the relational category of *research competencies* is presented below.

The first descriptive category is the *approach and intervention of educational and pedagogical problems*, which includes graduates' actions to identify, address and intervene in the different problems of the educational context where they work. In the cases of graduates working in higher education institutions or universities, it was determined that they put this competency into practice through research projects, which are developed in research groups or research groups attached to a formal research network. As for the graduates who work in basic-level educational institutions, they execute research studies individually, from their classroom work, systematizing their practice. For their part, graduates who work as contractors recognize that they put this competence into practice in the

execution of public policy projects and programs. Finally, it is important to highlight that the graduates interviewed recognize the importance of addressing educational problems through research processes.

The second descriptive category, which is *knowledge visualized production in socialization, publications, and participation in educational scientific-academic communities*, which arises from the proposal established in the program graduate profile, states that the graduate must be competent to produce and represent knowledge that is made visible through socialization, publication and participation in scientific-academic communities in education. In this regard, it was found that graduates who work in universities do better in this competence, especially in the publication of scientific articles. In relation to graduates working in elementary and secondary education institutions, although they

show that they have published scientific production, the proportion is lower.

Regarding participation in events such as forums, seminars, and research symposiums, some interviewees recognize that they do not participate as speakers, but they do participate as assistants. In this regard, they express their interest in keeping themselves updated. Likewise, some have transcended speakers and assistants' roles to become academic event organizers. In general terms, the study shows that the graduates are active in research processes in the institutions where they work, in which they execute writing exercises related to their teaching work and develop an academic production, which in some cases is not published in the mass media but is socialized and used in the school environment.

The third descriptive category denominated *activities in research groups* evidence the activities and graduates' management in everything related to leading, forming, and participating in research groups from their work environment. In this regard, it was determined that all the interviewees' support or work with research groups, represented in seed groups, formal groups attached to researchers' network, or groups that at the date of the interviews only had the recognition of the institutions where they work.

When analyzing *the activities category in research groups*, considering the graduates' work context, it is observed that, in elementary and middle school institutions, it is where research groups do not achieve national or international recognition, therefore, graduates have managed to enter into research through the Ondas program or through agreements with other higher education institutions. In this context, the research groups operate with institutional recognition, therefore, their radius of action is limited to that environment, however, the activities they develop achieve significant impacts because they promote research competencies in students and teachers in general. Within these groups, the graduates interviewed state that they play an important leadership role, considering that they seek alternatives to socialize their experiences.

In higher education contexts, the research groups of which the graduates are part, generally have national and international recognition and are attached to research networks, the interviewee's participation varies between advisors, principal investigator, companions, and others, it facilitates the production process of scientific articles, papers and participation in academic events. In addition, it is important to highlight that, although the graduates do not always belong to accredited research groups or do not make formal publications, this does not mean that they have given up their vocation or research work, since it was evident from the interviews that they put this competence at the service of their work or social context, either by motivating other teachers and students to do research, organizing committees, creating spaces for reflection and research at the institutional level, among other actions.

The above allows concluding that the role played by graduates in research groups has been highlighted and recognized by the community in general, since through the actors' voices who endorsed the performance, it was evidenced that the interviewees have created research spaces in the institutions, they have motivated their colleagues and students to do research and have contributed so that the educational environment keeps the research processes in force. And this is highlighted with greater intensity when the graduates have held managerial positions, where their administrative and economic decisions have been oriented to promote scientific production.

The fourth descriptive category, *scientific contributions to the institution*, arises from the program's training proposal, which indicates that the graduate must possess attitudes of inquiry, approach, and systematic and formal intervention of educational and pedagogical problems, in addition to observing his own work, that of the institution(s) and contribute significantly to the improvement, transformation, and quality management. For this reason, everything related to the contributions made by graduates to impact or benefit the institutions where they work, from the different research activities, is covered here.

With the information collected, it was possible to establish that the scientific contributions made by graduates revolve around actions such as:

promoting research group creation, strengthening, and formalizing the institutions' research groups, knowledge revealed production in scientific articles, and socialization in institutional or national academic events. At the same time, it was determined that, for the institutions, this management is significant, since it not only facilitates the approach to educational problems but also allows the research competencies development, facilitates the new knowledge production process, technological advances, visibility, and the educational entity recognition before the different academic organizations.

Likewise, it was identified that the graduates have had a positive impact on their environment through research processes. First, the motivation they exert on the educational community members, especially in elementary and high school institutions, so that teachers and students obtain a focus on research work. Second, the impulse they give to favorable changes in terms of improving the education quality in some institutions that have limitations in human talent terms and economic resources. Third, the creative and recursive capacity that has allowed them, with

the few resources offered by some educational environments, small schools to develop events for the research experiences socialization, advisory and evaluation committees, as well as a substantial improvement in the participation of municipal, departmental, and national educational forums.

Next, the relational category, *educational management*, is analyzed. In this regard, the program states that the graduate must be competent to actively participate in management processes and improvement of institutional quality, therefore, this category was oriented to establish all the actions executed by graduates for the strategies implementation and educational quality processes in the organizations where they work. In this sense, it was analyzed through the evidence of two descriptive categories as shown in Figure 3: *contributions to the improvement and quality management*, which includes actions related to the approach of proposals to direct the fulfillment and goals of the objectives of educational quality, and *contributions to strategic management*, which includes operational actions for the development and achievement of the goals set by an institution.

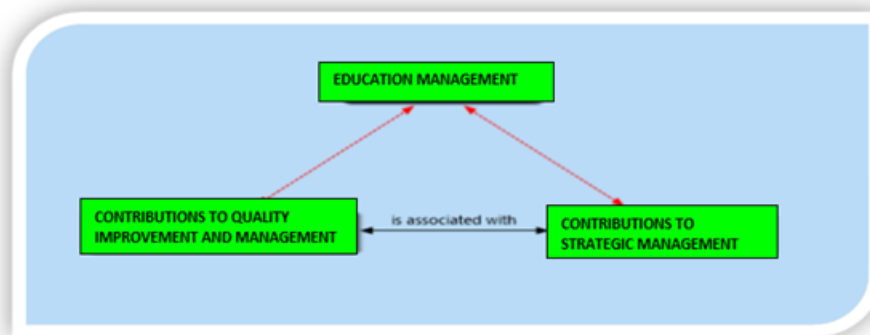


Figure 3. Map of the relational category of educational management

About the descriptive category of *contributions to quality improvement and management*, the results obtained showed that the graduates interviewed play an active role in the educational environments where they work, they are also recognized by the community and enjoy the trust of their immediate supervisors. This position has

allowed them to assume responsibilities that have a direct impact on the institutional strategies design aimed at the research processes implementation and the educational quality goals achievement.

It is important to highlight the impact of the environment on the development of the graduate. The trust and support received from their immediate bosses and other academic authorities influence the leadership and the contributions they can offer. Among the contributions identified, it is important to mention: work teams organization for the re-signification of institutional documents; research processes integration to the documents that guide the pedagogical actions of an institution such as the PEI, PEP, and master document; proposals' design to promote research competencies at all educational levels, advising and accompanying managers in the strategic processes implementation of the institution; readjustments to study plans, area plans, and transversal projects, and adjustments in the methodological, strategic and pedagogical components of the institution.

In the descriptive category of *contributions to strategic management*, it was found that the graduates coordinate and lead activities aimed at complying with the strategies outlined by the institutions for their development and progress in the educational quality area. In some cases, they are the ones who, with the endorsement of their directors, take the initiative to propose and implement actions for change with their work teams' support. Among the actions executed by graduates, as contributions in this category, the following can be highlighted: they qualify and consolidate work teams, lead pedagogical processes, carry out institutional congresses, manage inter-institutional agreements, lead processes for quality certification, and support program accreditation processes.

Finally, the relational category of *social projection* arises from the program's proposal to train educators capable of combining teaching with research and social projection, in order to promote science, technology, and innovation development, with the purpose of finding solutions to the region and the country's problems. Consequently, this category was aimed at determining social projection activities, which reflect a link between the graduates and the communities around them. It also sought to identify the contributions they make to the problems related to solutions to institutional

development at the local and regional levels. For this purpose, the actions were classified into three descriptive categories: *social projection significant experiences, consulting services, and formulation or public policies implementation*.

About the descriptive category of *significant social outreach experiences*, it was found that few graduates have had the opportunity to participate in large-scale social projects at the municipal, departmental, or national level. However, some interviewees stated that they have had the opportunity to work with municipalities and the National Education Ministry in early childhood education, bilingualism, and teacher training in the line of reconciliation and forgiveness.

In addition, it was identified that most of the interviewees develop social outreach activities from the educational institutions where they work, leveraged on research lines and pedagogical training, involving internal and external members of the academic community, such as students, parents, neighbors of the institution and in some cases, individuals. In this descriptive category, the case of the Higher Teacher Training Colleges can be highlighted as a favorable scenario for social outreach work, considering that their action range is wider when the contexts of the institutions where students execute their pedagogical practices are involved. Finally, it can be pointed out that the graduates' actions in this line are materialized through transversal projects, parents' schools, projects for the strengthening of the student's competencies, and culture and traditions promotion, among others.

Regarding the descriptive category *consulting services*, it was identified that some graduates are formally engaged in providing these services as an additional economic activity to their work in educational institutions and have done so at the municipal and departmental levels. Others, exercise this role in solidarity with people in their close environment who require it, in some cases, fulfilling functions specific to their positions such as advising research projects and strategic proposals for educational quality in their institutions.

Finally, in relation to the descriptive category *formulation and public policies implementation*, it

was identified that several graduates have worked in this category of actions, some report having made contributions to the public policies formulation from Education Ministry and others have supported the implementation of such policies, representing mayors' offices and the Governor's Office of Sucre. The most significant contributions, referenced by the interviewees in this line, have to do with contributions to the institutions' educational policies where they work, which are materialized through institutional improvement projects, for the strengthening of research processes and educational quality, as well as inclusion issues, literacy strengthening and the use of technological tools.

4. Discussion and Conclusions

This work allows dividing the contributions found into two types, some very specific, which can be very useful as an element of feedback for the program, and others, a little more general, which may be scientific community interest.

The findings of interest for the program have to do with the results that arise from contrasting the *possible performances* proposed in the qualified registration document with the *real performances* found in the interviews. In this regard, it can be highlighted that:

- The graduates interviewed are in the labor market, developing positions and activities typical of the educational sector. They play an active role in the educational environments where they work and are recognized by the community.
- The graduates interviewed, evidenced to have developed research competence, therefore, they are active in research processes from the institutions where they work, although a better strength is noted in the graduates who work in a higher education context.
- The graduates interviewed show that they have developed *educational management* competence, which is materialized through their contributions to organizing work teams, the institutional documents reconstruction, and the directors' accompaniment of the institutions where they work. As well, as strategic processes

implementation, the study plans development, and the institution's pedagogical accompaniment.

- The graduates interviewed, evidenced to have developed the competence of *social projection*, in this regard, despite recognizing to have few significant experiences, they stated to go through developed parent schools, and projects for the strengthening of students' competencies and promotion of culture.

When the above findings are contrasted with the approaches of the quality assurance models: qualified registration (Decree 1330, 2019), and high-quality accreditation (CESU, 2020), it can be inferred that considering the analysis "graduates" unit, the program exceeds the qualified registration requirements and meets high-quality ones, among other things, the graduates show outstanding performance.

On the other hand, the findings that we might think are of interest to the scientific community have to do with the following:

- The graduate relevance as a unit of analysis is ratified, to evaluate the quality of the academic programs, for feedback purposes, as has been raised, by Magaña et al. (2017), the evaluation of programs, through the performance of their graduates, seeks to identify the evidence of the transformations that the program managed to develop in the subject, from his role as a student to his professional development, in such a way that, it can be contrasted to what extent these transformations are consistent with the mission, vision, competencies, graduate profile, and professional profile that the program intends to develop.
- The category validates the *fit-for-purpose category* proposed by Harvey and Green (1993), is validated as a valid framework for developing quality evaluation methodologies in the educational field, through the contrast between the objectives established and the results achieved.
- The methodological development of this research confirms in some way, the polysemic, controversial, and complex character of quality study in the higher education field, described by Acevedo et al. (2022) and Gil et al. (2018). It considers that other researchers may have

different interpretations of the information presented and analyzed in this document.

These findings highlight the relevance of the higher education evaluation field for the scientific community, where, although the literature evidences a discussion between objective, subjective, and instrumentalization visions as Didriksson (2015) stated, research efforts should be oriented to strengthen the evaluation models, so that they can be improved in two aspects: objectivity and efficiency level in the capture of relevant information.

Additionally, it is important to recognize that the methodological design, in one way or another, could influence the results of the study, considering that only 10% of the graduates' population was interviewed, which, although the sample members were selected through a rigorous process of cluster, proportional and random sampling. It could have been left out, individuals who, with their experiences, in some way, directed the results in another direction.

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