













Notions and distortions of professional practices vs. social and labor realities in the university context

Nociones y distorsiones de las prácticas profesionales vs. realidades sociales y laborales en el ámbito universitario

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ABSTRACT

The link between higher education institutions, the context, and the government constitutes one of the main articulating axes of social development. The university's mission is to preserve the cultural heritage, generate knowledge, and transfer it to new generations. Together with the primordial values of humanity, it must guarantee that they can be inserted in these relationships. In this sense, a qualitative study was conducted with a complex approach in which diverse methodological aspects were integrated into the main design, which was ethnomethodology. The research was carried out at the Universidad Nacional Experimental Sur del Lago, Venezuela, and its objective was to evaluate the representation of the professional practice process from a multidimensional perspective. The results show that professional practices should occur periodically and not at the end of the formative period to avoid a late confrontation between theory and practice. In addition, a constant curricular transformation should be generated, updated, and contextualized according to the development needs of the social and academic environment.

Keywords: Educational sciences, higher education institute, pedagogical research, pedagogical practice.

JEL classification: I20, I21

Received: 17-09-2025

Revised: 01-12-2025

Accepted: 20-12-2025

Published: 15-01-2024

Editor: Carlos Alberto Gómez Cano 

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Cite as: González, H., Rivera, J., Soto, A., Mojica, L. y Guardela, J. (2024). Nociones y distorsiones de las prácticas profesionales vs. realidades sociales y laborales en el ámbito universitario. *Región Científica*, 3(1), 2024266. <https://doi.org/10.58763/rc2024266>

INTRODUCTION

Education is conceived as a means to form people capable of responding to society's transformations in an active, conscious, and supportive manner (Jasis, 2021; Nousheen et al., 2022; Porto & Zembylas, 2020; Reyes et al., 2021). It is also considered a process of human growth that allows to be surrounded by spaces with distinctive characteristics of people's interactions with their peers and their social context.



This need to prepare future generations to achieve a solid link with society, based on a solid understanding of the importance of their agency, has been picked up and addressed from the objectives of sustainable development despite the fact that its projection has been globally disparate (Herrmann et al., 2023; Kopnina, 2020; Mehmood, 2021; Nousheen et al., 2020). Hence, as part of the 2030 Agenda, the achievement of quality, personalized education that addresses the diversity of interests and needs, contextual particularities, and the challenges facing humanity are key lines for its realization (Leal et al., 2023; Molleví et al., 2023; Žalėnienė & Pereira, 2021).

In this sense, it is understood that universities constitute institutions of fundamental relevance in that they not only contribute to the training of their students and the integral development of the individual but also act in networks that generate synergies with other social agents, such as the government, companies or new ventures (AlMalki & Durugbo, 2023). Thus, higher education institutions (HEIs) represent an important platform for decision-making, the generation of opportunities and solutions to local, regional and global problems, an enclave for innovation and raising the quality of the external processes in which they participate, among other aspects in which they contribute to social development (AlMalki & Durugbo, 2023; Cao et al., 2020; Gupta & Yadav, 2023; Kipper et al., 2021; Pérez et al., 2022; Tseng et al., 2021).

Thus, university strategic lines converge in the search for academic excellence, the promotion of projects with high social responsibility and commitment, as well as scientific production (Compagnucci & Spigarelli, 2020). This last element constitutes a fundamental path insofar as transferable knowledge and its generation are not an unalterable monopoly of HEIs since companies and other private organizations have infrastructures for such purposes, which has recently altered the mission of the modern university (Palma et al., 2020; Pérez, 2022; van Barneveld et al., 2020).

This implies that HEIs must organize themselves and reflect on how to establish higher levels of social relevance through concrete and viable responses from their nature and purposes to the needs of society, especially those referred to the promotion of its development. Therefore, as an object of study, they represent complex ecosystems where the educational, the social, and the personal are integrated through complex relationships of interdependence and reciprocity.

Consequently, the university is a key element in supporting human development through its processes. Among these are the professional practices that are conceived in HEIs with the objective that students begin their professional contacts with the work environment in which they will develop (Cabaroğlu & Öz, 2023; Parrella et al., 2023; Prescott et al., 2021; Rillotta et al., 2022; Wolinsky-Nahmias & Auerbach, 2022). This process, called practicum, pre-professional internship, internship, or similar, acquires different expressions and forms of organization according to the specific context and the evolution of Higher Education in this context (Alconero-Camarero et al., 2020; Charles et al., 2023; Gómez et al., 2021; Hora et al., 2020).

METHODOLOGY

Research approach and design

The study was conducted based on the interpretive paradigm, with a naturalistic approach and the consideration of the research team, their worldviews, and performances as an important unit of analysis (Burns et al., 2022; Irshaidat, 2022; Matta, 2022). This approach to social reality was based on the need to deepen the understanding of the practices that give meaning to the phenomena under study based on the examination of their construction by a group of interrelated social agents (Bogna et al., 2020; Rose & Johnson, 2020; Sridharan, 2021). In such a way, the reconstruction of such meaning was sought from the team's analytical exercise on meanings, actions, and the representation of reality by key participants (Al-Ababneh, 2020; Castell et al., 2022).

In order to give shape to these epistemic postulates, ethnomethodology was used as a research method, as it allows the examination of reality from the perspective of the subjects, but also from what is not intrinsically personal, as well as in the common production of discourses, artifacts, cultural practices, among other incommensurable aspects of the common sociocultural space (Ghaffari-Rafi et al., 2020; Kim et al., 2021; Kim & Crepaldi, 2021). In addition, due to the need to delve into the units of sense and meaning of the internal structures of the phenomenon, another phenomenological design was embedded in this design as support for the procedural part and for the interpretation of the phenomena found (Probst et al., 2020; Pryce-Miller et al., 2023).

Data collection and analysis

Data collection took place through the use of interviews, observation, taking field notes, and group discussion of the main partial findings for a better synthesis of these. In this way, it was possible to access reality in vivo through the experiences narrated by the participants, the figure representation of reality through maps and code networks, as well as from the self-referential positioning of the researchers (Wiltshire & Ronkainen, 2021).

The procedure for analyzing and interpreting the data collected consisted of the reduction process proposed as the basis of grounded theory designs. This facilitated the transcription of the verbal data, the organization of the different databases according to preconceived criteria (participants, contexts, researchers), and the conduct of coding (Charmaz & Thornberg, 2021; Conlon et al., 2020).

Thus, codebooks were developed, categorical and thematic analyses were conducted, and co-occurrences were eliminated until a unique coding-categorization system was arrived at by constant comparison of the data corpora and their filtering (Koleva, 2023; Urcia, 2021). These procedures facilitated the representation in a figure in networks or conceptual diagrams through the ATLAS.ti software (7.2) in order to show a representation of the main findings.

Finally, with respect to the embedded phenomenological design, this was operationalized through the singular and independent study of the database containing the information from the interviews so that the participants' perspectives could be explored from their own belief systems, experiences, and stories (Urcia, 2021). Consequently, meanings were explored from the basic questions inserted, aimed at understanding the distortions between ideality and reality in the scenario of professional practices.

The analysis was carried out through the horizontalization of the verbalizations and the action of the researchers for the reduction of the phenomenon. The main results were produced through the presentation of the raw data and the connection of the findings with the system of codes-categories elaborated in the global design.

Context and sample

The research context was the Universidad Nacional Experimental Sur del Lago (UNESUR) (employers' representatives) during the professional practices of the undergraduate programs in two priority careers for local-regional development. Due to previous experience in the context, alliances created with gatekeepers within the organization, the evaluation of the subjects' informative capacity, and the formulation of a system of criteria for the selection of participants, a broad intentional sample was designed.

This aimed to cover roles, specific functions, and knowledge about the phenomena in question from the perspectives of those involved without neglecting spaces, cultural aspects, and other units of analysis considered influential. Therefore, the sample consisted of 10 key informants (four students, three academic tutors, two technical tutors, and a professional practice coordinator).

RESULTS AND DISCUSSION

The analysis of the organized databases and the triangulation of the main findings corroborated the complexity of the phenomena under examination. In particular, the coding-categorization process yielded a total of 17 codes linked together in three dimensions, one sub-category, and one theme (main categories of higher hierarchy). Table 1 shows the relationship between the codes and their grouping, which is discussed in more detail below.

Category: Professional Practices in University Education

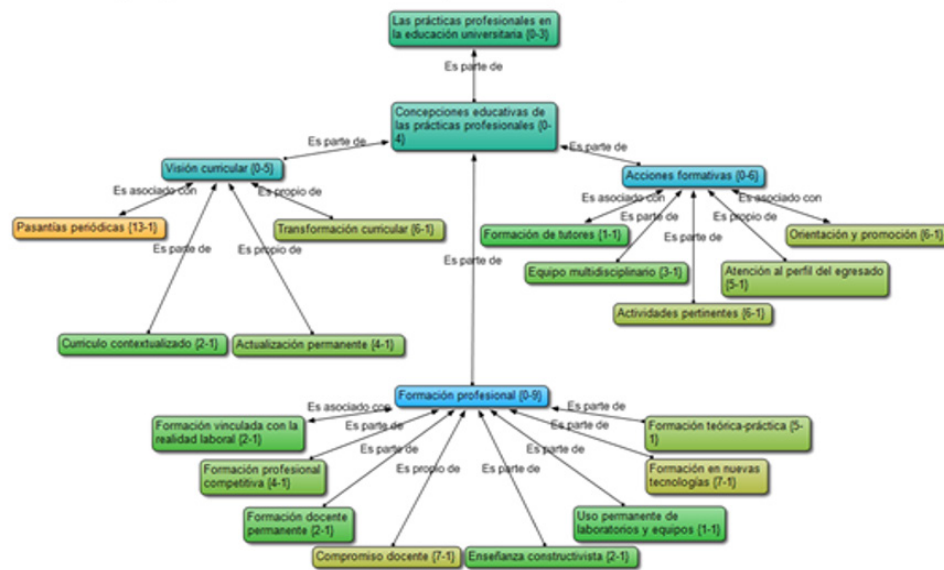
The educational conceptions on professional practices in this context raise a favorable prospective vision for the productive sector; however, they must be framed in a climate of organization, commitment, and responsibility. For this, the participation of innovative subjects, researchers, and with great social commitment is required. Therefore, it emerges as a sub-category: Educational Conceptions of Professional Practices, marked by the educational relevance that this field of action represents in university education (Figure 1).

Table 1.
Codification of information

N°	Code	Dimension	Sub Category	Category
1	Curricular transformation	Curricular vision	Educational Concepts	Professional Practices in University Education
2	Permanent update			
3	Contextualized curriculum			
4	Regular internships			
5	Theoretical and practical training			
6	Training in new technologies			
7	Permanent use of laboratories and equipment			
8	Constructivist teaching	Professional training	Professional Practices in University Education	
9	Teaching commitment			
10	Continuing teacher training			
11	Competitive vocational training			
12	Training linked to the reality of work			
13	Orientation and promotion	Training actions		
14	Attention to the graduate's profile			
15	Relevant activities			
16	Multidisciplinary team			
17	Tutor training			

Source: own elaboration

Figure 1.
SubCategory Educational Conceptions of Professional Practices



Source: own elaboration

Note: the figure appears in its original language

Professional practice constitutes a cardinal process in university education since it allows students to interact with the world of work for a certain period of time. Therefore, within this process, there are substantive relationships that uniquely qualify the link between theory and praxis.

In this sense, the data collected and their triangulation with the literature consulted point to the fact that the importance of professional practice is not exclusively didactic or instructive but participates in the configuration of identity, both personally and professionally. This is due to the fact that the contents and organizational forms are articulated within the student's action, who must emulate behaviors typical of their profession while solving professional problems that are inherent to their field of action and part of their social responsibility.

Thus, all the training received by the students during their stay at the university campuses acquires special importance when developing their practices. In this sense, it is assumed that the process should be thought of as general and specific competencies preconceived in the study programs; however, the data suggest that this operationalization is not always achieved, and the expected advances remain at the level of curricular theory and the educational policies that frame them, but far from the expected professional performances.

This implies that both students and teachers should recognize the professional practice period as a learning scenario that leads to the diagnosis and monitoring of capacities, skills, cognitive interests, and potentialities, which helps them take the step of successfully assuming the profession. Likewise, the data suggest the identification of these practice spaces as valuable opportunities for students to perform consciously and actively in their profession.

From this subcategory arises the Curricular Vision Dimension. This is where the epicenter of the analysis lies since, in Higher Education, the curriculum is an intellectual elaboration that mediates between the needs of the social context, the learner, and the university processes. This assumes that the interaction between the university processes, the contents, the cognitive operations, the values that are advocated, and the way in which they will be dosed are transparently declared.

The data collected corroborate the relationship between the model of society, curriculum, and professional practice. This could be seen in the statement of pedagogical intentions, the monitoring of the processes arising from the curriculum, and the determination it exerts on the formative reality. Consequently, the results pointed to the need to review the impact of the curriculum design on the actual exercise of professional practice, not only in the aforementioned educational discourse but also in the concrete praxis.

Thus, the following codes show how the curricular vision of the informants was manifested in the context of UNESUR. One of the aspects that emerge from the analysis and interpretation of the data is Curricular Transformation [1], which is seen in the following quotations:

[...] I would also like to make a suggestion... that we...(sic) should revise the curriculum, since 5 years ago... we are behind... it has not been done, so you get repetition of content... it is very common and especially production engineering... besides the fact that many subjects are not at the corresponding level [TT1AEA]

[...] they are *toderos* (sic) and we should start by changing the curriculum, they are *toderos*, and they lean more towards vegetal not only in the livestock part but also not vegetal... however, I think they are more or better trained in the vegetal area with the animal, that perhaps some basic curricular units in the animal air should be incorporated or become mandatory, then this should be modified in the curriculum, but a little so they can go more with tools [TT2IPA]

As suggested by the verbalizations, the curriculum represents, at the different educational levels, the way of approaching education, the teaching and learning processes, as well as the methods and techniques to carry out the different pedagogical activities. That is why, in the context of UNESUR, different agents demand its transformation and express the need to adapt it to the development needs of their social environment.

Likewise, the relationship between codes and categories in the global sense and the phenomenological reduction in the specific one point to the urgent need to make the curriculum more flexible, especially in its relationship with the student body. This is due to the need for students to start from a referent of meaning, which facilitates the assumption of the curriculum from their previous knowledge, but also their future aspirations. This result was highlighted in the agricultural sciences, where participants also pointed out the value of learning and applying knowledge related to agricultural sciences.

In relation to the above, the Permanent Updating code [2] emerges, which is expressed through the information provided by the tutors as follows:

[...] when we review and introspect on its professional training profile, we see that the university is still anchored to the same academic programs (sic), so the training profiles must be updated over time and, therefore, there is no permanent review process that allows for the adaptation of the program contents [TA1AEA]

This result was contrasted with Ayala and Dibut (2020), who state that updating the curriculum implies understanding how the substantive university processes condition its sub-processes, which at the same time are interdependent among themselves and influence the personological aspects of training, as pointed out by Pérez (2022). As a result of these results and the triangulation, it became clear that the curriculum itself should guide professional practice, not as a cold set of objectives and expected results but as a true projection of personal and professional processes that qualify learning.

Likewise, the code Contextualized Curriculum [3] emerges, which was manifested in the raw data as follows:

[...] the South Lake Basin, that it be better equipped with human talent like the university has, we have all the productive areas, the key careers in agriculture, we have them here, I think we should strengthen aquaculture, because there is water everywhere (sic)... so we have to focus our training on the context [TT1AEA].

[...] there was not much contact within the animal field and they had to assume those activities or those responsibilities within the professional practices and it was like a shock, the reality and what they learned or the little knowledge they had in the career, so, we have to restructure the curriculum [CP2IPA]

Similarly, the importance of personal factors that influence the implementation of curricular adaptation was emphasized, although with greater presence in the invisible discourse. In other words, the need to actively evaluate the actions of the agents who ultimately provide an outlet for the elements indicated in the curriculum.

Another aspect related to the curricular vision of professional practices is the code Periodic practices [4], expressed by the informant subjects as follows:

Sometimes, there are professional internships that are very good, sometimes it is a matter of time; that is why I think that it can be a progressive and not a static training, perhaps that these professional internships can not be from such a short period of time, but that from the student's professional cycle (sic) it can be progressive to start, to tell you something from the sixth semester... I think so, I just think they need to be trained more, I think they need to be trained and make this training much more continuous, progressive and, perhaps not at the end but throughout the whole career [TT2IPA]

[...] I would say that ideally they should not leave with only one 12-week internship, but with several internships, I say this not only... from my own experience... I had the possibility of doing several internships in different things and that is what I can tell you afterwards (sic)... well, but I am really going to dedicate myself to this, because this is what I like and this is what I will do best, I say [TA2IPA]

Peña and Vargas (2020) state that professional practices or internships can be planned and executed for varying periods of time, which can be relatively short or take up to two years. This dilation in time puts into tension multiple aspects of the practice and its own purpose within the curriculum, which may favor aspects such as specialization or act to the detriment of students due to not achieving an integral development of their potentialities in various fields.

In relation to the code Periodic practices [4], students also take into consideration the realization of professional practices periodically, as the following comment indicates:

[...] I think, first, that internships should be longer or that they should have several internship periods during the course, not just at the end, because those 12 weeks are often not enough to put into practice everything that has been learned. There are internship units that have big problems that sometimes 12 weeks I guess are not enough because there are things that attract attention and one would like to contribute more [E2AEAPROC]

As for the Professional Training Dimension, this is seen as all the curricular processes and social interaction between teachers and students during the course of the university career. In this sense, we highlight the codes that emerged from the interviews as a result of the analysis in relation to university education in the UNESUR context. The first code is represented by Theoretical-practical training [5], observed in the following quotations:

[...] they have to have the experience of being... what happens is that we are training theoretical students and not practical ones? In engineering this happens, and the biggest limitation is transportation, there is not a day when they do not know if there is practice (sic), then you are left as a teacher, as a facilitator, as an irresponsible person, then they tell you to schedule 15 days before, 8 days before, or as they tell you the same thing, without doing the practice [TT2IPA]

[...] we went back to the classrooms... we generate a staff in theories, but the practice is very little, the link between theory and practice has no place in our professional training profile, ... we have gone from graduating a student with broad practical skills, to a university that is training and generating skills at a theoretical level for each of its graduates [TA1AEA]

In relation to the meaning of training in new technologies [6], another relevant aspect in university education, the informants express the following:

[...] that statistical software, for example, software for data control, the management of Saint, and all the derivations that may exist in the market of that type... In the animal area, what is the livestock software or the GANSOF, they learn that within the professional practices... here they are not taught, so as a university, we are leaving aside the management of these new technologies [TA1AEA]

[...] I think it is necessary that teachers should (sic) provide us with the technological tools and, of course, how to use them, in any subject within the career that the labor market demands of us, as I see that technology is advancing, one must get involved or join these advances [E5IPAFIN]

In administration, for example, in information technology, students should learn how to make a payroll, make a record, so that they can use Excel to calculate vacation bonuses, all those things, that should be, so that when they arrive, they have that knowledge, but if they do not have it, how can they arrive at the company with their hands tied and besides, the university is the one who looks bad [CP1AEA]

Likewise, it is necessary to specify that this university, like most Venezuelan universities, must assume technological training in all its academic offerings as a fundamental curricular component for current university education. According to the literature consulted, it is vital to achieve, from the university itself, the enhancement of innovation and technological integration processes for the development of the productive sectors, especially in the agricultural sector (Alant & Bakare, 2021; Oyelami et al., 2022).

From this perspective, the permanent use of laboratories and equipment [7] was manifested in the testimonies of the research informants, as follows:

Well, we have a lot of deficiencies, because for example, in the animal area we don't have a laboratory, ... there is no physiology laboratory ... if we go for bovines, neither ... and I may have the knowledge, but I don't have a laboratory nor do I have the equipment and what can I tell you ... [TA2IPA]

[...] well I am going to talk about the ultrasound, first of all that (sic) not everybody has it (sic), it is a rather expensive tool, however it can, I think that... we, as teachers, as a university, must have the necessary equipment [TT2IPA]

In this way, it could be noted how UNESUR, in its enormous responsibility to train professionals, with the aim of contributing to the agri-food production of the southern part of the lake and the country, must have the support of the State to incorporate the equipment and tools it needs. This should be understood from the helix models since this would be an investment for the economic and social development of Venezuela (Durán-Romero et al., 2020; Hernández-Trasobares & Murillo-Luna, 2020; Pérez et al., 2022; Yoda & Kuwashima, 2020).

On the other hand, in relation to the training offered by the UNESUR context, an informant emerged with the code **Constructivist teaching** [8], as a teaching model that, in his opinion, corresponds to the learning-by-doing approach, which is required in this university setting, something that can be identified in the following quote:

[...] well, learning by doing is not the same as simply capturing it visually in one hour of classes, as a university professor, because I have seen it in the students I have had and who have previously told me about the professors who have given them classes and they do not learn... and therefore my criteria (sic) is that they learn in my classroom, how? They work and give their contribution and that is where the knowledge is built, when the student leaves the classroom, he leaves with the knowledge, because he did it himself, and he learned it [CP1AEA]

Thus, for this institutional representation, the work of this should be marked with actions that highlight the application of knowledge from the constructivist teaching approach. Thus, the teaching practice in context should evidence the development of activities that provide students with techniques and procedures that foster the ability to apply knowledge.

Consequently, for the researchers among the UNESUR teaching functions in context, several challenges and demands posed by the scenario under study were diagnosed, mainly regarding the responsibility intrinsic to the act of teaching, which is subsequently projected as a professional performance. This raised questions about the crucial relationship between the pedagogical competencies required to occupy the role of tutor and accompany the student to a learning process that is not exclusively technical but for life, as stated by Perez (2022).

This situation brought about the deepening of the exploration of the subject who teaches and from the voice of the informants emerged the code Teaching Commitment [9]:

I lacked a little more commitment on the part of the professors (not all of them); I had very good professors, but I also had several professors who lacked commitment, who did not attend, who came in a little late and left very early... when you see, it is very little... but I lacked that, I lacked to see a little more commitment from the academy, especially from the university authorities and the professors to do great things [E1AEAFFIN]

According to what has been expressed, the responsibility that a teacher has in educating others is manifested from the ethics that implies the recognition and the teaching actions, incorporating elements that favor a committed and responsible practice.

Given this situation, it emerges from the context through the information collected, the following is the evidence of ongoing teacher training [10]:

For several reasons, there are few professors who (sic) make the decisions to continue training, to continue updating themselves, the shortcomings of the country and the context in which we are, also limit a lot the teacher's action within the academy and, another one, perhaps due to lack of knowledge [E1AEAFIN]

I think it has to be a permanent and updated training process because technological innovations are constantly changing, from our teachers to our participants [TA1AEAEA]

Thus, lifelong learning and the incorporation of technological resources to teaching strategies are strategic processes for the university, as they allow the enhancement of human talent in the organization and the incorporation of new resources and trends. Likewise, competitive professional training emerged from the information collected [11]:

I believe that it is necessary to generate the appropriate competencies, that is to say, are our graduates capable of generating diagnostics for the gathering of information that will allow me to detect, among other things, those comparative advantages that exist in the region, and do we generate in them the complementary training processes in the use of new information and communication technologies to potentialize those comparative advantages and turn them into competitive advantages? [TA1AEA]

No, currently we lack the competencies required by the labor market; we do have competencies, but we have failures as any other system, what we have to do is to make the teaching staff aware of what we lack and that we have to train a student right now (sic) not to be a graduate in administration, but to face the problems the country is going through, not only to be an administrator, but to be an entrepreneur, to be proactive, to be a visionary [CP1AEA]

In addition, the information collected shows the training linked to the labor reality [12], as shown below:

It seems to me that we do not have the training of graduates according to the needs outside, well, because I think that in the case of livestock, I am looking at it from my area because perhaps in the vegetable area (sic) there is a better or greater capacity to respond as a professional, that does not mean that they do not have the will to commit... but, as training, I think that more elements from another area should be incorporated in the animal part so that they can have a greater capacity to respond to the productive process, because here we must contribute knowledge to the producers in general [TT2IPA]

All of the above evidenced the weaknesses of UNESUR in training professionals in the agricultural and livestock area, considering them as limitations in the face of the current requirements of a more competitive work environment and of accelerated advances and innovations. Therefore, it is required that this training be oriented to the emerging demands of the environment (Alconero-Camarero et al., 2020; Ayala & Dibut, 2020; Hora et al., 2020; Gómez et al., 2021). This situation impacts the students when they carry out their professional practices in the different production units of the South Lake area, Venezuela.

To conclude with the dimensions grouped in the educational conceptions subcategory, the Formative Actions Dimension is presented, which was considered based on the assumption that all the processes that occur in the educational environment can be considered formative and are represented by the activities, actions, and strategies inherent to the teaching and learning processes. Therefore, they are effectively and symbolically linked to the curricular pedagogical processes that take place in educational centers.

Thus, the code Orientation and promotion [13] arise, which become necessary actions for successfully realizing this formative process. The aforementioned code is noticed in the following informant:

[...] it is necessary to generate strategies from the coordination of internships to link, to promote as an institution, through a training process we generate for our students (sic). I am talking about the institutional figure, there is no promotion of the internship fair... ideally there would be a direct connection from the internship unit or the coordination of internships with the different companies in the specific areas of work [TA1AEA]

In accordance with what has been stated, the need arises to carry out dissemination campaigns to promote professional internships that contemplate their importance, the activities required to perform, and their scope and social relevance. In this regard, De la Flor (2018) highlights the preponderant role of the university in terms of promoting professional internships and even obtained better results when evaluating internships as a mandatory requirement, i.e., it is better to promote internships for the insertion of its interns in the labor market than to downplay this fact.

In relation to the orientation that interns should receive before and during their internship period, there is satisfaction on the part of the coordinating teachers of the department in carrying it out (the institutional representatives):

[...] is that we are complying according to the condition in which we are working and we do it because of the commitment and we do it for them. Above all for them! Because we are there to guide them, to orient them, so that they don't leave without any kind of knowledge of orientation to what they are going to face in their internship unit [CP2IPA]

In this order of ideas, the analysis of the information obtained from the context, the need for all the formative activities of the practices to be carried out under a unifying element, allowed the identification of the code in Attention to the profile of the graduate [14], raised by the informants through the following fragments:

I go directly to the competencies in which our students are trained, that is to say, I review the graduate's profile to see which are the fundamental training areas and try to establish a link between these training areas of the profile with the activities that the intern can develop in that production unit [TA1AEA]

Regarding this code, it is shown that it is necessary to promote the professional profile of each undergraduate training program, from the beginning to the final stage in the planning of the activities performed by students in internships. In this regard, Peña and Vargas (2020) emphasize that internships or professional practices should not constitute a supplanting of the role of the graduated and trained professional for decision-making and the deployment of operational performances, meaning those that impact in a direct and informed way the operation of the organization:

[...] they are not intended to perform operational or continuous tasks or to carry out the functions usually performed by a civil servant or worker. These activities can be carried out by an active student of an institution or a graduate who wishes to continue reinforcing his or her knowledge, but in a practical way (p. 17).

Also, the relevant Activities [15] are shown in the context, as added with the following code:

According to my experience, what is required is that he can develop within the areas or within the fields promoted by engineering, production, whether animal or vegetable, in the soil, in the administrative part; then, that he combines all that and can perform it within the company where he is doing the internships... the professional practices that does not fit it or not station (sic) in a single activity but allows him to rotate and develop different activities [CP2IPA]

What was stated by the informants evidences certain difficulties and distortions when talking about the activities carried out during the internship. Evidently, the need arises in the context to plan and organize these activities so that they are framed within what is required; this shows the importance of all activities being planned according to the various curricular contents of the undergraduate training programs.

In the same way, the code Multidisciplinary team [16] was created, as a need raised in the context to cover what concerns the formative actions of professional practices:

[...] in the internship department we lack infrastructure and personnel, in addition to a multidisciplinary team, which includes teachers in all areas of the administration career, having specialists at our disposal, where they in turn make a diagnosis of the internship unit, that would be our duty [CP1AEA]

In view of the above situation, the complex dynamics involved in the successful development of professional practices in university education can be deduced. Thus, Pérez (2022) states that tutoring is a complex, multidimensional process, which should not fall on the figure of a teacher who has not been prepared for it since its scope goes beyond academic accompaniment and involves relationships with other spheres of the student's life project. In the same way, tutor training [17] also emerges as a formative action, as shown below:

I think that the academic tutor does not even imagine the advantage that he/she has as a professional, tutoring an intern, the same happens with the degree works... I think that we should be obliged to train ourselves as tutors [TT1AEA]

When considering these aspects, a conceptualization of mentoring is required, as well as a correct delimitation of its areas and functions (Pérez, 2022). Hence, the spiritual and material recognition of the people who occupy the role is also fundamental. As the author points out, failure to observe these particularities of the tutorial action leads to poor interpretations of its imbrication in the substantive university processes, to the uncritical assignment, and, subsequently, to the failure of its principles (Pérez, 2022).

CONCLUSIONS

The study led to the conclusion that professional practices should take place permanently throughout university education, since the focus on theory prevails and the confrontation with practice is delayed. Therefore, professional practices should be carried out three times during university training, from a constant, updated, and contextualized curricular transformation, subject to the development needs of the social, academic, and research environment of the training programs.

It was evidenced that the integral formation of the graduate allowed the students to successfully link with the production units and to propose innovative strategies. However, the need to work on the process of curricular transformation based on the demands of the labor market and to incorporate training in new technologies was recognized, as well as the use of available technologies and the acquisition of equipment required for the professional practices of curricular units essential in undergraduate training programs, based on constructivist teaching.

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FINANCING

The authors did not receive funding for the development of this research.

DECLARATION OF CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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