

Implicit Assumptions of Pre-Professional Practice from Tutorial Experience in Higher Education

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Abstract

This study, about preprofessional practice (PP) in higher education, consisted of unveiling the implicit assumptions regarding the PP from the experience of academic and business tutors. A qualitative - interpretive approach was followed at the National University of Chimborazo - Ecuador and the companies that have inter-institutional agreements. The focus group, interview, content analysis, and the software Atlas.ti were the methods used. Results describe the design and evaluation of PP, and the way to improve it, as a contribution to optimizing the training process during the PP.

Keywords: *Tutorial function, theory-practice relationship, professional training, higher education.*

1 INTRODUCTION

The great challenges faced by society in the economic, productive, social and environmental spheres oblige higher education institutions to provide quality education that guarantees the comprehensive training of future professionals, with knowledge, skills, abilities, values, attitudes and behaviors for an efficient, ethical and socially committed professional performance. In this framework, one of the important axes of attention in university education is the pre-professional practice; therefore, through a research conducted with funding from the National University of Chimborazo-Ecuador, during the year 2022, it was proposed to unveil the implicit assumptions about this academic process from the perceptions of two important actors within it, the academic tutor and the business tutor, as a contribution to the optimization of this academic process. For universities, designing a curriculum that develops professional, personal and social competencies, understood as a set of cognitive, procedural, attitudinal and axiological skills that are evidenced in the interaction and resolution of practical problems, is a challenge.

In this order, Ronquillo et al. (2019: 17) point out that competence does not reside in the capabilities that a person possesses, but in their mobilization to solve problems. “Knowing”, is not to possess, but to use, by putting into practice an action is that one becomes competent. On the other hand, “know-how” is not currently the routine application of the individual's knowledge, but “know how to act”. Knowing how to act” involves a set of actions, where the execution of each one is dependent on the fulfillment of the whole. Competence requires knowing how to link different actions and not just apply them in isolation.

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Consequently, it is necessary to develop a curriculum that promotes the application of knowledge in problematic situations, the performance and intervention of students in real scenarios, the experimentation or testing of theories, and the theorization of experiences or practice, in order to form reflective, analytical, critical, and proactive professionals based on their own learning experiences, capable of facing the accelerated scientific and technological development, the dizzying changes in society and nature, the level of competitiveness in the labor field, and the growing social demands. In this sense, PP plays an important role in training. Vargas (2018: 101) defines it as “the training period spent by students in work contexts specific to the profession (...) outside the university working with professionals in real work scenarios”.

Romero and Moreira (2018) agree with the above, stating that the PP contributes to the formation of the student, allows him/her to acquire experience in the labor field, develop professional criteria in the decision-making process. Silva and Jiménez (2015) agree with the above indicating that students appreciate the opportunity to participate in a circuit of social and professional relationships that strengthens them, also valuing a quality education. For León and Mayta (2014: 23), it is “the set of activities carried out by the intern on a temporary basis in a company or organization, placing special emphasis on the learning process and professional training”. According to Rodríguez et al. (2018), this process is individual, however, it is produced as a result of a process of socialization and collective reflection.

Thus, PP is understood as the first contact that students make with the world of the labor market, the encounter that will favor the development of the necessary competencies to face the real problems of their profession (Rojas et al., 2017). In view of the above, PP contributes significantly to the training of students, by developing methodological, procedural and instrumental skills that allow them to test and experiment the set of theories, laws and concepts acquired during their training, but it also enables the experiences obtained in the different scenarios of action to make the construction of new knowledge feasible (Larrea, 2015).

From the sociological point of view, Cedeño and Santos (2017:111) consider PP as a process that contributes to comprehensive training taking into account reflexivity as a sustenance of self-valuation and personal involvement, in which the student participates as a social, professional, cultural and ideo-political subject, committed to the nation's project and the production and service sectors that must guarantee its subsistence. In this perspective, reflection in practice implies an active and deliberative cognitive process in which, from real situations and problems in the classroom, a series of thoughts are triggered that involve an ordering of ideas, based on observation, in the weighing of options and alternatives to act in the lived and experienced reality (Rodrigues, 2013).

The notion of reflection “implies thought processes that develop in close relation to the metacognitive abilities of the students in training” (Lamas and Vargas, 2016: 60). What contributes to the formation of mental structures in the learning process and that can take place during and after the action (Op cit. 2016). Based on this conceptualization, CP is considered as a space for disciplinary training for professional performance, but it also contributes to the personal and social development of the student, as a result of the reflective process that arises from the student's encounter with the experience lived in the real space of action.

Consequently, according to Palacios (2019), a good PP model proposed by the academy, the university or the faculty must articulate, nucleate all the elements of training, in order to contribute to the comprehensive performance of students. In this framework, the role of the tutor is important, whose action “implies the personalized accompaniment of the students' trajectory” (Caldera et al., 2015: 105). In the case of the PP tutors, their function is oriented to counseling and assistance in the field of social and labor insertion,

facilitating the transition from university to active life and training through practice in companies (García, 2008).

In this regard, Rojas et al. (2017) state that, in the conditions of the practice, not only the professor of the career intervenes, but also the professionals of the different institutions where the student develop this activity, which is enriched by sharing the experiences lived in practice with the students and brings to the teaching process concrete examples of the labor reality. Barrera et al. (2016) add that the role of the tutor is defining in this activity, even more so in the current digital era, an aspect of great importance in a context where the demands and demands of students change because society changes. Therefore, it means that the tutor can establish constant communication with his or her students through the different ways that the new technology favors and, in this way, guarantee a permanent feedback about the development of the events in the practice.

In the same vein, Larrea (2015) highlights the importance of supervision and monitoring in the management of the PP by the business and academic tutor for the development of skills, competencies and performance of students, since their intervention contributes to the modeling of the student's actions in the concrete reality or in the scenarios of education at work. In correspondence to the above, it raises the need to maintain systematic coordination with the professionals of the organizations and institutions that integrate the practice areas, to evaluate these actions and ensure compliance with the profile of students during the development of the practice (Larrea, 2015).

Meanwhile, Saniter and Siedler (2014) point out that CP does not represent any advantage, since the student invests a lot of time in its execution instead of dedicating it to study. Similarly, Wolter and Banscheraus (2012) question PP because they consider that companies use students as cheap labor, which undoubtedly affects the true purpose of PP in the training of future professionals. The above arouses the scientific interest of the researchers to know what the implicit assumptions of PP from the tutorial are experience? The findings emerging from the analysis of the experience of academic and business tutors will constitute contributions for the optimization of the training process during CP in higher education.

The purpose of the research is to unveil, from the experience of academic and business tutors, the implicit assumptions regarding pre-professional practice (PP) in higher education.

2 METHODOLOGY

Descriptive-interpretative qualitative research was carried out, which allowed to know the perceptions and interpretations of the academic and business tutors about the process of PP, from the experiences acquired during the performance of their functions, as important actors of the mentioned process. The context where the study was carried out is the National University of Chimborazo (UNACH)-Ecuador, in the 7 undergraduate courses of the Faculty of Engineering and 6 companies of the productive sector of zone 3, with the participation of 21 academic tutors and 14 business tutors as informants.

Consequently, in order to obtain information, the first step was to interview the professionals of the companies responsible for supervising and advising the student interns, called business tutors. The following criteria were considered for this purpose:

Concerning the company; public or private entities with local trajectory, referents in the area of production or generation of services, that maintain inter-institutional collaboration agreements with UNACH, have 10 or more places to host the students and where students from at least 5 cohorts prior to the year of research have done their internship.

Regarding the business tutors, it was taken into account that they should be professionals with at least 10 years of experience and that they should have performed the functions of

business tutors for more than 4 periods, in order to avoid bias in the appraisals based on a single experience.

With these considerations, 14 business tutors were interviewed (4 women and 10 men), related to 7 undergraduate careers that make up the Faculty of Engineering of the UNACH, namely: Environmental Engineering, Agroindustrial, Industrial, Systems Engineering, Electronics and Telecommunications Engineering, Civil Engineering and Architecture.

The focus group was also used to obtain information from the academic tutors, who are designated by each of the degree programs, with a concession of hours within their work schedule for the fulfillment of this function. To select the informant academic tutors, tenure, years of professional teaching service between 5 to 10 years, experience as academic tutors and the relevance of the professional degree with the career were considered.

Based on these considerations, 2 focus groups were organized, the first one with teachers with up to 5 years of service and the second one with teachers with more than 5 years, so that the criteria of the younger ones would not be affected by the more experienced teachers or vice versa. It was also considered that, since it is a young faculty, most of the teachers are within this range of time of professional service with tenure.

The constitution of the groups was as follows: the first focus group was formed by 8 teachers and the second one by 13, of which, 4 were women and 17 were men, with the participation of 3 academic tutors per career, for a total of 21 teachers.

For the application of the techniques described above, two scripts of questions were designed based on criteria such as: conception of PP, PP management, impact of PP on professional training and aspects to improve the PP process.

The interviews and narratives obtained in the focus groups were recorded with the consent of the participants. The information obtained was transcribed and, with the support of Atlas.ti software, the information was examined using the categorization analysis technique.

This procedure begins with the identification of units of analysis, to which codes were assigned to allow, through their relationship, the formation of categories. The interpretation of these categories constitutes the result of the study.

3 RESULTS AND DISCUSSION

IMPLICIT ASSUMPTION CONCERNING THE CONCEPTION OF PRE-PROFESSIONAL PRACTICE FROM THE BUSINESS TUTOR'S POINT OF VIEW

The pre-professional internship is a training space that allows the student to integrate theory and practice in a real performance context, as well as to strengthen the skills acquired in the classroom.

[...] I think it is their first encounter between the academy and the practice itself, where they put into practice their knowledge acquired in the classroom and really begin to see how the different teams that make up the company work [...] they put this knowledge into practice and not only the knowledge they have acquired in the classroom [...] we try to make them go through each of these departments so that they can have a clear understanding of all the job opportunities they could have once they enter the labor market (Entrevista Tutores Empresariales, 2022).

It is always important that it is accompanied by the theory, by the teaching that the professors give them, and when they do the internships they know how to develop themselves in all the work that they are going to do [... our company is dedicated to

consultancy and also to construction, we have a laboratory for construction materials, soil types and asphalts, they develop themselves more in what has to do with the laboratory, obviously they have to go out to the field, they have to do soil tests, they have to do asphalt tests and they also have to do concrete tests, this helps them to reinforce what they learn in the classroom so that they can develop [... it is very important for the students to have knowledge and skills, but above all, they can develop in what has to do with the field, more than anything to do with civil engineering, it is practice and then they have to try to receive this type of knowledge that sometimes is more important in practice than in the classroom [...] so they leave with very broad knowledge in what has to do with technology, so we do not fail in what has to do with it (Entrevista Tutores Empresariales, 2022).

IMPLICIT ASSUMPTION ABOUT THE BUSINESS TUTOR'S ASSESSMENT OF THE STUDENT'S KNOWLEDGE LEVEL

For the business tutors, the level of knowledge of the students depends on each one of them, and it cannot be stated that it is the same for all. In some cases, it is adequate and considered quite acceptable, particularly in the theoretical aspect.

Well, here I would practically say that the knowledge they bring from the academy is quite acceptable [...] they have helped us a lot because they also come with knowledge of data networks, so they have helped us in that sense and continue to help us in the repair of wireless terminal equipment of a system [...] in the theoretical part, let's say that they are quite good. [...] there are people who are quite well developed with a lot of knowledge [...] the level of knowledge, as I mentioned, is adequate for the first activities that they carry out in the internships; they do not require an advanced level, as they are second-semester students, but they do have knowledge of volume calculations or drawing plans. Well, in reality, as far as technology is concerned, I think that now our students are very advanced [...] (Entrevista Tutores Empresariales, 2022).

In other cases, the students' level of knowledge is considered low.

[...] as I mentioned, they lack a little more practice, that is, they should be a little more expeditious in the practical aspect, they should have more facility in those activities [...] Again, the fact that the level of the same semester is very uneven, that is the drawback.

[...] in fact, some of the weaknesses may be some concepts that must be already established, the handling of basic tools such as specifications, technical standards, it is important to manage them, they must know how to handle them very well because that is what we do and develop within civil engineering [...] another important aspect is also a little broader knowledge of what has to do with quality control [...] the quality control of a work is very important. the quality control of a work is very important, that has to be based on a mandatory basis so that the student can leave with some knowledge of what has to do with the quality control of works, different works and projects that are developed, so we can focus a little bit on what has to do with that [...] I don't know if it depends on the semester, sometimes they are in different semesters, but sometimes we come across people who are quite developed with a lot of knowledge, and there are other colleagues who have many limitations (Entrevista Tutores Empresariales, 2022).

IMPLICIT ASSUMPTION REGARDING THE EVALUATION OF THE PRE-PROFESSIONAL PRACTICE BY THE BUSINESS MENTOR

They point out that they do not carry out a rigorous evaluation process based on academic criteria. Nor do they receive any kind of guidelines for this purpose from the university. However, they consider for student evaluation the quality with which the assigned work was performed, the time of execution, compliance with safety standards, punctuality at the time of entry and exit of the company, and the quality of the work performed.

Well, if we have an internal evaluation here, we have a checklist to see what has been covered or in what quality parameters this activity has been carried out, that would be one way, and the other would be based on these checks; then we fill out the reports and the score of the internships. Well, it is not a test that says we are going to take a test or an evaluation or we are going to put a piece of equipment here and say let's see how to repair it [...] in some cases, with respect to the time of completion they have responded efficiently, the times have been acceptable; in other cases, they have taken too long or they have taken it very quickly [...] evaluations of a more general type, i.e. what are the procedures to carry out a repair [...] the safety procedures they have to follow in each of the areas, something like that [...] the evaluation is really about the student's interest in what they do [...] they have to be punctual in the activities they are going to carry out [...] obviously they have to arrive on time and the departure has to be the same [...] they have to be responsible for the activities they are given [...] they have to be responsible for the activities they are given (Entrevista Tutores Empresariales, 2022).

IMPLICIT ASSUMPTION ON ASPECTS TO IMPROVE THE PRE-PROFESSIONAL PRACTICE FROM THE BUSINESS MENTOR

They believe that the pre-professional internship, being a training space for the student, should be permanently reviewed and optimized. In this sense, they consider that the internship should be carried out during extraordinary academic periods so that the student would be exclusively dedicated to its fulfillment.

Well, among the suggestions, the first one would be that the internship period should, if possible, take place during the academic recess period, so that people have their five senses and can manage the entire schedule [...] Well, if we have had both experiences during vacations and during the semester, in any case, it would be convenient for them to take place during vacations because they can work the entire working day. Well, we have had both experiences, during vacations as well as during the semester, but in any case, it would be convenient for them to take place during vacations because they can spend the whole working day, but during the semester the time management is a bit restricted and in any case they are not even at one hundred percent, with all five senses because they are also attentive to their classes [...] [...] in one case, it would be convenient for them to take place during vacations because they can spend the whole working day. [...] a very small number of us have been helping them on the days or dates when they have classes, but on a part-time basis, that is to say, since the course has classes in the morning, we have been accommodating them in the afternoon so that they can do these internships, but as I was talking to them it is not very applicable, because our infrastructure is outside the company; in cantons and parishes where the company is really strong, preventive or corrective maintenance, assembly of new equipment, etc., are carried out. So a commission leaves at nine o'clock in the morning, work that is planned for the whole week, so we cannot tell the colleagues who work here, in the different areas, that they know they have to be back at two o'clock in the afternoon because they have interns coming in so that they can take them [...] they are not going to take advantage of these pre-professional internships which is practically their first job [...] [...] [...] it is always important for the students to have a little more open time, otherwise it would not be possible to make a very established schedule where they can go out to the field, because the work that is done is not only in the city, sometimes they have to go out to the provinces, to other cities; then it would not be possible to count on that personnel or to help the student to go out and practice outside the city, because the schedule would not really be enough, so it would be preferable for the student to have the availability of full time to be able to do their internships [...] (Entrevista Tutores Empresariales, 2022).

In addition, they consider that the contact between academic and business tutors during the pre-professional internship should be more constant and all administrative procedures implemented and required by the university should be duly socialized with the business tutor.

Well, in reality this is not applied, what we have done if the tutor has any doubt or if he/she wants to reinforce something else, he/she tells us and we do it, but a strict space so that the tutor can talk to us or share some aspect of the student, we have not been able to do that during the internship; it would be very good to do it because in reality we already here in the laboratory to see how the student is developing in practice it is always good to talk with the tutor so that this can also be reinforced, because in reality when you leave the university you know that it is not the same, in practice it is very difficult and even more so now that the work space in the province is so competitive, so it is important to reinforce many things of the student [...]. It is always important to be hand in hand, the university, which in this case is represented by the tutor, the student and the company, in this case my person, we must always have the confidence and security to say or ask for the things we want to teach the student [...] obviously, if there is the possibility of having more contact between the tutor or the representative of the university and the company, it would be excellent (Entrevista Tutores Empresariales, 2022).

In the same way, they believe that the company and the university should agree on the formulation and execution of projects of common interest that benefit both; and that the projects carried out by the students in the company should constitute inputs for their degree projects.

Well, the logical and obvious thing to do would be to work together on projects that could be a contribution both for the academy and for the institution [...]. In reality, the students must already have an established plan because in order to be able to do the internship, they also have to focus a little bit on what is related to their thesis topic, so the plan must already be established, obviously the tutor also contacts us to see if there is anything additional that can be reinforced or that can help the student according to the requirements of the tutor, according to the established planning (Entrevista Tutores Empresariales, 2022).

IMPLICIT ASSUMPTION ABOUT THE CONCEPTION OF THE PRE-PROFESSIONAL PRACTICE BASED ON THE ACADEMIC TUTOR:

They consider that the pre-professional internship is a training space that allows the student to strengthen the skills acquired in the classroom and to integrate theory and practice in a real performance context; it is the primary contact with the workplace.

It is the application in this case of what is seen in the classroom [...] pre-professional practice is very important for students, they apply the knowledge they acquire and develop in the classroom [...] Fundamentally, I see pre-professional practice as the link between theory and practice [...] Pre-professional practice is a complementary academic activity [...] internships in some way reinforce the curriculum or the professional profile [...] I think it is very important in academic complementarity [...]. The pre-professional internship is an academic complementary activity [...] internships somehow reinforce the curriculum of the career or the professional profile [...] I think it is very important in the training of students [...] fundamentally, I believe that pre-professional internships are a way of complementing academic activities [...]. fundamentally, I believe that pre-professional internships have a market nexus because they allow them to get closer to the work environment [...] it is a first work experience for students [...] they have a much broader view of the reality of the work environment, they can see processes up close [...] I believe that with pre-professional internships students make contacts, they acquire their first experiences in the work environment, of what they will develop in each of the careers (Grupo focal Tutores Académicos, 2022).

There were also unfavorable assessments of the pre-professional practice:

[...] what Dr. Rodrigo says should be considered, he is very right and what the colleagues have shared is very true, unfortunately, I say unfortunately and I think we have all gone through from our academic training what we are going to do free labor for the companies,

do paperwork; in the case of the agro-industrial career personally, I have experienced this: go away, check the warehouse, put me here, they never trust, they do not integrate the trainee in the processes, they do not trust the trainees [...] we have been developing pre-professional practices for a long time, I do not know how adequate, I do not know how pertinent it is to integrate the student or send him/her to do that kind of things, in fact there have been cases where girls from administration are taking coffee to the bosses, so these are not practices, they are not practices, it is to fall and fall back into the same thing (Grupo focal Tutores Académicos, 2022).

IMPLICIT ASSUMPTION ABOUT THE PERCEPTION OF THE ACADEMIC TUTOR REGARDING THE LEVEL OF KNOWLEDGE AND WHAT THIS PROCESS MEANS FOR THE STUDENTS

They believe that the knowledge of the students is not the most adequate, the student is not prepared and they also believe that the pre-professional practice does not mean something important for the students in their training:

[...] I've had the opportunity to work with kids who, when they are about to join the company where they are going to do their internship, they find out that they have to integrate, and that they have many academic deficiencies, so they tell me: "How can I continue with the internship? I can't do the internship, I don't know what I'm going to do [...] [...] you see, at the end of the day, being a bit crude is that students don't care much about what they are going to do, I have talked to them and it's not that they complain, that they ask me to do this or that, what they want is to comply and they want the paperwork to justify the document and that's it [...] I think unfortunately, it becomes: I fulfill the hours, they give me the document, I enroll, so they don't see it as a possibility of work, of strengthening knowledge, of acquiring skills and abilities that allow them to have a better professional growth, they take it simply as a fulfillment of hours, a requirement to be able to enroll and continue in the university [...] besides, something happens that I think is an open secret, of the 400 hours that they told us they had completed, they didn't really go, that means they attended sporadically [...] (Grupo focal Tutores Académicos, 2022).

IMPLICIT ASSUMPTION REGARDING THE EVALUATION OF THE PRE-PROFESSIONAL PRACTICE BY THE ACADEMIC TUTOR

They point out that they do not carry out a rigorous evaluation process based on academic criteria, they comply with an administrative process, the qualification does not have an impact on the students' continuation, the result of the evaluation is related to whether or not they did the internship:

[...] the newly appointed tutors do not know how to evaluate because the parameters should be precisely in accordance with the visits, the follow-up they should give during the internship, but because of the way tutors are appointed; when evaluating there is always that problem, so they make a very subjective type of evaluation, just to comply with the procedure, but in the end nothing is taken care of. I think about the learning results that the academic tutor evaluates, as Javier says, that is administrative because it is an already established format, there are some parameters that are evaluated, for example, the writing, the writing of the objective [...] as Javier said, the student is not interested in whether he is evaluated well or not, because that grade does not influence anything, it is only to get the certificate and that's it [...] the evaluation of the business tutor and the tutor of the entrepreneurial and entrepreneurial tutors is very subjective. the evaluation of the business tutor and the academic tutor, in those formats that are poorly established, do not show the learning results, or what the student learned from the theory in practice, that is not graded [...] they are other parameters and formats established by the institution itself, that is where it comes from, so we cannot change the formats or say I am going to change the learning results of the student on the practices; for example, in the area of occupational health and safety it does not say how much they learned in the area of

industrial safety, that is, they are other parameters that are evaluated because they are already determined in the formats (Grupo focal Tutores Académicos, 2022).

IMPLICIT ASSUMPTION ON ASPECTS TO IMPROVE THE PRE-PROFESSIONAL PRACTICE FROM THE ACADEMIC MENTOR:

They state that aspects such as the management of permanent agreements that guarantee sufficient work placements, the timely designation of academic tutors, the monitoring of the activities carried out by students in companies and the redefinition of the evaluation of the pre-professional internship should be addressed to optimize this process and make it really favorable for the student's training:

[...] we should reformulate the agreements, there is a difficulty with the companies, I do not think that every six months they have certain particularities where they need interns from each sector, that is to say; it is not so much the need of the company but that an agreement is already signed [...] strengthen a link that should exist through the agreements between the university and the different social actors, industrial and productive sectors [...] the university should define through the careers the activities that the students are able to develop in the internships [...] [...] [...] they change the tutor one month before the end of the students' internships, then I had to qualify and I did not know anything at all, they just appointed me, the previous tutor was no longer there, so what I had to do was to qualify and I did not know anything at all. they change the tutor a month before the end of the students' internships, so I had to grade and I knew absolutely nothing, I had just been appointed, the previous tutor was no longer there, so what I received was a document of the tutor's grade from the company where he stated his points of view and I did not know the process itself, but I was obliged to grade [...] [...]. they cannot change the tutor in the middle and especially at the end of the process, because there is a need for this qualification but without any support [...] one of the things that can be done is not to change the tutor in the process because they are simply leaving the possibility that the qualifications have no real support [...] (Grupo focal Tutores Académicos, 2022).

[...] another problem is that the regulation does not clarify, it does not indicate when the student should do the internship, if he/she should do it in the sixth, seventh or eighth semester, but he/she has to register, so the student decides to do it in the ninth semester, this particularity produces bottlenecks [...] Another process that is also badly indicated is that many people do an internship first, and then an internship, it is not logical, since it is not regulated it is also a problem [...] we should evaluate the competences that have been developed, the abilities and skills for their performance in the work environment, that is what we should evaluate (Grupo focal Tutores Académicos, 2022).

Regarding the first finding on the conception of pre-professional practice, business and academic tutors state that PP constitutes a training space that allows the articulation theory - practice in real contexts, which is corroborated by Blanco et al. (2012) when they point out, the student during practice observes facts, errors of certain procedures and/or decisions, finds sense to the large amount of pieces of information dispensed in the courses. Concomitantly, Zambrano et al. (2019) argue that direct observation of facts or processes and the elaboration of plans, provides the student with new experiences through which he/she tests hypotheses and contrasts results vs. theories.

Por otra parte, referente al mismo hallazgo, aprecian el aporte de la PP para el desarrollo de habilidades en los futuros profesionales; situación que es corroborada ampliamente por autores como Cedeño y Santos (2017) quienes manifiestan que la PP contribuye al desarrollo de habilidades cognitivas como la flexibilidad. Mientras Lamas y Vargas (2016) mencionan que el aporte está enfocado al fortalecimiento de habilidades metacognitivas. En tanto que, Romero y Moreira (2018) hacen referencia al perfeccionamiento de otras capacidades como la toma de decisiones; y, Blanco et al. (2012) al surgimiento de habilidades y destrezas para el análisis y solución de casos

reales de la profesión. Es evidente que los actores educativos, tutores académicos y empresariales, a partir de sus experiencias dan relevancia a la PP en la formación del futuro profesional.

However, it is necessary to state that the appreciation of the educational actors on PP is accompanied by serious concerns that, if not addressed in a timely manner by the corresponding university authorities, could have a negative impact on the training of students.

On the finding level of knowledge of the student at the time of going to practice, business tutors point out that in general, this is quite acceptable and does not impede their performance, they agree with Ronquillo et al. (2019) when they state that knowledge is not to possess, but to use, to put into practice, to act in a related way. Likewise, both academic and business tutors, when distinguishing CP as a training space, recognize the position of Vega, Moreira and Granda (2019) who argue that this academic process is a tool to shape knowledge.

For the academic tutors, the level of knowledge of the student at the time of going to the PP is not the most adequate because they consider that the student is not prepared; with this statement, they oppose the approach of Ronquillo et al. (2019:7) on “know-how”, which is understood as the non-routine application of what the individual knows, but it is a “know how to act”.

The evaluation of CP is a process that must be carried out in a systematic, continuous and reflexive manner in order to guarantee its adequate achievement. However, in the narrative of the tutors mentioned, it is evident from their experience that this process is not carried out in a rigorous manner, in contradiction with what Armengol and Castro (2011) point out the need for evaluation to be carried out with full rigor in the contexts of intervention, since it implies the certification of the professional competence achieved by the student, which enables feedback and timely support in response to the weaknesses and needs identified during the process.

Another aspect revealed is that the business tutor despite the weakness manifested above, in correspondence with the guidelines established by the Faculty of Engineering of the institution investigated in the Instructive of Pre-professional Practices (UNACH, 2018) where it is determined that the PP will be evaluated from the generic results such as ability for teamwork, conflict resolution of the work environment, practice of values of punctuality and responsibility, commitment to continuous learning, interaction to preserve the social and environmental surroundings; whether it evaluates student learning outcomes such as quality of work, execution time, compliance with safety standards and punctuality, among others.

For their part, academic tutors consider that the evaluation is an administrative process, which allows knowing whether or not the student completed the CP, which has no impact on academic continuation. This is a weakness since the evaluation should record evidence on the development of cognitive, labor and productive skills and abilities of the student (Guevara, 2012), to fulfill this purpose, field supervision and student accompaniment is vital, an academic activity so important in professional training that cannot be neglected (Rodríguez et al., 2011); otherwise, the fulfillment and purpose of the CP in the training of the future professional is put at risk.

4 CONCLUSIONS

As contributions to the optimization of the CP process, the business and academic tutors believe that, since it is a training space for the student, it should be permanently reviewed and optimized. In this sense, they recommend as significant aspects, the constant

interaction between academic and business tutors, which will allow timely decisions to be made, enabling the reorientation of the process and favoring the student.

Regarding the moment of execution of the CP, they recommend that this activity should be carried out in extraordinary academic periods, so that the student would be exclusively dedicated to this activity, attending to their practical training of application and experimentation in real contexts.

They also state the need to manage agreements permanently in order to guarantee links between higher education institutions and community organizations, companies and state institutions, through inter-institutional cooperation and collaboration agreements that enable permanent feedback from social and productive actors and sectors to the academy; but also provide the necessary facilities for students to have real scenarios of action (Rama, 2011), where they can build and reconstruct their learning.

Likewise, adequate attention and socialization of the administrative procedures implemented and required by the university is considered necessary in order to avoid improvisation in the execution of the process and non-compliance on the part of the different actors involved in the PP.

In addition, the pertinent designation of academic tutors is suggested, this in relation to the correspondence of the professional profile of the tutor, the opportunity in time to appoint him/her and the availability for the fulfillment of the functions; in attention to what is determined in Art. 18 of the Internship Regulations - UNACH (2019) where it is established, among the functions of the tutors "Guide, accompany, evaluate, provide feedback to the student during the pre-professional internship procedure".

Finally, it is proposed to redefine the evaluation of the PP as a subsystem of the training system that provides feedback to the operation of the process and concomitantly benefits the student, enhancing his or her future professional performance. To this end, it is necessary that the result of the evaluation be the product of a collaborative activity between the receiving entity and the university, based on the analysis of the written reports of the entities and the efficient supervision of the tutors (Oliver, Santana, Ferrer y Ríos, 2015).

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