Perceptions Of Tutors And University Students On Dual Tutoring And The Development Of Degree Projects

MSc. Rosa Mirian Caamaño Zambrano[1], Dr. C. Nuria Manzano Soto[2]

[1]Universidad Nacional de Educación a Distancia. España, https://orcid.org/0000-0002-7221-7992
[2]Universidad Nacional de Educación a Distancia. España. https://orcid.org/0000-0001-7849-4168

Abstract
The institution's dual mentoring program integrates pre-professional practices with the degree program, thereby fortifying students' professional training. However, challenges have been identified in the coordination of these two processes, which may have ramifications for academic development. The present study analyzes the perceptions and suggestions of students and tutors in their seventh and eighth semesters of education programs at the Faculty of Social Sciences at the Technical University of Machala. The objective of this initiative is to implement a dual tutoring model. Specifically, it examines the opinions of pre-professional (internal and external) and degree tutors on coordinating these two forms of academic support. The mixed-methods approach that was utilized included a literature review, surveys of student and internal internship tutors, and focus groups with external internship and degree tutors. The findings indicate that while students have sufficient access to host institutions for internship and degree programs, there is a paucity of coordination between the tutors overseeing these processes. This fragmentation has the effect of limiting coherent guidance during the final stage of training. The provision of methodological and emotional support, in addition to ensuring effective coordination between tutors, has been recommended. The study's findings indicate that dual tutoring is a valuable strategy for consolidating learning, improving the research process, and raising the quality of university graduates. The implementation of this mechanism is recommended as a means of integrating practice and research.
Keywords: Pre-professional internships, dual mentoring, certification, vocational training, higher education.

I. INTRODUCTION

The culminating stage of a university education constitutes a substantial milestone for students. It is imperative that they demonstrate their capacity to apply classroom knowledge to real-world scenarios while navigating challenging academic and professional expectations. During this period, students are required to submit a thesis that aligns with their institution's standards and evidences their capacity to thrive in the professional realm. The mounting demand for applicable skills and knowledge in professional settings presents significant challenges in the development of degree projects. These challenges encompass a paucity of experience in authentic work environments, the dissemination of content throughout the training process, and an absence of guidance on technical and methodological particulars. These factors have been demonstrated to exert a detrimental influence on academic performance and students' confidence in facing professional challenges.
In this context, tutoring constitutes a pivotal element of the educational process, providing support and reinforcing knowledge that is not reinforced in the classroom. As Flores (2016)

asserts, the implementation of innovative pedagogical strategies is imperative to address the authentic needs of students enrolled in the degree program, particularly those approaching the completion of their studies and the presentation of their theses. Flores also emphasizes persistent challenges in the implementation of tutoring programs, including inadequate institutional support, a lack of clearly defined tutor profiles, a confusion between the roles of tutor and advisor, and a dearth of targeted training for individuals assuming these roles. The aforementioned limitations underscore the necessity of rethinking the university tutoring model and redefining the tutor's role in degree programs.

II. BACKGROUND OF DUAL TRAINING

The concept of dual education traces its origins to medieval Europe, where apprenticeship programs were established, allowing individuals to learn a trade under the direct guidance of a master craftsman. This approach entailed the dissemination of technical expertise and the instruction of apprentices in values such as discipline, coexistence, and professional dedication (Mittmann, 2001). During the 17th and 18th centuries, Sunday and trade schools introduced a more structured approach that allowed apprentices to attend classes outside of working hours. Subsequent to this, in the 19th century, Germany formalized this practice with the Commercial and Industrial Regulations of 1869, thereby establishing the legal foundation for the modern dual system (Ribio Mayoral, 2014).

Lauterbach and Lanzendorf (1997) describe how the 1869 Act legally strengthened vocational training in Germany by establishing a regulatory framework for apprenticeships in companies and vocational schools. The authors of this study posit that this system promoted research, experimentation, and the constant adaptation of the curriculum to market needs. Initially, the responsibility for the training process was held by craft guilds. However, as time progressed, the state assumed control of this training, a development that favored the expansion and consolidation of the state. This historical evolution demonstrates how the dual training model adapted to new socioeconomic demands, ensuring the training of skilled technicians and facilitating their entry into the labor market.

In the latter half of the 20th century, Germany promoted the expansion of the dual model to Latin America. In Chile, this approach was introduced in 1993 in technical secondary education through a program alternating between high school and company training. By 1999, the Chilean dual system had over 6,000 students and 2,200 participating companies, demonstrating its growing acceptance (Sevilla & Balmaceda, 2001). Mexico adopted this model with support from prominent companies such as Volkswagen and Mercedes-Benz, integrating it into various industrial sectors, including the automotive, chemicals, and electronics industries (Labarca, 1999). According to Rueda (2017), Mexico's dual model prioritizes the development of training projects that integrate theoretical concepts with practical applications, receiving support from academic institutions and business entities.

The implementation of dual training in Colombia was initiated in 1975 with the support of the German government and the national productive sector. Institutions such as the Universidad Autónoma de Occidente, Uniempresarial, and the Universidad Tecnológica de Bolívar currently offer dual programs that have demonstrated favorable outcomes in terms of student employability (Mittmann, 2001). In Costa Rica, the National Learning Institute (INA) was the first institution to implement the model in 1993, followed by the Monseñor Sanabria Vocational College and the National University (Araya Muñoz, 2008). This initiative was formalized in 2000 with the establishment of the National Commission for the Promotion of Dual Education (CONAFODUAL).

The experiences of Colombia and Costa Rica illustrate the adaptability of the dual model and its capacity to be incorporated into diverse educational and productive environments.

Collaboration between educational institutions and business sectors effectively articulates theoretical knowledge with market demands, favoring contextualized, relevant professional training. This approach has become a model for higher education in Ecuador, where its adaptation for use in teacher training is under consideration.

Within this framework, dual mentoring in higher education is presented as an innovative strategy to optimize the degree program process. The implementation of this program would facilitate the integration of pre-professional mentors (both internal and external) with the degree program mentor. This integration would result in a more coordinated, coherent, and contextualized process. Consequently, students' practical experience becomes direct input for research purposes, thereby strengthening their academic and professional training in a comprehensive manner.

III.   THEORETICAL AND CONCEPTUAL FOUNDATIONS OF DUAL TUTORING

3.1 THEORETICAL FOUNDATIONS

The dual mentoring model is supported by various pedagogical approaches that emphasize active learning, situated experience, and social interaction as central elements of professional development. The theoretical underpinnings of this approach encompass Dewey's theory of experiential learning, Vygotsky's sociocultural theory, and Kolb's model of cognitive development. These theories facilitate comprehension of the significance of integrating theory with practice in a university student's education.

Dewey (1938, cited in Dewey, 2010) posits that experiential education fosters meaningful learning when there is a reciprocal interaction between action and theory. In this approach, practice is not an isolated activity; rather, it is an opportunity to build knowledge from reality. Kolb (1984, cited in García Zuluaga & Sáchica Navarro, 2016) elaborates on this notion by proposing a cyclical learning model that encompasses concrete experience, reflective observation, abstract conceptualization, and active experimentation. This dynamic methodology finds application in professional training contexts.

From a sociocultural perspective, Vygotsky (1979, cited in García Zuluaga & Sáchica Navarro, 2016) emphasizes the significance of social mediation in the learning process, attributing a pivotal role to teachers, tutors, and peers in the construction of knowledge. The concept of the zone of proximal development demonstrates how adequate support fosters intellectual growth. Within the framework of dual tutoring, this mediation is reinforced through the concurrent engagement with academic and professional tutors, thereby facilitating the student's transition from supported performance to greater autonomy.

Gleason Rodríguez and Rubio (2020) present an integrative view of the educational process in higher education. Drawing from the theoretical contributions of Dewey, Vygotsky, and Kolb, they delineate experiential learning, social mediation, and critical reflection as indispensable components of efficacious professional training. Integrating theory, pre-professional practice, and research has been demonstrated to enrich students' experiences and strengthen their ability to respond to environmental challenges. From this perspective, dual mentoring functions as a conduit between academic knowledge and professional experience, thereby facilitating the construction of contextualized, applicable knowledge.

The dual mentoring model is a training strategy that aligns with the principles of active and situated learning. By facilitating the integration of academic instruction with real-world professional experiences, students can enhance their comprehension of theoretical concepts, cultivate professional competencies, and develop autonomy in problem-solving and critical analysis skills. This comprehensive approach is designed to address the demands

of the contemporary academic and professional worlds. By transforming the degree program into a space for valuable educational synthesis, it aims to provide a multifaceted learning environment that fosters critical thinking and analysis skills.

3.1 Conceptual Foundations

3.1.1 Dual mentoring

Dual mentoring is defined as a training method that integrates academic knowledge with professional practice in real-world settings, enabling students to apply their knowledge in specific and diverse contexts. This model fosters a more profound and substantial learning experience by integrating theoretical concepts with practical applications, thereby facilitating active engagement in both academic and professional settings. In this regard, Araya Muñoz (2008) posits that this pedagogical approach occurs within complementary settings that are meticulously coordinated to establish a nexus between the theoretical knowledge acquired and the experiential learning experiences.

In contrast to conventional practices, dual mentoring involves the concurrent and systematic provision of support from two mentors: an academic and a professional. The role of the guide is twofold: to supervise and to assess. By overseeing the student's training process, the guide ensures that the activities align with the established professional profile. Folch (2018) emphasizes that this structure fosters collaboration between the education system and the workplace, promoting autonomy and the acquisition of essential skills. Moreover, as indicated by the Chilean Ministry of Education (2018), this model enables students to establish connections with the workplace at an early stage, thereby fortifying their technical, attitudinal, and cognitive preparation for professional life.

3.1.4 Dual mentoring process

Dual mentoring is a collaborative effort between an academic mentor and a professional mentor, with both roles working in tandem within the framework of the degree program. The academic mentor is responsible for guiding the definition of the problem and the formulation of clear objectives, while the business mentor facilitates practical application in real contexts. This coordination fosters the comprehensive training of students by enhancing their research and technical skills and cultivating innovative contributions that are grounded in relevant contexts. According to Schmierer, Fernández, and Portugal (2018), this synergy renders the degree program a meaningful and transformative experience, with an impact on both professional training and the educational environment in which it takes place.

3.1.5 Role of the dual tutor

The dual tutor plays a pivotal role in dual training, whether they are assigned by the university as an internal tutor or by the company as an external tutor. According to Schmierer, Fernández, & Portugal (2018), tutors are professionals with extensive experience in the field of student practice, which ensures that their technical skills are solid. Furthermore, candidates are expected to showcase their personal and pedagogical competencies through a demonstration of teaching and pedagogical skills tailored to the specific context.

According to the Spanish Ministry of Education and Vocational Training (n.d.), the role of the dual tutor is fundamental to ensuring the correct integration of the student into the Dual Vocational Training model, facilitating their transition between the academic and business environments. The role of the aforementioned entity is to:

- Design and monitoring of the training plan
- Facilitate the student's integration into the work environment
- Coordinate between the educational center and the company
- Guide and support for students

- Evaluate of student progress
- Coordinate between academic training and experience, ensuring that the learning process is meaningful, contextualized, and aligned with the demands of the professional sector in the work environment.
- Ensure that the learning process is meaningful, contextualized, and aligned with the demands of the professional sector.

Pre-professional internships

Pre-professional internships are of particular significance in the preparation of future teachers, as they facilitate the translation of theoretical learning into the authentic educational environment. These experiences facilitate the development of essential professional skills by providing opportunities for interaction with the dynamics of the school environment. Alvear Ortiz et al. (2023) posit that this direct interaction with reality contributes to enriching the training process through the development of practical skills. In a similar vein, Portela Falgueras et al. (2023) contend that internships are becoming an integral component of teacher training, as they facilitate comprehension of school contexts. In addition, the integration of reflective approaches has been demonstrated to encourage critical thinking among practitioners, as indicated by Portilla Faicán et al. (2023). These researchers propose that the analysis of one's own experiences serves as a means to enhance pedagogical intervention and cultivate an active attitude towards learning.

Beyond their educational value, pre-professional internships provide an environment conducive to developing research processes related to the degree program. The opportunity to identify specific challenges in the classroom allows students to generate proposals based on real-world experience. In this context, dual mentoring emerges as a strategic alternative for providing academic guidance and support in the workplace, coordinating the roles of the institutional mentor and the degree program mentor. This synergy facilitates the definition of study topics, the collection of relevant information, and the construction of applied knowledge. This integrated approach serves to strengthen the relationship between professional training and educational research, thereby promoting pedagogical innovation and the development of contextualized and meaningful practices.

3.1.6 Role of pre-professional internship tutor

The pre-professional internship tutor plays an important role in the apprentice's training, because they are their first contact with the professional world, their guide and role model in practical development. According to Puig Cruells (2004), their role is fundamental in the proper execution, evaluation, and approval of professional internships, as an essential curricular requirement prior to the student's graduation, because they become:

- Learning facilitator
- Internship process manager
- Institutional liaison
- Performance supervisor
- Practical learning evaluator
- Interlocutor and mediator
- Technical instructor
- Student integration into the work environment
- Guide toward critical reflection on professional practice

The pre-professional internship tutor plays an essential role in monitoring and supporting students, ensuring that they comply with the activity plan, supervising reports, and providing support in academic matters related to the internship. Furthermore, the role entails addressing any concerns or problems that arise during the process and referring them to the appropriate authorities. Beyond the execution of administrative responsibilities, these professionals assume an educational role by integrating practical experience with

research development. This connection enables students to reinforce their learning through critical reflection and the application of knowledge in real contexts, thereby enriching both their degree program and their professional development. In this capacity, the tutor functions as a facilitator, promoting the identification of environmental issues, encouraging the analysis of information, and providing guidance on the application of theoretical frameworks in specific contexts.

The articulation between pre-professional practices and research for degree purposes represents a strategic opportunity to optimize the student's time and resources. The ability to access an institution or company facilitates access to real data, the application of relevant tools, the validation of findings, and the design of contextualized proposals. The integration of technical guidance and support within an authentic environment, facilitated by the tutor, serves to mitigate the emotional distress and feelings of isolation frequently associated with degree work. Furthermore, this collaborative environment enables students to make substantial contributions to their respective fields, thereby fortifying their professional profiles through a methodical experience that aligns with academic and occupational standards. In this process, the tutor plays a pivotal role as an academic and practical guide, ensuring that the student's training path is oriented toward applicable and socially relevant results.

3.1.3 Thesis

Research for degree purposes is an academic process that allows students to demonstrate the application of the knowledge acquired during their university education in solving specific problems. Research work is one of the options for obtaining a third-level degree, where students choose a topic with an innovative proposal that allows them to carry out comprehensive research, developing all their skills and using the knowledge acquired during their university studies.

According to the International University of La Rioja (n.d.), the following phases should be considered for the development of degree work:

1. Title or topic: This can be defined based on a real-life scenario.

2. Justification for the research: This can be based on the relevance of the problem identified in the institution and on pre-professional practices.

3. Problem identification: This can be constructed based on the intern's direct experiences in the classroom and on observation of school dynamics.

4. Objectives: These can be formulated considering the needs identified in the classroom and aligning them with the goals of the educational institution.

5. Methodology: Students can formulate and employ qualitative, quantitative, or mixed research methods from the pre-professional practice setting, using tools such as direct classroom observation, interviews with teachers, students, or administrators, surveys to collect data on specific issues, and documentary analysis of plans and methodological strategies.

6. Activity Schedule: Students can organize the research schedule based on the activities carried out at the institution during their internship.

7. Conclusions: Students can draw conclusions based on observation, interaction with the educational community, and the application of pedagogical strategies.

8. Proposal: Based on their experience in the pre-professional internships, students can propose the need to implement strategies to improve the teaching-learning process in the educational institution.

9. Bibliography: During their internships, students can refer to institutional documents, scientific articles, educational regulations, and specialized literature to support their work.

In the context of dual mentoring, which integrates pre-professional practices with research for the degree, students are immersed in a real work environment where they can identify

relevant issues that enrich their degree project, advancing through each phase of the research and ensuring comprehensive, contextualized training.

3.1.7 Role of the degree tutor

The degree tutor plays an essential role in the student's academic and professional training process, guiding them in the preparation of their research work and ensuring that it meets the required methodological and ethical standards. Their role is not limited to supervising written work, but also encourages autonomy, critical thinking, and the development of research skills (Rosas, Flores & Valarino, 2006). Based on various references, the following role for the degree tutor is proposed:

- *Guidance in choosing and defining the topic*: The tutor must guide the student in selecting a relevant and viable topic, ensuring that it is related to their field of study and has academic and social relevance (Complutense University of Madrid, 2012).

- *Methodological advice:* You must ensure that the student uses appropriate methods for their research, ensuring scientific rigor and consistency in the study design. (Universidad Privada del Este, 2022).

- *Review and feedback:* Through critical reading and constructive comments, the tutor helps improve the structure, clarity, and quality of the thesis. (Rosas, Flores & Valarino, 2006).

- *Promotion of autonomy and critical thinking*: Not only does the tutor supervise the research process, but they also encourage reflection and critical analysis, allowing students to take ownership of their work and develop research autonomy. (Complutense University of Madrid, 2012).

- *Emotional and motivational support:* The tutor also acts as a mentor, providing support to reduce the anxiety and stress that the degree process can generate. (Universidad Privada del Este, 2022).

- *Ethical and academic supervision:* They must ensure that the work complies with ethical and academic standards, avoiding plagiarism and promoting integrity in research. (Rosas, Flores & Valarino, 2006).

The degree tutor is not just a supervisor, but a learning facilitator, methodological guide, and mentor who drives the student's academic development. Their role is important in ensuring that degree projects not only meet formal requirements but also represent a valuable contribution to knowledge and professional practice.

IV.   METHOD

4.1 Research approach and design

The research is descriptive in nature and uses a mixed approach, combining quantitative and qualitative methods to obtain a comprehensive view of the phenomenon studied. Analytical-synthetic and statistical methods were used, allowing for a rigorous analysis of the data collected. To ensure the validity and reliability of the findings, data triangulation was applied, contrasting information from different sources and collection techniques.

4.2 Population and sample

The population of the study consisted of 352 students enrolled in their seventh and eighth semesters of education programs at the Faculty of Social Sciences of the Technical University of Machala. The programs included Basic Education, Early Childhood Education, Physical Education, Experimental Science Education, Foreign Language Education, and Psychopedagogy. Moreover, the university appointed 32 internal pre-professional practice tutors to supervise students in their practical training. In addition, 58 degree tutors were responsible for guiding the research process for degree purposes. Furthermore, 117 external pre-professional practice tutors from 26 educational institutions served as host centers for the practical training of students. According to the

Quetzaltenango Citizen Commission on Transparency and Probity (n.d.), "The initial step in defining the study population is to delineate the units of analysis. These entities may include individuals, households/families, organizations, groups, businesses, or others (p. 3). Convenience and availability sampling was employed for the sample. In the case of the student population, the total number of respondents to the online survey was 283, which corresponds to an 80.39% participation rate. This participation rate is sufficient to ensure adequate representation in the subsequent analysis. For the purpose of this study, the population of tutors was 32, of which 29 responded, yielding a 90.6% participation rate, thereby ensuring the reliability of the study.

Conversely, two focus groups were conducted: one focused on degree program tutors and comprised 10 participants, intentionally selected from a population of 58 teachers based on criteria such as gender, experience, representativeness by degree program, and institutional disposition. In the case of the focus group with tutors of external pre-professional internships, 15 representatives were selected from among 117 teachers belonging to 26 educational institutions. The selection was based on a set of criteria, including the number of tutors per institution, geographical location, educational levels (early childhood, primary, secondary), and gender parity, ensuring diverse and meaningful representation.

4.3 Data collection techniques and instruments

The following collection techniques were used:

− - *Surveys:* Aimed at students and teachers who supervise pre-professional internships to obtain quantifiable data on their perceptions and suggestions regarding dual mentoring and the degree program.

− *Focus group:* Applied to UTMACH degree program tutors and pre-professional teachers from host educational institutions, with the aim of exploring their experiences and perceptions of dual tutoring in depth.

The data collection instruments were validated by six experts in the field of education, three of whom were university professors and three of whom worked for the Ministry of Education. The experts evaluated the relevance, clarity, and consistency of the survey items and focus group guides.

4.4 Data analysis

Quantitative data were processed using descriptive statistical analysis, which included measures of central tendency (mean, median, and mode) to identify the most representative values, as well as measures of dispersion (standard deviation) that allowed for understanding of the variability of the responses. This methodological approach enabled the description of the distribution of participants' responses and the subsequent highlighting of key differences between different groups. Conversely, the qualitative data, derived from focus group interviews, underwent a thorough content analysis. The process entailed coding the responses, identifying recurring patterns, and categorizing the perceptions expressed by the participants. Through the observation of these emerging categories, a more nuanced understanding of their perspectives was attained, enabling the formulation of informed conclusions and the revelation of underlying aspects that were not discernible through quantitative data alone. The integration of these analytical approaches served to enhance the validity of the findings, thereby providing a holistic and comprehensive perspective on the phenomenon under study.

V. RESULTS

According to a survey conducted among seventh- and eighth-semester students in education programs at the Faculty of Social Sciences of the Technical University of

Machala, regarding perceptions and suggestions about dual mentoring, the following results were obtained:

Student perceptions

Table 1 *Student perceptions*					
Question	Always	Almost always	Poor	Very Poor	Never
	%	%	%	%	%
Does the internal pre-professional internship tutor coordinate actions with the external pre-professional internship tutor and the degree program instructor to guide and facilitate the process of preparing the degree project?	20	12	11	7	50
Is the pre-professional internship setting, in reference to the host institution, a suitable place for them to carry out their research work for the purposes of obtaining their degree and receive tutoring when the situation warrants it?	71	17	5	4	3
Are you well received at the institution where you are doing your pre-professional internship?	78	16	3	2	1
Would integrating the tutorials provided by the internal and external pre-professional internship tutors, as well as the degree tutor, be a proposal that would contribute to improving the degree process?	75	17	5	2	1

Source: Own elaboration*, 2025*

According to data obtained through a survey of 283 seventh- and eighth-semester education students, key perceptions were identified regarding the coordination between pre-professional internship supervisors (internal and external) and degree program instructors.

Fifty percent of students indicated that there is never any coordination between these actors, while 18% (11% "little" and 7% "very little") also reported weak coordination. Only 32% perceived some degree of coordination ("always" or "almost always"). These results show a weak link between the teachers responsible for practical support and those responsible for the degree program, suggesting a fragmentation in the research guidance process.

In contrast, 88% (always and almost always) of students considered that the internship setting is conducive to preparing their degree work and receiving tutoring, highlighting the value of the school environment as a space for learning and research. In addition, 94% (always and almost always) of students said they felt welcome in educational institutions, reinforcing a favorable environment for professional development. This perception is relevant, as a welcoming environment positively influences students' motivation and willingness to research and apply their knowledge (García, 2012).

Finally, 92% positively valued the idea of integrating internal and external internship tutors with the degree tutor through a dual model, highlighting the potential of this strategy to improve the degree process.

Suggestions from students
Table 2
Suggestions from students

Question	Always	Almost always	Poor	Very Poor	Never		
	%	%	%	%	%		
Would you be satisfied with the guidance provided by the internal pre-professional internship tutor in relation to identifying the research problem and collecting data for the purposes of obtaining a degree, suggesting this procedure?	77	15	5	1	2		
Do you agree and suggest that degree tutoring be integrated in collaboration between the internal and external pre-professional practice tutor, giving it a dual focus?	71	17	8	2	2		
During the degree program, do you require emotional support, motivation, and guidance on how to manage stress and anxiety associated with the degree program?	82	10	4	3	1		
Do you consider and suggest combining pre-professional practice with research work to simplify the time and process of obtaining a degree?	72	20	5	1	2		
Is it necessary to have a properly structured methodological proposal for implementing tutoring from a dual approach (internal, external, and degree-related pre-professional practice tutor) to support students in the degree process?	78	14	6	1	1		

Source: *Own elaboration, 2025*

The survey results indicated that students expressed interest in optimizing their degree process through dual tutoring. The following results were achieved:

A substantial majority of respondents, 92%, expressed their strong endorsement of the provision of support through tutoring by the internal pre-professional practice tutor, particularly during the phases of identifying the research problem and collecting data. This underscores the necessity to reinforce the role of the tutor in the preliminary stages of the research process.

An overwhelming majority of 88% expressed concurrence with the recommendation to integrate the tutoring provided by the pre-professional practice teacher (both internal and external) with that of the degree program teacher. This criterion lends further support to the proposal of a dual tutoring approach, which permits concurrent assistance from the classroom and the real-world practice setting.

A significant majority of the respondents, specifically 92%, articulated a pressing need for emotional support and guidance to effectively cope with the stress and anxiety associated with the degree program. This underscores the profound emotional impact of this training stage and emphasizes the pivotal role of comprehensive support from tutors, encompassing academic, emotional, and motivational facets, as previously highlighted by García (2012).

With respect to the integration of pre-professional internships with research endeavors, a significant proportion of respondents expressed a favorable perspective, with 92% considering it to be feasible, often citing the strategy's potential to optimize time management. This approach also prevents the duplication of efforts and reinforces the connection between practical experience and research outcomes.

The survey results indicated a resounding support for the implementation of a structured methodological proposal to facilitate dual mentoring, underscoring the necessity for a comprehensive and formal model to guide this integration process and provide effective guidance at each stage of the degree program.

Teachers' perceptions

According to a survey conducted among teachers who mentor internal pre-professional interns in education programs at the Faculty of Social Sciences of the Technical University of Machala, regarding perceptions and suggestions about dual mentoring, the following results were obtained:

Table 3 *Perceptions of teachers supervising internal pre-professional internships*

Question	Always	Almost always	Poor	Very Poor	Never
	%	%	%	%	%
As an internal pre-professional internship tutor, how do you coordinate with the external pre-professional internship tutor and the degree program instructor to guide and facilitate the process of preparing the degree project for your students?	10	5	16	18	51
Is the pre-professional internship setting, in reference to the institutions that host students, a suitable place for them to carry out their research work for degree purposes and receive tutoring when the situation warrants it?	91	2	3	4	0
Are your pre-professional interns well received at the institutions where they do their internships?	89	8	1	1	1
Would integrating the tutorials provided by the internal and external pre-professional internship tutors, as well as the degree tutor, be a proposal that would contribute to improving the degree process?	93	3	2	1	1

Source: *Own elaboration, 2025*

According to the results obtained from surveys administered to 29 teachers who tutor internal pre-professional interns, important perceptions about dual tutoring and its impact on the student degree completion process were identified.

First, 85% of teachers report that they do not coordinate actions with the external tutor or the degree tutor. Specifically, 51% indicated that they never do so, 18% that they do so very little, and 16% that they do so infrequently. Only 15% (always and almost always) reported maintaining coordination. This weak connection evidences a lack of coordination among those responsible for student support, which can fragment the research process. According

to Ruiz et al. (2020), the lack of integration between practice and research significantly limits the development of professional skills.

Regarding the quality of the practice settings, 93% (always and almost always) stated that these spaces are adequate for conducting research and receiving tutoring when needed. This data highlights the value of the educational environment as a starting point for initiating research processes with direct support.

In contrast, 97% (always and almost always) of teachers said that their students are well received in the educational institutions where they carry out their internships. This perception coincides with that of the students and is a key factor in ensuring motivation and the development of professional skills in real contexts.

Finally, 96% (always and almost always) of teachers believe that integrating the mentoring of the internship mentor (internal and external) and the degree mentor would improve the degree process, which reaffirms the relevance of a dual mentoring model that guarantees consistent, structured, and efficient support.

Suggestions from teachers

Table 4 *Suggestions from internal pre-professional internship tutors*

Question	Always	Almost always	Poor	Very Poor	Never
	%	%	%	%	%
Do you think that your pre-professional internship students would be satisfied with the mentoring provided by the internal pre-professional internship mentor in terms of identifying the research problem and collecting data for the purposes of obtaining their degree?	85	7	5	1	2
Would you suggest that degree tutoring be integrated into collaboration between internal and external pre-professional practice tutors, giving it a dual focus?	71	17	8	2	2
Do students in the process of obtaining a degree require emotional support, motivation, and guidance on how to manage stress and anxiety associated with research for degree purposes?	82	10	4	3	1
Do you think that pre-professional practice should be coordinated with research work to simplify the time and process of obtaining a degree for students?	81	10	5	2	2
Is it ideal to have a properly structured methodological proposal for applying tutoring from a dual approach (internal, external, and degree-related pre-professional practice tutor) to support students in the degree process?	91	5	2	2	0

Source: *Own elaboration, 2025*

The tutors of internal pre-professional internships offered valuable recommendations to strengthen the support provided to students in the degree program.

A substantial majority of respondents, specifically 92%, expressed their confidence in the tutoring's ability to foster student satisfaction, particularly during the preliminary stages of the research process, such as problem identification and data collection. This perception

underscores the pivotal role that internal tutors play as methodological guides from the research work's inception.

With respect to the integration of tutoring from a dual approach, 88% of teachers indicated the importance of establishing links between the work of internal and external practice tutors and the degree tutor. This coordination would establish a more coherent support model, in which students can receive guidance at different stages of the process, thereby optimizing resources and avoiding duplication of efforts.

A substantial majority of teachers, specifically 92%, acknowledged the necessity of emotional support, motivation, and guidance for students pursuing their degree. This support is crucial in helping students manage stress and anxiety, thereby promoting their well-being and academic success. This finding aligns with the expressed sentiments of the students, underscoring the imperative for educators to encompass both academic performance and the holistic well-being of their students in their support strategies. As García (2012) has noted, motivation and emotional support are pivotal factors in maintaining commitment during arduous academic endeavors.

With respect to the articulation of pre-professional practices with research, 91% (always and almost always) considered that this integration simplifies the time and process of obtaining a degree for students. This criterion suggests that the internship setting be leveraged to facilitate research, with adjustments to time and effort made without disrupting either process. This notion aligns with the comprehensive training model, which aims to integrate theory, practice, and research into a cohesive framework.

A substantial majority of teachers, specifically 96%, have consistently voiced the necessity for degree programs to incorporate a structured methodological model for implementing dual mentoring. The proposed initiative would facilitate the effective guidance of the process, thereby establishing explicit responsibilities and promoting coordination between mentors from diverse fields. The high level of acceptance among the teaching staff suggests that the institutionalization of this approach in education degree programs is a viable prospect.

Perceptions of degree program tutors and external pre-professional internship supervisors

Perceptions of degree program tutors

According to information provided by degree program tutors regarding their perceptions of pre-professional internships and the degree program process, they state the following:

- There has been no coordination with internal and external pre-professional practice teachers regarding the certification process for students who are simultaneously completing their pre-professional practice. No opportunity has been presented.

- The pre-professional internship setting is certainly a conducive place for students to carry out their research work and receive mentoring. It would be ideal for students to have this opportunity for cooperation between mentors.

- Pre-professional internship students are always well received at the institutions where they do their internships because they are attentive and collaborative.

- Integrating the mentoring provided by internal and external pre-professional internship mentors and degree program mentors would be an innovative intervention to help students with their research. We also went through these processes when we were students, and these strategies would have been very helpful.

According to information provided by the degree program tutors, based on their suggestions regarding pre-professional internships and the degree program process, they state the following:

- It would be an opportunity for students to receive mentoring from the internal pre-professional practice teacher to identify the research problem, as well as to collect data for

their research, because this dynamic brings them closer to the research problem and takes them to the same scenario to collect data, avoiding duplicate efforts and academic overload.

- Having an internal and external pre-professional internship tutor will be a strength and will make students feel fully supported in the development and progress of their degree work, because they will receive timely guidance in different scenarios. Therefore, there should be a connection between the internal and external pre-professional internship tutors, materializing the dual approach.

- Emotional support and motivational guidance should be provided to students, who often experience high levels of stress during their final semesters due to pre-professional internships and degree work. For García (2012), this emotional dimension is seen as a fundamental component of comprehensive teaching support.

- Regarding the feasibility of linking practice with research, the informants consider this strategy to be completely viable and necessary because it allows students to take advantage of the real environment as a source of data and reflection, while optimizing time, contextualizing work, and strengthening professional training.

- Finally, they consider it necessary to implement a structured methodological proposal to guide the dual tutoring process, pointing out that the model should clearly establish the roles of each tutor, promote inter-institutional coordination, and focus on the development of research skills in real contexts. This idea is in line with successful dual training experiences, such as those described by Rueda (2017) and Folch (2018).

Perceptions of teachers supervising external pre-professional internships

According to information provided by external pre-professional internship supervisors (host institution) regarding their perceptions of pre-professional internships and the student certification process, they state the following:

- No links have been established between tutors and university teaching and degree supervisors with regard to the degree work of young people, because we have not received any guidance in this regard; furthermore, students have not mentioned this need to us; however, the proposal would be important for trainees.

- Pre-professional internship settings will always be favorable for interns because they have the support of the principal and the classroom teacher; and while they collaborate in the classroom, they can gain a lot of information and experience that will help them from start to finish to link theory with practice and also in their research activities for their degree; in addition, tutors can provide tutoring at the internship site in mutual coordination.

- For us teachers who welcome interns into the classroom, we look forward to seeing them every year because they have always been a great support, especially when we have too many students in the classroom and when there are a significant number of students with special educational needs.

- The integration of mentoring by the pre-professional practice teacher assigned by the university, the practice mentor assigned by the host institution, and the degree mentor would be a beneficial experience for all parties (mentors and students), because if the research problem arises in the classroom where the student is doing their internship, the student would make the most of their time by linking the internship with the research.

According to the information provided by the external pre-professional internship tutors (host institution), based on their suggestions regarding the pre-professional internships and the students' degree certification process, they state the following:

- The more support students receive, the more grateful they will be, and if they can conduct their research for their degree during their pre-professional internships, it would be beneficial for the interns, because the educational institutions where they do their internships will be more receptive to them conducting their research, identifying research

problems, and gathering information. Therefore, this strategy should be applied to support them from their pre-professional internships, which we would be happy to do.

- Tutoring should always be integrated with student interns, as this helps them reduce stress because they will be engaged in two activities at the same time, pre-professional internships and research, taking advantage of the same setting and the support of the internal tutor, integrating tutoring with the external tutor and the degree tutor. From this perspective, it is suggested that "dual tutoring" be applied to save time and fatigue for interns, because it is understood that in the seventh and eighth semesters they carry out their internships and at the same time their research work to graduate.

- Completing the final semesters is complex for students, because they must complete their degree work, which involves academic demands that can generate: pressure, demotivation, low emotional state, fears, and uncertainty. For this reason, emotional support, motivation, and guidance are necessary to manage the stress and anxiety that affect their academic performance. Therefore, it is important to consider these factors for the benefit of the interns.

- It is entirely feasible to integrate pre-professional practice with research work. This integration would optimize the internship scenario and the time and effort of students, facilitating the internship and degree process at the same time.

- It would be ideal for the university to implement a structured methodological proposal to consolidate the dual mentoring model, which would guide coordination between pre-professional and degree internship mentors to organize support for students in the degree process.

VI.   DISCUSSION OF RESULTS

The findings obtained in this research clearly reveal that most students and internal pre-professional internship tutors perceive a lack of coordination between the different actors involved in the process of supervising degree projects. This perception is further substantiated by the unanimous opinion of both external and degree tutors, who attest to the absence of any structured coordination between the two groups. This phenomenon gives rise to a state of fragmented support, characterized by the presence of scattered and disjointed guidance. In this regard, Ruiz et al. (2020) emphasize that the discrepancy between practice and research hinders the development of professional skills, underscoring the pressing need to devise institutional strategies that foster integrated mentoring.

Another salient aspect that emerged from the participants' perceptions was the recognition by the majority of students and internal tutors that pre-professional internships serve as an optimal environment for the development of degree work. However, this potential remains largely untapped due to a lack of coordination with degree tutors and external tutors, the majority of whom do not perceive a meaningful connection between practice and research. This discrepancy underscores the necessity to establish genuine conditions that facilitate the articulation of theory and practice in authentic educational settings. As Flores (2016) underscores, the development of research skills is of paramount importance, and pedagogical devices must be created to provide adequate support to students, thereby mitigating the challenges they encounter at this stage.

Notwithstanding the noted limitations, a salient positive aspect merits emphasis: the majority of students and tutors concur that students are well received in the institutions where they undertake their internships. This consensus is shared by internal, external, and degree tutors, who acknowledge the integrative function that host institutions fulfill in the training of future professionals. The positive environment fosters not only the integration of students but also their motivation, confidence, and eagerness to learn. García (2012)

posits that the motivation and willingness of those involved in mentoring promote contextualized and versatile learning, thereby reinforcing the emotional dimension of the educational process.

A salient point of consensus between students and tutors (internal, external, and degree-granting) pertains to their favorable stance toward a dual-faceted tutoring approach, which facilitates the establishment of coherent, effective support that is oriented toward attaining meaningful results. In this regard, Rodríguez (cited in Van, 1997) posits that "the integration of guidance into curriculum development necessitates close collaboration between teachers and counselors" (p. 4). This underscores the necessity to institute an institutional model of dual tutoring that fosters collaboration among various educational entities. This collaborative approach aims to reduce the time and effort expended on preparing degree work, thereby enhancing the comprehensive training of students.

It is also acknowledged by participants that dual tutoring can serve as an effective strategy to support students in the early stages of research. This support is particularly crucial in facilitating the identification of problems and the collection of data, which are fundamental tasks in the research process. This perception is shared by the majority of students and tutors, both internal and external. Schmierer, Fernández, and Portugal (2018) posit that tutors are professionals who facilitate the development of competencies in various contexts with technical knowledge and pedagogical criteria. This assertion underscores the pivotal role of accompaniment from a dual approach.

The dual strategy was endorsed by all the actors consulted, and there was also a consensus on the importance of providing emotional support to students during the degree process. The majority of scholars regard it as imperative to have support that addresses the emotional aspects, guiding students to cope with the stress, anxiety, and uncertainty that accompany the research process. García (2012) posits that motivation exerts a direct influence on academic performance and students' proactive approach to challenges. This assertion serves as a foundation for the integration of the motivational dimension into the tutoring model.

Finally, participants reached a consensus regarding the viability and necessity of the articulation between pre-professional practice and degree programs. This articulation was deemed to be a crucial element for optimizing resources, reducing timeframes, and enhancing the quality of professional training. As León et al. (2016) emphasize, the integration of research activities into the internship program fosters a holistic educational experience that seamlessly intertwines theoretical foundations, empirical inquiry, and practical application within authentic professional settings. In this regard, the necessity for a meticulously structured methodological proposal that guides the implementation of tutoring from a dual approach is recognized. Rueda (2017) offers an analysis of the dual model in Mexico, positing that its objective is to cultivate professionals within an environment that synthesizes theory and practice through a project guided by both the university and the professional field. This approach, according to Rueda, enables a more effective response to the demands of the context.

VII.   CONCLUSIONS

The findings of the study indicate that, while students and teachers hold a favorable view of the dual tutoring model, the coordination between the tutors involved in the degree program is often deficient or nonexistent. This phenomenon has been corroborated by the majority of students, internal internship tutors, and, with one exception, external and degree tutors. This unanimous consensus among the latter group suggests a fragmentation of

support and a lack of institutional coordination that adversely impacts the educational process for students.

It has been determined that pre-professional internships serve as an optimal environment for the development of research projects, as they provide students with the opportunity to engage in real-world contexts and address authentic problems. However, this training potential remains unrealized due to the inadequate connection between the internship and the degree program, resulting in processes being duplicated, delays occurring, and students becoming dismotivated.

A salient finding is that students experience a sense of welcome and emotional support within their practice centers, thereby fostering their integration, sense of security, and eagerness to learn. This condition, when considered in conjunction with the generally positive attitudes of all relevant parties regarding the integration of mentoring under a dual approach, serves to bolster the viability of implementing an institutional proposal that would establish a coherent, articulated, and comprehensive support model.

Finally, it was determined that the participating academic community considers the implementation of structured dual tutoring to be both feasible and necessary. This implementation would link all tutors from the beginning of the research process and include not only technical support but also emotional support. This strategy would optimize graduation times, improve the quality of work, and respond appropriately to the demands of the academic and professional environment.

VIII. **Recommendations**

- Design an articulated dual mentoring model that formally integrates pre-professional (internal and external) and degree program mentors, with clearly defined roles and functions.
- Establish coordination spaces between mentors to ensure joint planning of student support.
- Start mentoring from the internship stage, accompanying students in identifying problems and collecting data for their degree work.
- Include emotional support in the mentoring process as an integral part of teaching support.
- Structure an institutional methodological proposal that articulates theory, practice, and research in line with the dual approach.

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