



REFLECTIVE PRACTICE FROM THE LIVED EXPERIENCE OF TRAINEE TEACHERS

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Abstract

Teacher education must continually adapt to social, cultural, economic and technological contexts, which requires constant reflection on pedagogical practices. This study analyzed the investigative pedagogical practice of trainee teachers to understand their relationship with reflective thinking. The research was based on the need to review the practical pedagogical training of future teachers, in accordance with the guidelines of the Ministry of National Education to improve the quality of degree programs. A four-stage phenomenological-hermeneutic study was carried out, focusing on the experiences of the trainee teachers during the pedagogical practice in the curriculum of the Bachelor's Degree in Computer Science and Technology. Data were collected through content cards, observation guides, open-ended surveys, informal conversations and phenomenological interviews, and analyzed through documentary analysis, participant observation and thematic analysis. The results describe the trainee teachers' perceptions of pedagogical practice in terms of teaching strategies, the teacher-student relationship, the conception of the trainee teacher and the role of the tenured teacher.

Keywords: Teacher trainees, pedagogical practice, reflective practice, reflective thinking.

INTRODUCTION

Reflective practice is an essential process in professional and personal development that involves critically reviewing one's actions, experiences and knowledge. It is an approach that involves questioning assumptions, examining beliefs and understanding how they influence the way we act and think. For Schön (1983), reflective practitioners are able to think about what they are doing while they are doing it. This reflection in action enables individuals to adapt their behavior and make more informed decisions in real time.

Dewey (1933) emphasizes the importance of action in the reflective process, arguing that active reflection is fundamental to generate changes in learning processes. It is through reflection that one manages to make sense of experiences, connecting them with previous knowledge and constructing new understandings. In this sense, Kolb (2014) argues that reflection is an integral part of experiential learning, highlighting that it enables deeper and more meaningful learning.

Reflective practice also invites critical examination of mental and social structures, highlighting the importance of self-reflection in the search for truth and personal growth. In the context of education, Piaget (1972) suggests that reflection is fundamental to cognitive development, as it enables the construction and reconstruction of understanding about the world. Freire (2004) advocated a liberating praxis, which involves critical reflection on power structures and transformative action. This perspective emphasises the importance of reflection in the struggle for social justice and human emancipation.

In order to understand the relationship between pedagogical practice and reflexivity in the training of graduates in the area of Technology and Computer Science, initially, a theoretical review was conducted on pedagogical practice in teacher training and the fundamental skills in which an education professional should be trained. A trend was found towards the formation of reflective thinking in educational processes, in the professional training of educators and its relevance in pedagogical practice, since reflective thinking generates a more complex, singular, and analytical knowledge, which favors the professional practice of teaching (Moral, 1997).



On the other hand, the review of research background allowed us to elucidate trends around the research topics, where it is worth highlighting that reflective thinking and pedagogical practice are current topics and focus of interest at national and international level.

With the aim of analyzing teacher training processes, especially pedagogical practice as a fundamental space for articulating theory with practice and developing skills in the framework of a reflective praxis by future teachers, it is important to take into account the trends in teacher training, and to place students at the center of the process; thus, based on a reflective view of teacher training, the following question was posed:

¿How do trainee teachers interpret pedagogical practice from reflection on lived experience? From which, the objective was proposed: to analyze the investigative pedagogical practice of deepening from the lived experience of the trainee teachers, in order to understand their relationship with reflective thinking.

The research was developed under the qualitative approach (Taylor and Bogdan, 1986), which favored the analysis of descriptive data on the lived experience of teachers in training and observable behavior, the phenomenological-hermeneutic method set out by Van Manen (2003) was applied, with the purpose of analyzing the relationship between reflective thinking and pedagogical practice in teacher training, especially during praxis. The research was approached in four stages: hermeneutics, description, interpretation, and description and interpretation; the last three with a phenomenological approach. Initially, the research categories and subcategories were defined on the basis of the theoretical and background review; however, given that it is a phenomenological study, new subcategories emerged during the research process, which were linked to the research in order to deepen and have a broader view of the phenomenon studied. The information was collected through content cards, observation guides, surveys with open questions, informal conversations and phenomenological interviews; the analysis techniques applied were documentary analysis, participant observation and thematic analysis.

In the conclusions, the conception of school as a space for the integral formation of citizens who respond to the needs of a free and democratic society is highlighted, under this context, it is required that students are trained by teachers with the capacity to teach from and for a reflective, permanent practice and through the dialogue of knowledge.

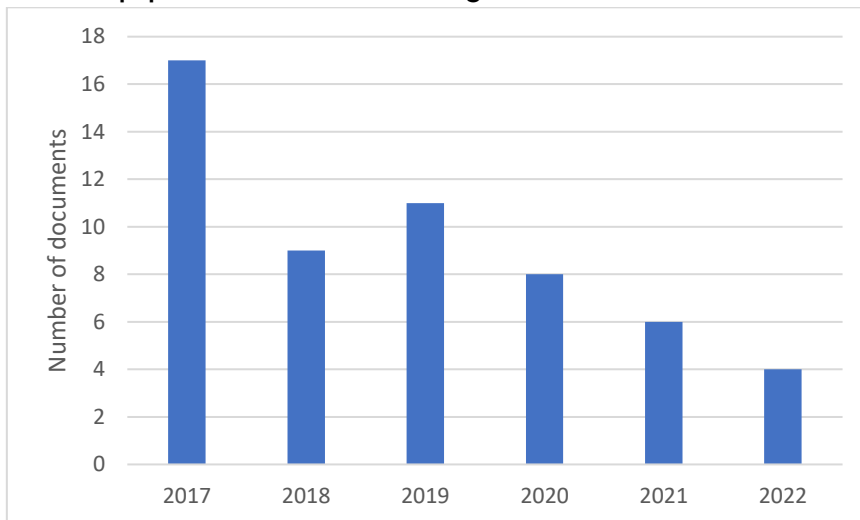
CONTEXT OF THE RESEARCH

In the review of background information on reflective thinking and pedagogical practice in teacher training, at national and international level, the academic production resulting from research, in digital format, was investigated in the specialized

search engine Google Scholar and the academic databases Scielo and Redalyc; within the search criteria, the observation window 2017 to 2022 was established, in order to identify trends and categories of research on the topics of study in recent years. Likewise, publications in Spanish and English were taken into account, in order to have an approach to the Latin American context and to establish similarities and differences with the research approach at a global level. Thus, the result was a robust corpus of documents, for the analysis presented below, 110 digital articles with the highest citation index were selected, 55 on reflective thinking and 55 on pedagogical practice in teacher training.

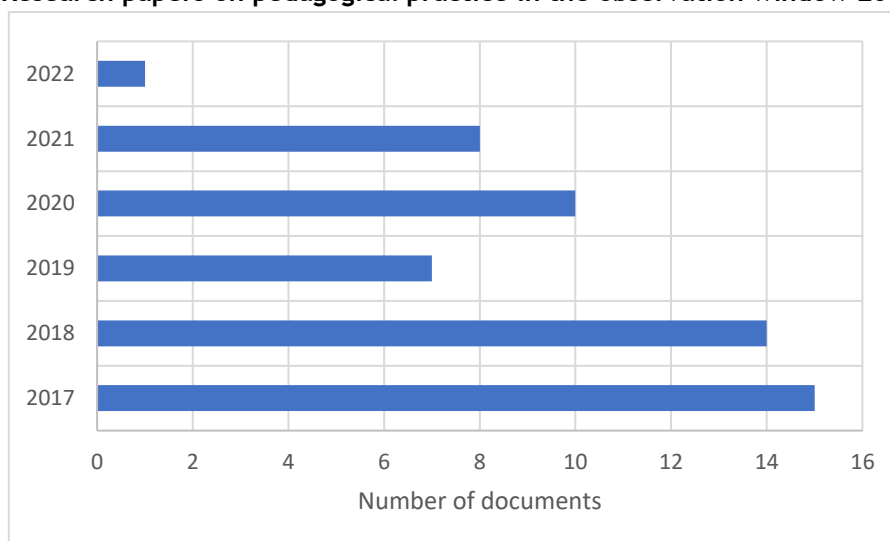


Figure 1. Research papers on reflective thinking in the 2017 to 2022 observation window.



Note. Own elaboration

Figure 2 Research papers on pedagogical practice in the observation window 2017 to 2022



Note. Own elaboration

The research on reflective thinking, reviewed in the observation window 2017 to 2022, is based on the theories of authors such as Dewey (1933), Schön (1983), Calderhead and Gates (1993), Moral (1997), Cornejo (2003), among others; and describes four forms of reflection: anticipatory, which corresponds to discussing alternatives, planning and anticipating experiences; reflection during action, related to tacit knowledge, making decisions during action, without planning them; awareness or tact, where the action is not the product of reflection, however one is aware of this situation; and reflection on memories, corresponds to the judgement on what was done and what should have been done, it can even be the judgement that comes from others.

The review of research on reflective thinking reveals the need to train future teachers in skills to reflect on their practice and, at the same time, to design strategies to develop reflective thinking in students, with the aim of strengthening the capacity for analysis, decision-making, teamwork and problem solving; this involves setting real objectives and goals, intellectual virtues such as knowing how to use information acquired in other situations, and intellectual standard as the ability to recognize what is known or not known about a subject.



Pedagogical practice is conceived as an essential element that makes it possible to demonstrate the acquisition of knowledge within the teacher training process and at the same time, it is a space for teachers in training to re-signify their role and reconstruct knowledge about the pedagogical task. Since ancient times, it has been considered as a sphere of human action, called praxis, where knowledge is related to doing, referring to the fact that it is an activity of the human being to transform the human itself, it is an anthropological phenomenon (Runge and Muñoz, 2012). For years it has been determined that practice cannot be alien to the reflection carried out by the individual, therefore, it is considered that there is no practical activity without thought and reflection. For Romero (1997) 'pedagogical practice is characterized by the dialectical relationship between thought and action, whose purpose is the permanent reconstruction of historical processes, which occur in real social situations' (p.45).

These reflections lead to the need to investigate the ways in which pedagogical practices have been articulated in teacher training processes and how they manage to improve educational processes. In the review of 55 studies on pedagogical practice, four lines of research were identified: conception of pedagogical practice from documentary review, government policies, the voices of its actors, and curriculum analysis; experiences on the design and implementation of strategies and models to strengthen pedagogical practice; the incorporation of technology and the relationship between digital competences and pedagogical practice; and the role of reflexivity in the practical training of future teachers.

The studies analyzed in the background review made it possible to identify that reflective thinking and pedagogical practice in teacher training are relevant topics in the field of education and have been researched globally; likewise, new lines of research were revealed, such as reflective practice and the development of competences that are linked to reflexivity, as in the case of problem solving, decision-making and digital knowledge. The research reviewed on these topics coincides in affirming that reflective thinking is a superior ability of the human being, which must be developed and strengthened at school; in this way, it is essential that future teachers have the skills to think reflectively and are trained in pedagogical strategies that promote these skills in their students.

¿ How does one learn to think?

Thinking is an innate ability of the human being, it arises spontaneously and naturally, as happens with breathing or any other involuntary function, it is not possible to indicate to the subject how to think or control their way of thinking (Dewey, 1933); however, some ways of thinking can be identified and described and to the extent that the subject is aware of them, they can choose or orient themselves towards the one they consider best. For Dewey (1933) the best way of thinking is reflective, this type of thinking starts from an idea that catches the subject's attention, generates curiosity or interest and develops in a chained way, called a consequence of ideas, corresponds to a consequential ordered structure, where each idea is the result of the previous one and in turn, defines the next one, developing through articulated phases, each one is a step that leads to a common end.

Reflective Thinking

John Dewey is the main exponent of reflective thinking; this American philosopher, pedagogue and psychologist stood out for the development of a philosophy that integrates theory and practice, which he reflected in his own life with his intellectual and political work, as well as in the educational reforms of the time. Dewey (1933) proposed the relationship between reflective thinking and teaching in the book *How We Think*, published in 1910, expanded in 1933 and with several editions to date; according to the author, the process of reflection begins when the subject wonders about the value or validity of something (fact or idea), giving rise to analysis and verification to determine whether there are indeed data that justify and support that fact or idea. From this perspective, reflective thinking presents nuances of the scientific method, its point of convergence is the definition of hypotheses, verification by experimentation and the results expressed in conclusions.

The child arrives in the classroom immensely active and in this sense the role of education is to guide and enhance this activity (Dewey, 1833). Likewise, the author maintains that the child enters school with four innate impulses: to communicate, to construct, to inquire and to express him/herself,



emphasizing the interest and development of skills acquired at home and in the context, which become the fundamental raw material for the teacher to guide activities towards positive results. When the subject is faced with a difficulty, he/she assumes one of three attitudes: avoiding it, imagining a powerful way to master it, or facing the situation, the latter being the beginning of reflection; in this sense, reflection goes beyond a group of ideas; for the author, reflection is an ordered consequential structure of ideas, where one idea is the result of the previous one and at the same time is the cause of the next idea (Dewey, 1933).

Pedagogical practice

According to García-Cabrero et al. (2008), pedagogical teaching practice is perceived as the set of situations within the classroom that shape the work of the teacher and students, based on certain training objectives circumscribed to the set of actions that have a direct impact on student learning. The theoretical foundations of pedagogical practice are presented below, beginning with the concept of education training, practice in teacher training, and ending with some positions on reflective practice.

In Colombia, teacher training takes place in two training modalities or scenarios; on the one hand, there are the teacher training colleges (Escuelas Normales), which are responsible for the initial training of teachers, awarding the title of 'Normalista Superior' and entitling graduates to teach in basic primary education, a level that goes from grade one to grade five; On the other hand, in higher education institutions (universities) there are professional programs called Licenciaturas, focused on the development of discipline-specific knowledge, pedagogical knowledge, and practical knowledge on the didactics of the discipline; in this way, professional titles are awarded according to the area of training, for example: Degree in Mathematics, Degree in Social Studies, Degree in Computer Science, among others; these education professionals are empowered to teach in the specific area, at all levels of education (pre-school, primary, basic, middle and higher).

In this research, the concept of pedagogical practice is approached from the perspective of the practical training developed in academic programs in higher education whose mission is to train teachers. In the case of the UPTC, the pedagogical practice is regulated by Resolution 037 of 2015, and is conceived as:

The processes of permanent interaction of the student with the educational reality, from the pedagogical, investigative, social, cultural and systematic action in the daily life of the classroom, its context and environment, as well as non-formal academic spaces that make implicit pedagogical and didactic aspects of the teaching profession, to design and implement innovative experiences, through the development of pedagogical, attitudinal, communicative and cognitive competences of the teachers in training. In this training space, the student will recognize and reflect on the object of pedagogy, methods and the reason for pedagogical knowledge, as well as its relationship with specific disciplinary knowledge, in order to give meaning to the teaching profession and effectively intervene and transform the social, educational and cultural context where they work, with proposals for pedagogical action, from the interdisciplinary, disciplinary and in-depth areas (p. 3).

The pedagogical practice in the UPTC's undergraduate training programs is developed especially in the tenth semester, where students, called Teacher Trainees, carry out their teaching work through total immersion in an educational institution, with the development of teaching, research and management activities. The teacher trainee works in the educational institution during the academic semester, and is guided by a UPTC teacher advisor and the head teacher in charge of the area in the educational institution. The purpose of the pedagogical practice is to articulate knowledge and action through an experiential process that favors the understanding of pedagogical work in a real context. Pedagogical practice is based on understanding pedagogy beyond the act of teaching; it is being sensitive to reality, building on interaction and reflection on what is taught, how it is taught and why it is taught (Van Manen, 2003). In this way, pedagogy does not consist of the development of skills or competences, it is the experience itself of being a teacher and is reconstructed through experience.



Reflective practice

The term reflexivity has various interpretations that are assumed from the field of study, in the case of education and in particular in teacher training, the term is used in the curriculum to indicate that it is a purpose of training and refers to the ability of future teachers to build knowledge by questioning and analyzing their own experience, however, studies have shown that this only remains in the curriculum, there is little evidence of its implementation in academic programs (Russell, 2012). Dewey (1985) laid the foundations for reflective practice and coined the concept of reflective action: the teacher in his role as researcher reflects on his or her teaching and this allows him or her to learn from his or her own experience. Thus, reflective thinking has a direct relationship with the learning process, the former is a condition and result of the latter, the educational process is a reflective activity.

In this way, reflexivity is a fundamental axis in the training and professional development of teachers, so that the teacher must be a reflective professional and teacher training centres have the responsibility to guide guidelines and define spaces so that this skill can be developed (Kaasila and Lauriala, 2012; Ruffinelli, 2017). From Schön's (1983) point of view, reflective practice is conceived as an art in teaching; it is the ability to reflect on the action or pedagogical act and after it, so that practical knowledge is built from experience.

Reflective practice implies a conscious and permanent analysis of the pedagogical task; the teacher as a reflective professional must have the ability to take a critical stance on his or her actions in each situation that arises in the classroom, interpret the relationship with his or her students and the context, and analyze the effect of his or her intervention on the educational process (Perrenoud, 2007).

METHODOLOGY

The study was developed under the qualitative approach based on the postulates of Taylor and Bogdan (1986), given that the research leads to descriptive data on the experiences of the subjects, in spoken or written form, and observable behavior; in this sense, the researcher views the population under study and its context from a holistic perspective, as a whole and not as a variable.

From a qualitative approach, this research was concerned with the individual and their environment, that is, it focused on understanding the relationship between reflective thinking and pedagogical practice, from the training received in the degree program in computer science and technology, and the lived experience of trainee teachers during pedagogical practice; Thus, the training process was analyzed through the curriculum, then aspects of interaction, performance and reflective thinking skills were observed during the pedagogical practice; and finally, the perceptions narrated through anecdotes by the voices of its protagonists were reflected upon.

The study was developed using the phenomenological-hermeneutic method presented by Van Manen (2003), with the purpose of determining the pedagogical meaning of the educational phenomena experienced on a daily basis and to understand the nature of knowledge and its link with practice. The phenomenological-hermeneutic presented by Van Manen (2003) is not a method in the sense of following a specific procedure, however, it develops through a path guided by the research tradition from the body of knowledge and ideas of authors who laid the methodological foundations for research in the human sciences.

The study was developed in four phases: hermeneutic analysis, description, interpretation, and comprehension; the main categories analyzed correspond to: reflection before the action, reflection during the action, and reflection after the action. In this paper, the results of the Compression phase are presented; in this phase the analysis of the anecdotes about the lived experience told by the trainee teachers was fundamental, 'the purpose of the anecdotes is to establish the relationship between living and thinking, between situation and reflection' (Van Manen, 1998, p. 135); phenomenology aims to unravel the meaning of the concrete by delving into everyday existence, and the anecdotes are a methodological tool that allows the meanings to be revealed.



RESULTS

At the end of the pedagogical practice, each of the trainee teachers selected for the study was interviewed and asked about the experience lived during the practice, anecdotes and aspects related to reflective thinking. The interview was designed under the criteria of phenomenology-hermeneutics, with the purpose of giving meaning to the relationship between pedagogical practice and reflective thinking from the lived experience of the trainee teachers; allowing to listen to the voice of the main actors, i.e. the trainee teachers, to know what is not evident, what is not possible to identify in the observation, because it is in the feeling of each subject, product of the day to day experience inside and outside the classroom. These actors in the training process, construct their knowledge through interaction with others (students, tenured teachers, advisors, managers in educational institutions, parents of their students, other fellow teachers in training, among others), reflect on these interactions and give meaning to their experiences.

The analysis of the experiences lived during the pedagogical practice goes beyond the discourse, it is necessary to unravel the feelings of the subject to deepen the aspects that marked their training in practice, the self-recognition of strengths and areas for improvement, involves questioning, being critical about their own performance, also valuing their effort and achievements. For Freire (2004), education involves three fundamental elements: practice, reflection and action; in such a way that graduate training requires a space to reflect on their praxis, to reconstruct it in order to generate changes (actions) that lead to improving and transforming their environment in a positive way.

In this sense, the phenomenological text presented below is an analysis of the experiences lived by the trainee teachers, told from a process of reflection after the action. From the phenomenological point of view, 'experiences seem to emerge from the flow of everyday existence. They are recognizable in the sense that we can remember them, name and describe them, reflect on them. Or, perhaps, experiences become like experiences because we name and describe them' (Van Manen, 2016, p. 36). The purpose of this exercise is to promote the habit of reflecting on pedagogical practice and thus contribute to improving teaching.

This phenomenological-hermeneutic study is based on anecdotes. "Anecdotes form a concrete counterbalance to abstract theoretical thinking. The object of phenomenological description is not to develop theoretical abstractions that distance themselves from the concrete reality of lived experience, but rather phenomenology aims to penetrate the layers of meaning of the concrete by tilling and ploughing the soil of everyday existence' (Van Manen, 2003, p. 135). Under this position, the analysis allowed us to identify four important aspects to be described: didactic strategies in terms of reflective thinking, the relationship between trainee teachers and students, being a trainee teacher from lived experiences, and the role of the tenured teacher.

Teaching strategies to strengthen reflective thinking, from the perspective of trainee teachers

Didactic strategy is a term frequently used by trainee teachers, during the interview they referred to the use of didactic strategies to generate or strengthen reflective thinking and focused on mentioning: workshops, project work, videos, infographics, concept mapping, mind mapping, presentations, collaborative work, gamification, and problem solving.

From the anecdotes we were able to extract elements that express the meaning of the teaching strategies from the lived experience of the trainee teachers:

- Among the didactic strategies, observation and imitation prevail as a method of learning.
- The choice of a didactic strategy depends on the resources available, the guidance of the teacher, the classroom environment and the attitude of the students.
- The subject matter is of little relevance to the choice of teaching strategy.
- The need to incorporate didactic strategies to strengthen creativity, analysis and reflection in students is recognized.
- The didactic strategy should favor students' motivation, but this is rarely achieved in the classroom.

Relationship between trainee teachers and students in the context of pedagogical practice



In the interview with the trainee teachers, it was identified as a relevant aspect, the importance that they attribute to their relationship with the students, in some cases it is assumed that the success or failure of educational activities depends on the behavior of the students and this is mediated by the treatment and the relationship that is established during the practice. In this sense, Flores-Moran (2019) proposes the teacher-student relationship as a mediating element in learning, to the extent that an educational environment is generated where respect, empathy, open communication and feedback prevail, there will be better conditions to achieve educational objectives. Regarding the emotional dimension, Roca et al., (2002) indicate that during the pedagogical practice, the teacher-student interaction is undeniable, so that a transmission of emotions is generated that have an impact on the student's development and influence the attitude of teachers and their own educational work.

From the experience lived by the teachers in training, the student is recognized as an integral being in its various dimensions: physical or bodily, communicative, emotional, cognitive, aesthetic, spiritual, historical, ethical, and socio-political (Guerra et al., 2014). Educational action goes beyond imparting knowledge, giving indications and providing feedback, it is about rethinking pedagogical practice in terms of the being (student, teacher, parent), learning is not an end, it is a process that begins with getting to know the students, unravelling their interests, mobilizing their curiosity and fostering motivation; all this through a fluid interaction centred on empathy, dialogue and respect.

Conception of Teacher in Training, from the experience lived in the pedagogical practice

In the context of pedagogical practice, the main actor is the trainee teacher; however, there are few studies on the conception or meaning of being a trainee teacher in practice. In this regard, Bolívar (2019) indicates that the perceptions of the agents of practice (trainee teachers) are oriented towards exposing the distance between theory and practice; Baquero (2006) conceives the trainee teacher as a subject of pedagogical knowledge, while Da Silva (2005) focuses on how the skills and competences of the trainee teacher change during the development of practice, and also indicates that the articulation between theory and practice during teacher training reduces the conflicts and dilemmas that may arise in pedagogical practice, and greater security and a favourable performance in teaching work is perceived.

The notion of being a teacher in training, based on the experience and reflection of its protagonists, includes the following elements:

- The trainee teacher is a pedagogical actor who is willing to apply his or her knowledge, learn and update himself or herself.
- The trainee teacher has the capacity to reflect on the aspects he/she needs to improve in order to redefine his/her teaching work.
- The trainee teacher is an emotional being, he/she is surprised and feels satisfaction for his/her work and that of his/her students, but also goes through states of anxiety, frustration, fear, insecurity, among others.
- The trainee teacher must be empathetic, conciliatory, maintain assertive communication and promote an atmosphere of respectful interaction with the educational community.
- The trainee teacher recognizes the importance of strengthening the participation and articulation of parents in the educational process.
- The trainee teacher must be creative and innovative, but does not have autonomy; he/she is governed by the guidelines of the head teacher, the advisor and the rules of the institutions.
- The trainee teacher must have the ability to adapt and face the daily challenges that teaching demands.

Teacher trainees and tenured teachers: contributions and limits in the Classroom

The lived experiences of the trainee teachers, told through anecdotes, highlight the importance of the role played by the tenured teacher in the educational institution. From the perspective of reflective practice, the trainee teacher is not an imitator of the head teacher; on the contrary, he/she is a researcher who starts from observation to understand the logic of educational practice in the institution, and to generate his/her own didactic strategies according to the interests and



needs of the students; in such a way that he/she learns during praxis and resignified what he/she observes (Van Manen, 2003). This conception of reflective practice moves away from the notion of the model teacher assigned for centuries to the role of tenured teachers; tension is generated between the disciplinary, pedagogical and investigative conceptions of trainee teachers and those of their tenured teachers; in some cases, the latter are reluctant to make changes proposed by trainee teachers, given that they consider that they are outside their logical structure cemented by experience (Baquero, 2006).

Discussion

The phenomenological interview allowed us to interpret four relevant aspects for the trainee teachers in relation to pedagogical practice and reflective thinking; on the one hand, the meaning they assign to their role as trainee teachers, where they recognize their strengths and aspects to be improved, and the relevance of their role as pedagogical actors in educational processes; On the other hand, the relationship with the students, with the teachers and with the parents or guardians, the recognition of all the actors in the pedagogical practice and how these relationships have an impact on the development of the same, including the incorporation or not of strategies that favor reflective thinking.

At this point in the research, a better understanding of the phenomenon studied has been achieved from the lived experience of the trainee teachers, the phenomenological interview became a tool for reflective practice, which allowed us to unveil some of the causes that made it impossible to incorporate strategies to promote reflective thinking skills, such as: the hierarchical nature of the relationship between the trainee teacher and the tenured teacher, where the latter generally seeks to be imitated by the trainee teacher and/or assume control of the process through evaluation; likewise, the attitude of the students towards the subjects, so that the trainee teachers gave greater importance to the development of entertaining activities to motivate interest in the class, than to the purposes of learning.

The analysis of the curriculum of the Bachelor's Degree in Computer Science and Technology revealed some gaps related to the training of teachers who respond to the needs of the contemporary pedagogical, social, economic and digital context, which were also identified in the observation carried out during the pedagogical practice of some trainee teachers, and confirmed by the reflective and self-critical analysis, expressed through anecdotes told by the main authors of the process, the trainee teachers.

CONCLUSIONS

Developing a study on reflective thinking and pedagogical practice allowed me to appropriate the meaning of reflection in my work as a researcher; based on the positions in the theoretical framework and the experiences of the trainee teachers, the hermeneutic view was capitalized on through the analysis of background information and the documentary review on the subject; On the other hand, the reflective approach in the framework of a research with a phenomenological perspective, gave me the opportunity to share with the trainee teachers of the degree, to observe their work in the classroom, to listen, analyze and interpret their reflections on the pedagogical act and to understand the relationship between reflective thinking and pedagogical practice in the training of future teachers.

The pedagogical contributions are oriented towards redefining pedagogical practice as the privileged scenario for trainee teachers to apply theoretical knowledge in the pedagogical task, under a connotation of reflexivity, where the trainee teacher contributes to the formation of reflective thinking in their students and, at the same time, reflects on their practice to improve it and enrich the pedagogical act; however, how does the teacher teach reflection if they do not have habits of reflexivity in their work and in their lives? If future teachers have not been trained in reflective thinking skills, it is clear that they do not have the knowledge and teaching strategies to develop this type of thinking in their students.

In this way, it is essential to review and restructure the training objectives of future teachers, which should seek to develop the reflective thinking skills necessary for the teaching profession: The ability



to identify problems, determine the best solution based on the enquiry and analysis of the conditions involved in the problem, define hypotheses, develop and apply knowledge in the proposed solution, build conclusions and support them under a theoretical basis, which leads to reasoned decision-making and improve the performance of the teacher in the pedagogical act; likewise, it provides the experience and knowledge required to develop these skills in students.

One form of relationship between pedagogical practice and reflective thinking converges in reflective practice, where the trainee teacher must analyze reflectively before, during and after the pedagogical act. The analysis of the observations made during the pedagogical practice, allowed to evidence distance between the three moments of reflection; on the one hand, the preparation of the classes is done in a methodical and linear way, following a step by step, moving away from the variables involved in the pedagogical act, for example: In this way, in the reflection before the action, the objectives and planned activities overestimate what is done in the class, challenges are proposed aimed at developing cognitive skills, while in the classes the priority is to advance in the topics, develop practical activities, and carry out summative evaluation processes.

REFERENCES

- [1] Baquero Masmela, P. (2006). Práctica pedagógica, investigación y formación de educadores. Tres concepciones dominantes de la práctica docente. *Actualidades pedagógicas*, 1(49), 9-22. <https://doi.org/10.19052/ap.1612>
- [2] Bolívar, R. M. (2019). Investigar la práctica pedagógica en la formación inicial de maestros. *Pedagogía y Saberes*, (51), 9-22.
- [3] Calderhead, J. y Gates, P. (1993). *Conceptualizing reflection in teacher development*. Routledge Library.
- [4] Cornejo, J. (2003). El pensamiento reflexivo entre profesores. *Pensamiento Educativo, Revista de Investigación Latinoamericana PEL*, 32(1), 343-373.
- [5] Da Silva, M. (2005). Constructing the teaching process from inside out: How pre-service teachers make sense of their perceptions of the teaching of the four skills. *Teaching English as a Second or Foreign Language*, 9 (2), 1-19. <http://www.tesl-ej.org/wordpress/issues/volume9/ej34/ej34a10/>
- [6] Dewey, J. (1933). *How we think: a restatement of the relation of reflective thinking to the educative process*. Heath & Co Publishers.
- [7] Dewey, J. (1939). *Experiencia y educación*. Editorial Losada.
- [8] Dewey, J. (1985). *Democracy and education (Vol. 9)*. Carbondale, IL: Southern Illinois University Press. (Original work published 1916).
- [9] Flores Moran, J. F. (2019). La relación docente-alumno como variable mediadora del aprendizaje. *Revista San Gregorio*, (35), 174-186.
- [10] Freire, P. (2004). *Pedagogía de la autonomía. Saberes necesarios para la práctica educativa*. Editora Paz e Terra. <http://webdelprofesor.ula.ve/nucleotachira/oscarg/materias/epistemologia/lecturas/freire.pdf>
- [11] García Cabrero, B., Loredó Enríquez, J. y Carranza Peña, G. (2008). Análisis de la práctica educativa de los docentes: pensamiento, interacción y reflexión. *Revista electrónica de investigación educativa*, 10(SPE), 1-15.
- [12] Guerra, Y. M., Rubio, A. M. M., y Silva, N. C. B. (2014). Formación integral, importancia de formar pensando en todas las dimensiones del ser. *Educación y desarrollo social*, 8(1), 48-69.
- [13] Kaasila, R. y Lauriala, A. (2012). How do pre-service teachers' reflective processes differ in relation to different contexts? *European Journal of Teacher Education*, 35(1), 77-89.
- [14] Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT press.
- [15] Moral Santaella, C. (1997). *Fundamentos para una práctica reflexiva en la formación inicial del profesor*. Universidad de Granada - FORCE.



<https://digibug.ugr.es/bitstream/handle/10481/43104/fundamentos.pdf?sequence=1&isAllowed=y>

- [16] Perrenoud, P. (2007). *Desarrollar la práctica reflexiva en el oficio de enseñar: profesionalización y razón pedagógica* (Vol. 3). Graó.
- [17] Piaget, J. (1972). *Psychology of intelligence*. Editorial Psique.
- [18] Roca, J. S., Abarca, M. y Marzo, L. (2002). La educación emocional y la interacción profesor/alumno/a. *Revista electrónica interuniversitaria de formación del profesorado*, 5(3), 1.
- [19] Romero, A. (1997). Investigar en la acción educativa: una estrategia pedagógica de participación comunitaria. *Investigando y Educando*, 1(1)
- [20] Ruffinelli, A. (2017). Formación de docentes reflexivos: un enfoque en construcción y disputa. *Educação e Pesquisa*, 43, 97-111.
- [21] Runge Peña, A. K. y Muñoz Gaviria, D. A. (2012). Pedagogía y praxis (práctica) educativa o educación: de nuevo, una diferencia necesaria. *Revista Latinoamericana de Estudios Educativos*, 8(2), 75-96.
- [22] Russell, T. (2012). Cambios paradigmáticos en la formación de profesores: Peligros, trampas y la promesa no cumplida del profesional reflexivo. *Encounters in Theory and History of Education*, 13, 71-91.
- [23] Schön, D. (1983). *El profesional reflexivo. Cómo piensan los profesionales cuando actúan*. Editorial Paidós.
- [24] Taylor, S. J. y Bogdan, R. (1986). *Introducción a los métodos cualitativos de investigación*. Editorial Paidós.
- [25] UPTC Universidad Pedagógica y Tecnológica de Colombia (noviembre 03, 2015). Resolución 037 de 2015. *Por la cual se establecen los lineamientos para las prácticas pedagógicas Investigativas de los programas de licenciatura presencial y a distancia de la UPTC*. http://www.uptc.edu.co/export/sites/default/secretaria_general/consejo_academico/resoluciones_2015/res_37_2015.pdf
- [26] Van Manen, M. (1998). *El tacto en la enseñanza. El significado de la sensibilidad pedagógica*. Editorial Paidós.
- [27] Van Manen, M. (2003). *Investigación Educativa y Experiencia vivida. Ciencia humana para una pedagogía de la acción y de la sensibilidad*. Editorial Idea Books.
- [28] Van Manen, M. (2016). *Fenomenología de la práctica. Métodos de donación de sentido en la investigación y la escritura fenomenológica*. Universidad del Cauca