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Learning Conceptions of Pre-service Teachers in Greater Concepción, Chile

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Abstract. The present study delved into the conceptions of pre-service teachers in the pedagogical programs of the faculties of education of the universities of Greater Concepción (Chile). The research is presented using a qualitative approach through a hermeneutic tradition. The key informants were 68 students from five pedagogical training programs belonging to three Chilean universities. The information was collected through semi-structured interviews composed of three dimensions: conceptions, factors associated with learning, and the learning practices used by pre-service teachers. The information collected was coded using the QDA Miner Lite software and the thematic content was analysed using theoretical and emergent coding. The results show that the participants have, in the initial stages of their training, a behaviourist conception of learning that evolves towards behaviourist, cognitive and constructivist conceptions. At the end of their training, the conceptions of learning were different according to the career they were studying for. On the other hand, the learning practices were similar among the students and, as they advanced in their training, greater complexity and variety were identified. The factors that influence their learning were their teachers, family support, friends and fellow students, field trips and university spaces, such as seminars, conferences and access to a physical and digital library. It is concluded that it is necessary to go deeper into the characteristics of the training of each career to understand the differences in the construction of the concept of learning.

Keywords: Conceptions; learning; teaching; pre-service teacher; higher education

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1. Introduction

A fundamental concept in pedagogical training is the conception of learning, which is understood as the conscious and unconscious approaches to learning undertaken that are developed from experiences and formative processes, influencing the ability to cope with new learning by student teachers (Pozo et al., 2006; Sánchez, 2005).

The student teachers' learning practices and the conceptions they hold about their life experiences and formative processes are important in the context of the implementation of the Teacher Professional Development System (Ministry of Education, 2008; 2009; 2011; 2015; 2016; 2017). These changes modify the educational administration, pointing out the need to improve the initial teacher training processes that should be promoted by the different faculties of education of Chilean universities. In Chile, research describes the conceptions of students according to their education and careers but no studies have been found relating to a holistic view of pedagogical training (Contreras & Zuñiga, 2019; Friz et al., 2018; Merellano-Navarro et al., 2019; Valenzuela et al., 2018). Going deeper into the different formative contexts would make it possible to distinguish between the construction of learning processes among the different pedagogical careers and to understand in greater depth the processes of initial teacher training. To this end, it is necessary to develop in future teachers the competencies of reflection on their teaching work (Ministry of Education, 2008), to enhance teaching and learning in the teacher training process and in the professional practice of pedagogy itself, allowing for the improvement of the pedagogical practices of teachers, helping to articulate the initial professional development possible through postgraduate opportunities.

It is recognized that there is a research gap related to the learning processes of pre-service teachers that needs to go deeper into the different educational programs of the universities of the Greater Concepción area. In accordance with the above, this study aimed to deepen the conceptions and practices involved in the learning of teachers in training from different pedagogy careers and universities in the city of Concepción, Chile. In this regard, the following research questions were posed: What are the conceptions of learning presented by the students with different teaching careers? What are their learning practices like? What factors influence the construction of learning?

2. Theoretical perspective: conceptions about learning

Student teachers build their knowledge based on different assumptions, prejudices and experiences related to the learning paradigms (Pozo et al., 2006; Sánchez, 2005) which they will later apply in their future educational proposals as teachers in practice or as teachers in the educational system.

These paradigms explain the approaches to learning used by students to construct their current and future pedagogical knowledge. These paradigms can be aligned with direct (behaviorism), interpretive (cognitivism), and constructivist (constructivism, socio-critical, and humanistic) theoretical approaches (Jordan, 2017).

Behavioral theory understands learning through modification, reinforcement, punishment and/or the observation of behaviors by the subject, who has a passive role in learning through a stimulus-response chain (Jordán, 2017). The conception of learning is understood as being gradual, continuous and organized by an external subject that provides the stimuli (Bandura, 1977; Skinner, 1938; Thorndike, 1903; Watson, 1913). Thus, behavioral theories base their principles of understanding reality on the elements external to it. They understand the educational act according to the reproductive notion of the academic behavior of learners.

In cognitive theory, research focuses on mental processes, structures and functions. Thus, it is possible to find studies on reasoning (Piaget, 1926; Vygotsky, 1934), studies on the physiological responses to certain stimuli (Atkinson & Shiffrin, 1968:1969), studies on psychology (Davidoff, 1989). Learning is understood as discrete changes at the mental level which are subject to codification by the subject and involve a continuous structuring of the new information registered (Ausubel, 1968; Bruner, 1975).
As a third paradigm, constructivism is identified, according to which the construction of knowledge is carried out by the student from a participatory and active modality that promotes meaningful and deep learning for the learner (Piaget, 1926; Vigostky, 1934).

Another paradigm is the socio-critical perspective, which promotes a dialectical relationship between the object and the subject, raising the need to improve the educational praxis from models of community intervention (Freire, 1970; Habermas, 2008).

In addition, the humanist paradigm develops an individual conception, according to which each subject interprets his or her reality in search of the exceptional and unpredictable (Jordán, 2017; Gagné, 1987). Thus, learning is understood based on the influence of the socio-affective domain and interpersonal relationships, which together promote a lesser or greater appropriation of learning by the subject (Aizpuru, 2008; Maslow, 1964; Rogers, 1987).

Finally, connectivism is the learning paradigm that implies connection through social networks in which the activity is proposed as a collective act in different virtual environments (Bowen & Siemens, 2008). This theory moves away from an individual and personalized view of learning because the student is understood as being autonomous and in connection with other students in a virtual world (Downes, 2020).

Currently, teaching and learning theories are understood as an integration of assumptions that make up a totality or global unit, which are used according to the age and environment of the subjects to explain, understand and reflect on learning (Zamora et al, 2025). Teacher training on learning is based on the management and application of psychological principles in the planning, teaching and evaluation of learning in the classroom. The review of the evidence obtained in the Ibero-American context showed that teachers present with a constructivist

conception of learning but in the classroom, they respond to behavioral and cognitivist guidelines (Borgobello et al., 2018; Moreno et al., 2017) because they relate to learning as something transferable that is linked to routines, with a vertical model between teaching knowledge and student knowledge (Renata-Alvarado & Vásquez-Bernal, 2019). Likewise, teachers present with a positivist and constructivist conception of learning but their practices are linked to eclectic conceptions (Marroquín & Valverde, 2019). Students perceive their teachers and their own learning as being between the behavioral and cognitive paradigms, conceptualizing learning as something transferable and allowing growth (Alarcón & Hernández, 2019).

3. Methodology of the study

3.1 Research Design

The study used an interpretative approach through a hermeneutic design (Flick, 2007). The information from the participants' discourses was analyzed, allowing for the construction of the theoretical and emergent categories that appeared during the research (Valles, 1999).

3.2 Research Participants and sampling procedure

The key informants were 68 students from 4 pedagogy plans belonging to three universities in the city of Concepción, a city located in the south central region of Chile. The participants of the study described 3 universities and 4 careers, making an in-depth description of the reality of the conceptions of learning in pre-service teachers possible.

The universities were Universidad Católica de la Santísima Concepción with 20 students from the pedagogical training program, Universidad de Concepción with 18 students from the history and geography pedagogy programs, and Universidad de las Américas with 20 students from the Basic Education and Special Education programs. Causal sampling (Bisquerra, 2009) was applied, related to the access possible to the subjects of the study and the researcher's workplaces. In addition, logical criterion sampling was applied (Patton, 2001) because the choice of the sample obeyed criteria such as being student teachers, belonging to years 1 to 4 of the careers under study, and studying in faculties of pedagogy of universities in the city of Concepción.

3.3 Research Instruments

The interview method has a semi-structured modality and is understood as a way of approaching the meanings of the subjects (Flick, 2007). In this case, the instrument was constructed based on the sociodemographic data of the participants and 3 dimensions that were presented using a total of 10 questions: conceptions, factors, and practices in the student teachers' learning. Conceptions are understood as the idea or understanding that a subject has about a specific topic (Sánchez, 2005). Factors are elements that imply a positive or negative relationship, presenting a cause-effect relationship with learning. Practices are understood as the exercise that takes place in educational contexts, influenced by the students' conceptions of learning (Pozo et al., 2006).

3.4 Data Collection and Analysis

The researchers contacted different students to be possible participants according to the inclusion criteria of a purposive sample. This was done after a discussion with the heads of the different pedagogy programs who gave their permission to coordinate interviews with their students. Before conducting the interviews, the informants signed an informed consent to apply the instrument. The interviews were recorded and transcribed into MS Word.

The information collected from the techniques was coded using two methods. The qualitative software QDA Miner Lite was used to obtain a description of the frequencies according to the codes and cases which present as having two levels of depth, generating output tables in MS Excel and families of networks for the total number of cases. The technique of thematic content analysis was also used, allowing for the construction of categories of meaning from the conceptions according to the theoretical and emerging categories (Gibbs, 2007). The categories and codes were agreed upon by the researchers through a similarity criterion as part of the analysis (Patton, 2001).

3.5 Quality of the Research and Ethics

Credibility is built through the validity of the research involving the triangulation of the researchers and another triangulation of the involved theories (Denzin, 1989). The researchers presented their coding and developed a similarity criterion to approach the coding process by presenting their theoretical positions on the interpretation of the coded information. The transferability of the research was developed through an in-depth and detailed description of the themes, categories and codes found in the participants' information. Finally, consistency was obtained from the description of the research protocols of the semi-structured interviews and the dimensions of the data collection instrument (Flick, 2007).
Before conducting the interviews, the informants will sign an in-person consent to apply the instrument, in which they will be informed of the benefits, costs, risks, confidentiality and their rights.

In relation to the control held over the information collected in the research, the data will be kept in the principal investigator's unit and cannot be sent by electronic means, nor can it be reproduced or partially viewed by other persons outside of the research. Thus, only the principal investigator will have access to the information collected in the research. The sample and the informants will be anonymized and will be presented as "case X" according to the data de-identification technique.

The information collected was recorded in an audio format for later analysis. The information collected stored and backed up on the hard disk of the researcher's laptop computer and in the institutional cloud of the Catholic University of the Most Holy Conception associated with the email victor.montre@ucsc.cl.

4. Results and findings

Through the application of the thematic content analysis technique, three major categories were recognized that were linked to the student teachers' learning: conceptions about learning theories, specifically conceptions and practices about the construction of learning, learning itself, and the external and internal factors that promote learning.

Category 1: Theoretical conceptions of learning

This category seeks to unveil the learning theories stated by the participants regarding understanding learning as a phenomenon of acquisition and construction of knowledge (Díaz & Fernández, 2012; Marzano, 2005:2017; Marzano & Pickering, 2007; Marzano et al., 2001). When analyzing the codes of the Learning Theory category, the following views and their corresponding interpretations were identified.

Learning is behavioral when it is understood by the interviewees as the acquisition or reception of knowledge in different spheres of life, be it school, family, or daily life, which is achieved through the teacher's teaching, conversing, observing and imitating actions. It was recognized in the following discourse:

"According to my opinion learning is the acquisition of some knowledge, this can be given in our daily life, through the experiences we have lived, this can be good or also bad, which leads to changes in the person, transformations that these will last in time"(Case 65).

Learning is cognitive-constructivist when it is understood as a process whose construction is influenced by different factors. Importance is given to previous knowledge, experiences, the methodology or support of the teacher, and its application to daily life in order to achieve the internalization of knowledge as expressed in the following intervention:

"It is a process, where knowledge is going to be acquired, in addition to values, skills, or attitudes; since everything is directly related, and learning is not only learning content, but rather a whole, since it can be learned under any context, taking place this mainly through experience, and teaching that is obtained in specific situations, such as in classes, or in daily life situations" (Case 61).

Learning can be socio-critical when it seeks to construct learning but it can also be applied to reality, with the objective of modifying the reality of the subjects and their space, expanding knowledge towards action-learning. This category of conception of learning was identified in a few discourses of the student body, with the following being one of them:

"This act can be in group or individual form, and can extend to several fields or areas of life, not only the disciplinary field. Life experiences, for example, teach us something. We learn from everything because every second we live and feel things that make us change our perception, our vision. Learning is not only studying a specific area of some discipline, but also every action, every experience, etc." (Case 30).

Learning can be eclectic if there is a connection between several learning theories, thus helping to understand learning as a process that presents through several components, such as knowledge, attitudes and skills. Learning from an eclectic vision was the least identified in the discourses of the student teachers as expressed in the following intervention:

"It involves the apprehension of new knowledge, skills or ways of acting, by an individual. I would also add that "learning" can be used to refer to the modification of an internal concept or behavior (it does not necessarily have to be something totally new). For the same reason, I feel that it is somewhat difficult to understand, since, for me, learning can comprise the development of the process in which the individual interacts with this new experience or assimilates the modification in thought; nevertheless, I feel that in general it is considered as learning simply the result" (Case 35).

It is evident that there are two main learning theories in the conceptions of student teachers. On the one hand, we had in 45.8% of cases a behavioral conception of learning, mainly among first and second year student teachers, regardless of the university of origin. On the other hand, the cognitive-constructivist conception was present in 44.5% of cases among students from the second to fifth years of pedagogy in the different universities but with substantial differences in the depth of the theory. The students of two years present with superficial-immature notions about cognitive-constructivist learning, as opposed to the students of more advanced courses, who present with deeper and more mature conceptions about this theory.

Category 2: Conceptions and practices on the construction of learning

In order to deepen the category, we sought to identify the codes that describe the construction of learning by the student teachers. The learning process sought was reproductive and/or guided, related to the reception of ideas from another person, text, video, etc. and involved replication in daily life or in an evaluation at the university. When it is guided, learning is achieved through the mediation of a teacher, who plays the role of an intermediary between knowledge and the construction of knowledge by each student as expressed in the following statement:

"For example, if I have to learn about concepts that are completely new to me, I work with cards, which at the top say the concept and the back its meaning or what it refers to" (Case 5).

The act of learning was characterized by being individual, depending on each subject, since all people had different ways of constructing knowledge. This involves recognizing the importance of instances of application, since they implied a higher degree of learning by linking reality or the praxis of a knowledge according to the student body. This was recognized through the following sentence:

"The learnings that have stayed with me the most are those that I assimilate by exercising some action, for example: once I worked in mechanics and I learned that if I work with automobile engines I should not use much force because I can roll the bolts" (Case 14).

The students recognized that long-lasting learning is not related to short-term memory processes, giving importance to the life trajectory in learning, as well as building and appropriating knowledge, values and skills as expressed in the following intervention:

"I can say that I have learned throughout my life because since we enter an educational establishment we begin the first learning (letters, colors, numbers), but we also already have learning from home such as values that we acquire thanks to our parents, these learnings help us to go over goals and objectives that each one proposes in my case to reach the university" (Case 1).

The act of learning is strongly linked to the understanding of new knowledge and experiences that can be propitiated. Thus, the internal structures of knowledge are related to trial and error, while the imitation of new learning is according to the students:

"On the other hand if we talk about learning through experience, I learn by watching others do things, for example, to learn to play the guitar, I learned by watching my dad and tutorials on the internet or when things happen to me or happen to someone else the same way I feel that I learn a lot from it, since I will try not to relapse in doing ''x'' thing again since I know what can happen" (Case 5).

The conceptions of learning are related to behavioral and cognitive-constructivist conceptions but are not directly related to socio-critical or humanistic theories. There is a strong cognitive component in the construction of a learning concept for the student teachers. Thus, conceptions such as imitation, reproductive, guided and individual are recognized in first and second year students but in third through to fifth year students, conceptions about experience, applicability and the learning processes were identified.

Subcategory 1: Internal learning factors

According to the interviewees, the factors that affect the students' learning are their family, teachers, the teaching methodology, and emotions. In addition, the subject is an important factor in learning, since his or her internal state affects his or her possibility for cognitive, physical and emotional development. Learning depends on each subject, since all people have different ways of constructing knowledge, being connected as it is with values and attitudes, such as patience, effort and respect for their classmates. Thus, experiences are situations of cognitive breakthrough where new knowledge is intertwined with the old, being mediated by emotions, and thus enhancing or limiting learning as expressed in the following intervention:

"In my case, I am an insecure person and above all very fearful, therefore, when I am afraid of some future learning I get paralyzed and do not feel capable. In addition, I lack the ability to understand, therefore, I feel that in areas more related to historical philosophy are very complicated for me" (Case 3).

Values and attitudes, such as patience, effort and respect, were presented as elements that can influence the student's learning, giving specific experiences the possibility of clashing with their beliefs and/or attitudes, promoting a modification in their posture towards learning. This was recognized in the following sentence:

"Much of my learning has been acquired and retained at times when I have had to apply it directly or when I have had the opportunity to explain it to a second" (Case 8).

Concentration and a disposition towards one's goals through a perception of challenge were identified as factors that allow cognitive attention and propitiate positive postures towards the teaching process. The existence of a quiet and comfortable place integrated with their short-, medium- and long-term goals was also a fundamental component for learning among the student teachers.

"Having clear objectives, since we all study something, but we must project that learning to something bigger that allows us to have a clearer idea of what we want in the future" (Case 3).

The learning rhythm of the student teachers can be described through stress management and the use of time for the construction of tasks and products associated with their teaching career. The periods of academic demands had a different impact on the student body, being differentiating factors from the study methods and the self-critical capacity to promote knowledge. This is as expressed in the following intervention:

"My main difficulty is my lack of a concrete study method that is effective for me in the general of the subjects" (Case 8).

The above factors present a transversal description with all pedagogy careers, recognizing experiences, personal rhythm and the use of time as positive or negative factors in the learning process. Also present were the disposition towards goals, emotions and the ability to concentrate as components with less presence in the discourse of the participants.

Subcategory 2: External learning factors

The external dimension was understood as the components that do not depend directly on the student teacher since they are linked to factors such as the university, their family, classmates, friends and partners, all of whom play an important role in the academic processes of the student teachers. The family, with its values, knowledge and the experiences of the different family agents, enhanced the promotion of learning because they built positions based on the academic process and its impact on the future as expressed in the following intervention:

"*Another people who help me to be able to learn is my dad and mom, since they are constantly concerned about me, in every aspect, and since I was little they encouraged me to learn all kinds of things, taking me to countless types of workshops, courses, etc.*" (Case 27).

The teacher, through his closeness or distance to the students, has the ability to motivate and understand the student and to explain and exemplify the topics of work, which has a positive impact on learning. This was able to be identified in the following discourse:

"Those teachers who create a link with me; therefore, I feel the confidence to ask questions and improve my learning, in addition it is of vital importance that it is dynamic and not necessarily so correct, since, although we are in a classroom, it tends to be very dense if it is not didactic" (Case 3).

The teaching methodology was an external motivation that builds the teacher through his methods, techniques and teaching strategies, as well as work inputs, the type of evaluations used, the time given to the realization of activities, the development of critical thinking, developing courses continuously, individual and team activities, the degree of participation of the course in the construction of the class influence, positively or negatively, present in the construction of the learning of a student teacher. This was expressed in the following intervention:

"When a teacher is not didactic, since leading a monotonous class makes learning difficult" (Case 1).

Career peers and friendships were a support for those looking to continue with the learning programs due to their influence on the perception of reality and possibility of success in the future. In this way, supporting material and learning environments created positive environments for learning, as well as decreasing tensions and conflicts in the classroom by enhancing trust among the actors in the teaching--learning process. This is identified in the following sentence:

"Thus, social circles are very important for learning, because with my friends I discuss ideas, visions, etc." (Case 10).

The student's family, the teacher as a person, and classmates-friends were identified as less present factors of a greater presence in the construction of an external dimension of learning. The teaching methodology and learning environment were less present in the identification of codes. Thus, it is the subjects who mainly influence a student's learning who, in one way or another, provide adequate learning environments, academic inputs, concentration, disposition towards goals and the perception of challenge, thus becoming key factors in the appropriation of learning.

Category 3: Learning practices in university contexts

This category was associated with the physical places in which the student teachers' learning takes place and takes shape, recognizing two major dimensions: university and external to the university. These were understood not as a physical entities but somewhere in which experiences are diverse among actors, instances and places.

University classes were the main characteristic used to describe a university by making interactions with specialists and peers possible. In addition, scientific dissemination congresses are special instances of greater depth for a subject but

are scarce in their formative periods. Conversations with peers allow the possibility of getting to know the positions, ideas and beliefs of others, increasing tolerance and opening up the perspectives on each subject, as expressed in the following intervention:

"Talking among my peers and sharing our acquired knowledge" (Case 1).

Field trips were of vital importance in the learning process due to their applicative nature, promoting the link between theory and reality. Also, the library was understood to be a specialized place where quality scientific information can be found and requested, which would imply greater learning possibilities.

"Studying in the library helps me because I need a lot of light, good heating, adequate music (instrumental or orchestra), plenty of coffee and cookies, and adequate materials" (Case 13).

Daily life refers to the situations that happen in the daily life of each student which do not have a formal academic connotation, as expressed in the following intervention:

"The street or university of life, since this gives us much more knowledge than we can acquire locked up at home, as it is sociabilizing; one knows realities that one does not know" (Case 2).

The home of each student was presented as a place of closeness, rootedness and trust, involving spaces that imply a greater comfort in which to carry out academic work, with them being necessary to achieve good learning when formal spaces such as the library or the classroom cannot be used. This is recognized in the following sentence:

"At home, specifically in my bedroom, in this I have a desk and a comfortable armchair, in this place, which I call "my corner", it allows me to move with tranquility and be pleasant when I study" (Case 11).

The spaces of knowledge external to the university, such as museums, art galleries and heritage sites, presented with characteristics able to develop topics of academic interest, and even support the possibility of connecting the university with these spaces through alternative pedagogical practices. As expressed in the following intervention:

"In museums there is a lot of interesting information about the most diverse objects, especially museums of historical or scientific objects, although it is equally possible to add art galleries, since in them one learns the meaning of the works" (Case 6).

It is evident that the main place of study was the university, through classes with teachers who are empathetic and close to the students. In addition, they attach great importance to the library as an academic space that allows them to interact with their fellow students and the different educational resources provided by the

university. In the external context of university spaces, the room and daily experiences were crucial in promoting learning.

5. Discussion & implications

The first relation of the research would be that the conceptions of learning throughout the teachers' training process tend to move from the behaviorist towards a cognitive-constructivist conception of learning, although their most significant learning experiences were mainly formal with a strong behavioral component. In addition, there was the promotion of a humanistic or constructivist vision of human learning but it was circumscribed to formal school spaces and not informal realities such as the home or leisure and recreational spaces.

These results are related to the research of Cárcamo and Castro (2015), which showed that there is a clear difference between the conceptions that student teachers have between the first and last year of training, predominantly in the last years, the cognitive-constructivist conceptions. Thus, teacher training in Chile has a theoretical approach over a practical one (Martinic et al, 2014) due to the factual and behavioral notions promoted in the teaching models used by teachers in their pedagogical plans.

Another relationship to consider is the conceptions about learning spaces, where the idea of learning linked to a formal space is promoted, and the students believe this to a greater extent and recognize as significant the concepts developed in educational contexts such as school or university, leaving aside the daily experiences of the subject as a constant constructor of his own learning (Choquette et al., 2024).

Socio-critical and humanistic notions were identified but to a lesser extent. Knowledge is sustained in a school structure which cannot escape the formal orbit, therefore its impact on the subject's daily conditions remains distant, a product of a behavioral conception of learning, and focused on cognition. It is not focused on daily practices in the school territory, evidencing some correspondence with what was postulated by Gómez and Guerra (2012).
The students' discourses are theoretical conceptions (mainly contents) (Cárcamo & Castro, 2015), which move away from notions linked to skills, and especially attitudes. Therefore, the students' practices are eminently reproductive because they are mainly based on visual and auditory strategies but are not connected to reflection and their application to reality.

The application of behavioral strategies in their initial training could promote future reproductive practices in the classroom by encouraging behaviors that they performed in their high school and undergraduate studies (García-Herrero et al., 2024). This reality can be linked to the future practice of students, where Monteagudo et al. (2015) evidenced that there was poor management of evaluation by the teachers, manifesting learning evaluation practices conceptual contents that were far from the notions of competencies (skills and attitudes) (Aalto et al., 2019).

The evidence showed that there is a clear difference around the conception that student teachers have between the first year and last years of training, predominantly in the last years, cognitive-constructivist conceptions (Cárcamo & Castro, 2015). Thus, teacher training in Chile has a theoretical approach over a practical one (Arancibia & Galaz, 2019; Martinic et al., 2014), due to the factual and behavioral notions promoted in the teaching models used by teachers in their pedagogical plans.

The factors that mainly affect learning are teachers, family, and peers, all of which are linked to emotions, therefore, the evidence supports that learning is not only linked to cognitive but also to social and emotional elements (Aranda & Fernández-Martín, 2024; Suckel et al.,2019).

Another relationship to consider is the conceptions about learning spaces, where an idea of learning linked to the formal is promoted. Students believe this to a greater extent and recognize them as significant, especially those developed in educational contexts such as school or university, leaving aside the daily experiences of the subject as a constant constructor of his own learning.

The results presented in the research are related to the existing evidence demonstrating the importance of broadening the conceptions about learning in student teachers. This is due to the fact that currently the practice of pre-service teachers in educational contexts is characterized as individual, reproductive, of contents, with the passive participation of the student, and involving a behavioral-cognitive approach to learning.

6. Limitations and directions for future research

The learning conceptions and practices studied entailed educational challenges that may have a strong impact on the national school reality. On the one hand, we have the mental conceptions about learning and, on the other, there are the educational practices of the students. The research presented this duality in the exercise of learning, where the university and its curricular plans promote a reproductive reality of the behavioral and/or cognitive, the latter with a superficial conception (Bowman & Harrinson, 2025; Pardo et al., 2024; Zito et al., 2024).

In order to modify the conceptions and practices of pre-service teachers, a modification of the pedagogy curriculum is proposed, increasing its focus on the line of training in education while, at the same time, projecting a greater relationship between specific disciplines and pedagogy since this linkage is currently minimal or nonexistent (Smets & Tuithof, 2024). At the micro level, the programs should modify their learning outcomes towards the skills and attitudes found in the students, developing the knowledge present in the curricular plans and programs at the Chilean level (Latva-aho et al., 2024).

In addition, the importance of the teacher as a moral and ethical subject, the teaching methodology, the family, and emotions were identified as preponderant factors that promote learning and the construction of short, medium and long term objectives (Bergman et al, 2025). It is necessary to consider these factors in

the formative educational processes but they are not present in university education, since learning is centered on the student, from an autonomous point of view, and is not linked to a reality. This leads to a conception of the student as lacking an environment, promoting a behavioral-cognitive (superficial) demand for the teaching-learning processes in the classroom (Braun & Hooper, 2024).

The implications of the research involve understanding the evolution of pedagogy programs around the world. The challenge of teacher training in university spaces, the need for changes in the pedagogy program related to the needs of pre-service teachers, and the need to promote conceptual and theoretical changes on learning and teaching spaces to integrate pedagogical theory and practice are evidenced (Hooper & Jhonson, 2025; Zamora et al, 2025).

7. Conclusion

These university realities imply challenges around the formative processes, not from an individual approach where the student is the only factor, but from within an integrative approach where families and practices linked to their environment are connected. This research was presented as contrary to the university reality because we encourage future teachers to link the family into the educational process. Teachers in previous primary, secondary and tertiary education training did not have this educational reality. The formative process of school coexistence, citizenship and learning implies that pre-service teachers must understand and apply a different model of education, one which entails a deconstruction of their conceptions and practices of teaching and learning. Finally, it is recommended to demystify the school as the primary space for knowledge; the results of the research point to a strong bias about what knowledge is, how it is constructed and where it is constructed. Most student teachers do not visualize knowledge beyond books, classes and other formal instances. Therefore, it is necessary for universities to extend learning to other aspects of everyday life, with the aim of developing humanistic and socio-critical notions of learning linked to the students' everyday environments.

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