ABSTRACT: The objective of this research was to interpret the subjective theories of pedagogy students from three Chilean universities on the change of professional identity during their training. Using a qualitative method, episodic narrative individual interviews were conducted with a sample of 8 fourth- and fifth-year students belonging to any pedagogy. For the analysis of results, three encodings were carried out: open, axial and selective. The interviewees theorized that the dimensions of teaching work and teaching process are the most influential in changing the teaching professional identity. The selective coding resulted in an explanatory model of the subjective theories of the participants, which had as a central phenomenon the change in the teaching professional identity.


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RESUMO: O objetivo desta pesquisa foi interpretar as teorias subjetivas de estudantes de pedagogia de universidades chilenas sobre a mudança na identidade profissional dos professores durante sua formação. Através de uma abordagem qualitativa, esta pesquisa reconstrói as teorias subjetivas de oito alunos do quarto e quinto ano pertencentes a diferentes pedagogias, de três universidades e de duas regiões do Chile. Para análise das entrevistas foram realizados três tipos de codificações: aberto, axial e seletivo. Os entrevistados teorizaram que as dimensões do trabalho docente e do processo de ensino são as mais influentes. A codificação seletiva resultou em um modelo explicativo das teorias subjetivas dos participantes, cujo fenômeno central foi a mudança na identidade profissional do professor.


RESUMEN: La presente investigación tuvo por objetivo interpretar las teorías subjetivas de estudiantes de pedagogía de universidades chilenas sobre el cambio de la identidad profesional del profesorado durante su formación. Mediante un método cualitativo, esta investigación reconstruye las teorías subjetivas de ocho estudiantes de cuarto y quinto año pertenecientes a diferentes pedagogías, de tres universidades y de dos regiones de Chile. Para el análisis de las entrevistas se realizaron tres tipos de codificaciones: abierta, axial y selectiva. Los(as) entrevistados(as) teorizaron que las dimensiones labor docente y proceso de enseñanza son las más influyentes en la formación de la identidad profesional del profesorado. La codificación selectiva dio como resultado un modelo explicativo de las teorías subjetivas de los participantes, el cual tuvo como fenómeno central el cambio en la identidad profesional docente.


Introduction

Professional identity (PI), refers to the dimension of a person's identity that represents what it means to be a professional, alludes to who we are as members of a profession (BARBOUR; LAMMERS, 2015) and consists of a dynamic and interactive process, in which personal and social variables intervene (BEIJAARD, 2019).

In the practice of pedagogy, PI is key, not only because it contributes to work motivation and fosters self-efficacy in relation to professional work, along with decreasing the risk of career dropout (HANNA et al., 2019; HONG, 2010), but also because it is the image, based on which the teacher determines who he or she is as a professional and personal (BAUSTIEN, 2019).

According to Richter, Brunner and Richter (2021) there is a consensus on the conceptualization of PI. This is understood as a multidimensional concept, which has four components: (a) the perception of the task, (b) self-efficacy, (c) the perception of satisfaction
or failure and (d) the personal system of beliefs about teaching and how to put them into practice. In addition, initial training has been found to have a significant effect on teachers' PI construct (VAN DER WAL et al., 2019).

While the importance of initial training in the formation of PI is recognized (VAN DER WAL et al., 2019) the truth is that how this process occurs is still unknown in depth. So far, evidence suggests that in student teachers PI varies throughout the course of the university career, showing that this construction is complex and does not necessarily occur in a linear fashion as students advance in their formative levels, for example, It has been reported that PI is high when students enter the pedagogy career, although this level decreases during the second, third and fourth years of the career, and during the fifth year it increases again, although not to the same level as at the beginning of the professional career (ALCAYAGA et al., 2021).

On the other hand, in a longitudinal study with three groups of students at the diploma level of pedagogy, the results indicated that the teaching identity varies in the academic progression, strengthening throughout their formative process, even when not all students visualize themselves practicing teaching as a profession throughout their future life (CERVANTES; DENGÖ, 2019). That is, we know that the construction of the PI is complex and non-linear, but we do not know why these changes occur throughout the training, nor do we know how these changes are explained by the students themselves. The present research seeks to understand the above, that is, how student teachers explain this phenomenon of fluctuations in the levels of PI from their entry to their graduation, through their subjective theories.

Understanding the construction of PI in initial teacher education from subjective theories becomes relevant, given that it accounts for a highly elaborated and rooted subjective knowledge (CUADRA-MARTÍNEZ; CASTRO-CARRASCO; JULIÁ, 2018), while allowing predicting future actions in people (VYSTRČILOVÁ, 2015). Subjective theories (ST hereafter) are hypotheses that people elaborate in their daily life, starting from early childhood, together with experience and social interaction, and allow understanding one's own behavior and the world. Specifically, STs correspond to cognitions of the vision of oneself and of the world, which can be understood as a complex set, that have an argumentative structure, at least implicit, and that fulfill three functions: (1) explanation, (2) prediction, (3) technology, also contained in scientific theories (GROEBEN et al., 1988). That is, they are elaborations of the subjects, similar to scientific theories in their structure and function, and that serve to unfold in the world. These qualities are key to understanding PI and how it could be influenced or mediated by STs.
Along the same lines, Cuadra-Martínez, Castro-Carrasco and Juliá (2018) argue that STs have a significant impact on the initial training of teachers, regulating at some level learning and the disposition towards it. In this way, they can explain and predict phenomena specific to the profession, in addition to justifying, and given that they are beliefs, guide the present and future behavior (BIESTA; PRIESTLEY; ROBINSON, 2015) of future teachers. Moreover, STs are a good entry point to deepen the PI not only from an individual but also from a collective point of view. This is because STs emerge and have meaning in a social and cultural context, they are elaborated in interaction with others and with the environment; therefore, they are a manifestation of subjectivity and intersubjectivity. Consequently, they can have an individual locus or a collective locus; that is, an individual or collective elaboration (CATALÁN, 2016).

From the STs constructed, people can generate new derived hypotheses, theories of greater complexity, as well as new STs that replace or increase the existing repertoire; all of which favors the availability of new and varied courses of action, translatable into various behavioral alternatives. Thus, STs on PI could eventually favor or inhibit courses of action, to the extent that the vision of oneself, as a teacher, may be more or less flexible. Moreover, there is evidence showing that teachers' STs influence their pedagogical practices (BIEN; MERTEN; SCHNOTZ, 2015) as they behave as filters through which they process experiences and information.

Thus, on the basis that our beliefs guide our actions, delving into the STs about the teaching PI is key, since it would allow us to account for the way in which teachers understand themselves, impressions that are loaded with their own meanings and subjective theories of how to be a teacher (BORTOLUZZI; CATALÁN, 2014).

Despite the fact that, STs may be implicit, complex to articulate, resistant and difficult to change, if they do, these changes in their STs induce the modification of their pedagogical practices (DONOVAN et al., 2015).

Cárcamo and Castro-Carrasco (2015) analyzed conceptions about learning in student teachers and practicing teachers of basic education. One of the conclusions of this research is that both student teachers and practicing teachers do not have only one type of theories about learning, i.e., these theories are flexible depending on the situations they have to face. From this, it is pointed out that, in the course of pedagogical practice, depending on the contexts and demands, teachers mobilize different theories, according to which they justify, predict or explain their actions. If we consider the property of change that teachers' STs possess, it has been found that, teachers mainly identify changes in both their personal and professional lives,
attributing them as causal to external and personal factors, with explanations that involve both scenarios (BONILLA; CASTRO-CARRASCO; GÓMEZ, 2020).

On the other hand, Serrano and Pontes (2016) investigated PI among students of a master's degree in secondary education teacher training. The results revealed that students possess a poorly elaborated PI, they also mention the importance of creating spaces that allow reflection on the teaching profession, as this would help to foster PI among students in that profession. In a systematic review of qualitative studies on the construction of teacher PI in initial training, Cuadra-Martínez et al. (2021) identify a series of conditions and factors that influence this construction, the most relevant being the characteristics of the study programs, the figure of teacher trainers, practice-based training approaches and an adequate university-practice center relationship.

Based on the above, the research question that guides this study is: How do student teachers explain the phenomenon of fluctuations in the levels of PI from their entry to their graduation?

The general objective of this work is to interpret the ST of student teachers from three Chilean universities on the change of PI during initial training, and its specific objectives are to reconstruct the ST of the students about the relationship between the dimensions of PI and the change of PI during their training and to interpret the ST of the students in order to elaborate a comprehensive model that accounts for their explanations of the phenomenon studied.

Method

The methodology responds to the interpretive research paradigm (FLICK, 2020). The interest in knowing the subjective explanations of the students led to the design of a qualitative study based on a case study design.

Participants

A purposive sample (PATTON, 2002) by non-proportional quotas (EVANS, 2007) of 8 participants was chosen for the study; 6 women and 2 men, with an age range of 22-26 years, all students in Chile from different pedagogical careers belonging to two state universities and one private university.

The inclusion criteria were as follows: being a fourth year student of any pedagogy or a fifth year student doing their professional practice in any pedagogy or having recently completed it. Table 1 describes the sample.
Table 1 – Sample table

<table>
<thead>
<tr>
<th>N°</th>
<th>Codeo</th>
<th>Yes in final professional practice</th>
<th>University</th>
<th>Career</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S1FHXG</td>
<td>X (4th)</td>
<td>Coquimbo Region State University</td>
<td>Pedagogy in History and Geography</td>
</tr>
<tr>
<td>2</td>
<td>S2MPGB</td>
<td>X</td>
<td>Coquimbo Region State University</td>
<td>Basic General Pedagogy</td>
</tr>
<tr>
<td>3</td>
<td>S3FHXG</td>
<td>X</td>
<td>Coquimbo Region State University</td>
<td>Pedagogy in History and Geography</td>
</tr>
<tr>
<td>4</td>
<td>S4MPEF</td>
<td>X</td>
<td>Private university in the Coquimbo region</td>
<td>Pedagogy in Physical Education</td>
</tr>
<tr>
<td>5</td>
<td>S5FEP</td>
<td>X (4th)</td>
<td>Atacama Region State University</td>
<td>Kindergarten Education</td>
</tr>
<tr>
<td>6</td>
<td>S6FPFC</td>
<td>X</td>
<td>Coquimbo Region State University</td>
<td>Pedagogy in Spanish and Philosophy</td>
</tr>
<tr>
<td>7</td>
<td>S7FPMF</td>
<td>X (4th)</td>
<td>Coquimbo Region State University</td>
<td>Pedagogy in Mathematics and Physics</td>
</tr>
<tr>
<td>8</td>
<td>S8FEP</td>
<td>X (4to año)</td>
<td>Atacama Region State University</td>
<td>Kindergarten Education</td>
</tr>
</tbody>
</table>

Source: Prepared by the authors

The participants were contacted through consultations with teachers and contacts of the research team. After expressing their interest in participating and agreeing to be contacted, general aspects of the study and the process of accepting participation were explained to them. Those who accepted were asked for personal data such as their telephone number and e-mail address in order to send the informed consent form, approved by the accredited Ethics Committee of the University of Santiago de Chile, via Google Forms, which was completed and accepted by the participants prior to the interviews. With respect to the confidentiality of the information, only those who were part of the research team had access to the data provided by the interviewees. Likewise, to guarantee anonymity both in the analysis and reporting process, the identities of the participants were coded according to the order in which the interviews were conducted, gender and career.
Information collection instrument

As for the instrument applied for the collection of information, eight episodic interviews were conducted (FLICK, 2020), since these allow a better approach to the participants' STs, based on the assumption that beliefs generally have an important relationship of association with episodes and, therefore, with episodic memory (NESPOR, 1987).

For the development of the interview guideline, the dimensions that the literature indicates are part of PI were considered: task perception, self-efficacy, perception of satisfaction or failure, and beliefs about teaching (CANRINUS et al., 2012; KELCHTERMANS, 2009; RICHTER; BRUNNER; RICHTER, 2021).

Interviews were conducted with each participant individually, through the Zoom platform due to the pandemic situation. They were conducted during the month of June 2021 and were conducted by the authors of this paper RE, NR, RT and CV in pairs. The contents were recorded by audio recording (with prior authorization) and later transcribed verbatim for analysis.

Data analysis

For the reconstruction of the students' STs, grounded theory analysis procedures adapted for the study of STs were followed (CASTRO-CARRASCO; KRAUSE; FRISANCHO, 2015). The analysis process consisted of three types of coding: open coding, axial coding, and selective coding (FLICK, 2018).

Open coding

This consisted of the initial segmentation of the data into smaller descriptive units that made it possible to organize and systematize the information into codes and families, resulting in a total of 11 families made up of the various codes (or STs).

Axial coding

The selection of central phenomena was determined by the density of some codes (TS) of the most relevant families with respect to the research question. These were Teaching work (40 codes) and Teaching process (33 codes). Regarding the elaboration, the model proposed by Strauss and Corbin (1990) was used, who propose a coding paradigm that serves to clarify and identify the relationships between a central phenomenon, its causes, consequences, its context
and the strategies involved.

Schematic models were then developed for each central phenomenon using the Lucidchart platform (www.lucidchart.com).

Selective coding

For this third phase, the categories were analyzed and the emerging central category of the study was discussed in team meetings, the codes and quotations were reviewed and a central category was agreed upon. This central category integrated all the existing categories and the relationships between them, thus formulating a comprehensive explanation that seeks to answer the research question.

Results

The results will be presented first with descriptive analyses (open coding) and then with relational analyses (axial and selective coding).

Descriptive analysis

Categories of subjective theories: Once the transcriptions of the interviews were completed, an open coding was carried out with the support of ATLAS.ti. v8 software. By means of this software, textual quotations from the student teachers were selected, which gave an account of explicit or implicit STs, synthesized in sentences with a structure of the type if, then or in general premise and conclusion. In the analysis, this synthetic formulation becomes a code and can be used to represent more than one textual quotation from one or different interviewees. Subsequently, the related STs were grouped into 10 families or emergent categories, with the possibility of a subjective theory being grouped into more than one category. This is described in Table 2, which also includes a representative ST for each family.
### Table 2 – Families created based on open coding

<table>
<thead>
<tr>
<th>Name of family or category</th>
<th>Family definition</th>
<th>Number of ST (codes)</th>
<th>Representative example of ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circumstances in pandemic context</td>
<td>STs that mention the new reality of students in the context of pandemic, including virtuality.</td>
<td>8</td>
<td>Due to the pandemic context, teachers were faced with new challenges to which they had to adapt.</td>
</tr>
<tr>
<td>Teaching difficulties</td>
<td>STs that mention the difficulties encountered in teaching</td>
<td>25</td>
<td>When you are a teacher you must always behave correctly, because you are a teacher 24 hours a day.</td>
</tr>
<tr>
<td>Teaching failure</td>
<td>STs describing situations that generate or would generate a feeling of teaching failure</td>
<td>11</td>
<td>Teachers &quot;question&quot; their abilities, faced with a frustrating situation.</td>
</tr>
<tr>
<td>Influence of contexts in teaching</td>
<td>STs that mention how different contexts influence teaching</td>
<td>16</td>
<td>Since there are different contexts, the teaching method must be &quot;adapted&quot; to these contexts.</td>
</tr>
<tr>
<td>Teaching work</td>
<td>STs involving beliefs about the teaching task</td>
<td>40</td>
<td>In order to do the teaching job properly, a variety of strategies must be used so that everyone learns.</td>
</tr>
<tr>
<td>Perceived self-efficacy in teaching work</td>
<td>STs associated with the perception of self-efficacy in the teaching job</td>
<td>14</td>
<td>Due to the online context, the perception of teacher preparation is impaired.</td>
</tr>
<tr>
<td>Teaching process</td>
<td>STs involving perceptions related to the teaching process</td>
<td>33</td>
<td>The role of the teacher in teaching is not only to deliver knowledge, since learning transversality is fundamental.</td>
</tr>
<tr>
<td>Training process</td>
<td>It relates to all the circumstances that are present throughout the academic training process.</td>
<td>19</td>
<td>Internships bring future teachers closer to the /real/ challenges of their work, as it is the closest they can get to the real world.</td>
</tr>
<tr>
<td>Responsibility (commitment) for teaching</td>
<td>It is related to all the circumstances that are present throughout the academic training.</td>
<td>16</td>
<td>The teaching process must consider the needs of the students, since all students are different.</td>
</tr>
</tbody>
</table>
Relational analysis

Axial and selective coding: The two models that emerged from the previous analysis are presented below. Each of them is described together with their respective citations, to finally give way to the selective coding model.

Axial coding

Teaching work: Model 1, includes the interviewees' STs in relation to the teaching labor as a central phenomenon and how it relates to the other dimensions of the teaching PI. According to the interviewees, the causal condition that influences the formation of the teaching profession is the training process. The student teachers interviewed point out that the experiences lived during university and school training, among which they include teachers and teacher educators, is a determining factor in the development of the teaching profession. They mention that both good and bad experiences obtained at this stage make them reflect on what they want and do not want to do as future teachers. The following quote is an example of this subjective theory: "I had good schooling and good teachers who taught me different values of how to act and how not to act as a teacher, and that undoubtedly has meant a lot in my training process" (S2MPGB).

The interviewees maintain that the intervening conditions in relation to the teacher training process are the circumstances in the pandemic context and the difficulties in teaching. This is due to the fact that the circumstances in the pandemic context have interfered both in their training process and practices, as well as in the tasks they must perform as teachers. This was expressed by some interviewees:
And at least the pandemic has not helped me much in that sense... because I needed the second internship to be sure of that and I could not have it... which was the most important one because it was the assistantship and you also have to teach classes... that is what worries me... I don't know... what worries me, that I have not had the opportunity to be in front of the classroom [...] (S1FHXG).

Because as I was telling you they teach you, they prepare you to be in the classroom with students face to face, they teach you I don't know, to create guides, to... how to work with the blackboard, but they don't teach you, for example, how to reach students online (S6FPFC).

Regarding the difficulties in teaching, the interviewees point out that, at the moment of doing internships, the teaching work is faced with multiple difficulties, such as the context of the establishment, the students and their families. In relation to this, the strategy of action used by the interviewees is responsibility in teaching, which includes different actions that they carry out to face the difficulties mentioned above.

You realize that behind that child there may be other problems, and you have to address them, know what they are about, know why he is so hyperactive, why he stops so much, so it is the teacher’s job to accompany him throughout his process and look for the best strategies so that he can understand you and learn (S5FEP).

All the aforementioned factors, according to the explanations of the interviewees, cause teacher satisfaction, teacher failure, the perception of self-efficacy in teaching, as well as student teaching processes and variations in PI dimensions. Finally, the interviewees mention that the context that influences all these elements is the influence of socio-institutional contexts on teaching, which refers to the family, social and institutional contexts within which teaching work is developed.
Teaching process: Model No. 2 (axial coding) presents the TS of the interviewees about the teaching process as a central phenomenon and the relationship it has with the dimensions of PI. The interviewees refer that the causal conditions that influence the teaching process are: the training process and the perception they have about teaching work, indicating that both what they have learned in their school and university stages, the personal experiences lived considered as pleasant and/or unpleasant, together with their visions of teaching work, are a key factor to carry out the teaching process, emphasizing the need to teach not only academic contents, but also values, considering the diversities in the way of learning that students have, the hidden curriculum and to be able to promote "critical thinking" (S6FPFC). The following quotes represent these beliefs.

All people receive the same thing differently, so the ideal is that you have the variety of everything, to learn it and internalize it in your own way, so that you can also generate opinions, criticisms and reflections on what is being taught or said (S3FHXG).
In reality, what we should be looking for is for students [...] is that they do not remain only with the conceptualization of things, but that they begin to develop critical thinking, that is what is fundamental (S6FPFC).

Teaching is both knowledge in terms of subject matter and also the hidden teaching that one gives to students in terms of values, responsibilities that they have to acquire (S7FPMF).

The students interviewed argue that the intervening conditions to the teaching process are the circumstances in the pandemic context and the difficulties in teaching. This is due to the fact that the circumstances in the pandemic context have changed their way of conceiving teaching and the way to adapt and develop in it.

I spent my 3rd and 4th year of university either in a social explosion or in a pandemic, and that means that the contact with the children is delayed (S4MPEF).

In this pandemic, new teachers are generated, with new teachings [...] teachers who are closer, more open-minded, perhaps more motivated (S7FPMF).

In relation to the difficulties in teaching, the interviewees state that at the time of teaching there are several situations and problems that interfere in the process, such as the type of establishment, the realities and environments of each of the students and their families. In this regard, the action strategy used is responsibility in teaching, which includes different methodologies to adapt to the situation and be able to carry out an adequate teaching process, also generating a learning process in the interviewees.

If at that particular moment the need of the student you are interacting with is to talk, to cry, to say anything and he/she needs it, you have to adapt to the context and be able to adapt the class and then continue (S3FHXG).

One always faces very different realities depending on the establishments and one has to adapt (S7FPMF).

In this process I discovered new ways, platforms, such as Word Wall [...] they are platforms where one makes games and they are platforms for teachers (S3FHXG).

All the factors described above generate as a consequence positive and negative connotations in teacher failure, but also, teacher satisfaction, perception of teacher self-efficacy and variations in PI dimensions. Finally, the interviewees mention that the context that influences all these elements is the influence of social-institutional contexts on teaching, which refers to the family, social and institutional contexts within which the teaching process takes place. The following quote is an example of this:
La habilidad de creación y de planificar la clase de un profesor donde se tiene que adecuar a distintos contextos de necesidad educativa [...] yo te puedo hacer una clase de historia ligada con arte, [...] hacer, no sé, un jarro pato y relacionarlo con la cultura Diaguita (S2MPGB).

**Figure 2 – Model 2 axial coding**

![Diagram](image)

Source: Prepared by the authors

**Selective coding**

Selective coding (model 3) integrates the two models presented and synthesizes the subjective theories of the interviewees. The central phenomenon in this model is the change in teacher PI, which is surrounded by factors that influence this process and are influenced by the changes in it. As we can see, teacher satisfaction, the teaching process, the perception of self-efficacy in the teaching job and teacher failure influence each other with the change in the teaching PI, while the training process influences the change in the teaching PI and this, in turn, determines the teaching job. Likewise, we can see that all these factors surrounding the central phenomenon influence each other.

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10 Influence of social - institutional contexts in teaching Training process Teaching work 1 Phenomenon 2 = Causal conditions 3- Intervening conditions 4 = Action strategies 5 Consequence 6 = Context Influences Circumstances in pandemic context = Mutual influence Determinant 3 Teaching process Difficulties of teaching Responsibility in teaching Variation in PI dimensions Teaching failure Teaching satisfaction Perception of self-efficacy in teaching
In relation to the influence of social-institutional contexts on teaching, this affects all the elements of the model. Due to the current context, it can be seen that the circumstances in the pandemic context is one of the most influential factors in the training process of future teachers, as well as in the development of their PI and the dimensions that compose it. Finally, in relation to academic progression, all the interviewees mentioned that the practical instances they experienced throughout the course were what most affected the development of their teaching IP, since it was in them where they faced situations and challenges closer to the practice of teaching. In the practical instances, student teachers experienced questions and doubts that tested their vision as teachers and their abilities, but once overcome, they strengthened the development of their teaching IP. In other words, the greater the practical experiences, the greater the integration of the dimensions of the teaching IP. It is worth mentioning that the closer the internships were to the actual teaching experience, the greater their influence on the development of the dimensions of the teaching PI. In this regard, those interviewees who had more practical experiences reported higher teacher satisfaction and perception of self-efficacy, while those who had less practical experiences and lived them remotely, reported the opposite.

There is a notion of transversality in the exercise of the teaching profession, which increases during the academic progression, since the teacher is not only the one who delivers knowledge (as the interviewees thought in their first years of training), but also a trainer in integral value issues, taking as a central point the internal and external context of the students and the individual and general socioeconomic context in which the exercise of teaching is being carried out.

In summary, there are multiple factors that influence both the teaching process and the teaching work, which is exemplified in a TS of the participants, who mentioned that in their work as teachers they must influence and contribute in all the contexts that involve teaching and the environment of the students, in order to facilitate and enhance their learning process, although this may produce an overload in them.
**Discussion**

We first present an interpretative synthesis of the relationships and scope of the results, followed by a discussion of these results in comparison with other studies, and then present what we believe could be implications of our findings.

---

**Figure 3** – Selective Coding Model: subjective theories of teacher PI formation through academic progression.\(^{11}\)

![Diagram showing the Selective Coding Model with the following nodes: Influencia de contextos sociales-institucionales en la docencia, Circunstancia en contexto pandemia, Satisfacción docente, Cambio en la identidad profesional docente, Responsabilidad en la docencia, Processo de formación, Fracaso docente, Percepción de autoeficacia en la labor docente, Labor docente, Processo de enseñanza, Change in professional teaching identity, Responsibility in teaching, Teaching process, Teaching work, Teacher satisfaction, Perception of self-efficacy in teaching, Influence of social-institutional contexts on teaching, Training process, Teaching failure.]

Source: Prepared by the authors

\(^{11}\) Influence of social-institutional contexts on teaching Training process Teaching failure Perception of self-efficacy in teaching E Circumstance in the context of the pandemic Teacher satisfaction L Change in professional teaching identity Responsibility in teaching Teaching process Teaching work
The results of this study show that the students' STs that explain the variations of teacher PI during initial training, specifically the perception of the teaching role and teaching beliefs, were intertwined and related to each other, since these dimensions do not seem to be separated in the explanations of most of the interviewees, explaining everything as if they were the same dimension. In spite of this, they concluded that both teaching and teaching go beyond the traditional view, including a combination of knowledge and values. This can be seen either as a good integration of the aspects related to their profession or as a lack of more reflective elaborations that would allow for more distinctions on various aspects of their PI. Regarding the latter point, Vloet (2009) points to the need to generate more reflection and awareness of the meaning of the profession, which Živković, Stojanović and Ristanović (2018) have related to a limited awareness in student teachers of how they construct their PI.

The first aim of the study was to reconstruct students' STs about the relationship between PI dimensions and PI change during their training. This was done by forming 10 families of codes linked to the dimensions and 1 category containing the variations of the PI dimensions during the initial training. Of the 10 families mentioned, the ones with the highest density (highest number of STs) were teaching work and teaching process. These were also the ones that the students identified as the ones that varied the most during the academic progression. Therefore, we understand them here as the most relevant categories in relation to the teaching PI.

As for the second objective, which consisted of interpreting the students' STs in order to elaborate a comprehensive model that accounts for their explanations of the phenomenon studied. The results obtained again put as central phenomena the teaching work and the teaching process, the first would be determined by the PI, while the second has a mutual influence with it. Therefore, it reaffirms these dimensions as the most relevant in relation to the development of the teaching PI.

The results show agreement with Morrison (2013), who states that PI is the way in which we represent others and ourselves through our professional roles, without ignoring the set of beliefs, values, language and resources that exist in these professions. Thus, professional behavior influences PI.

There was no mention by the participants of the incidence of their previous experiences outside the university period; therefore, no implications of external relationships in the development of the PI are reported, which differs from other results found in the area (DÍAZ, 2021). For example, Galaz (2014) mentions that a teacher's PI cannot be conceived as circumscribed only to his or her initial training; it is also built on a previous network of primary
and early relationships and identifications (life experiences and significant subjects) and, later, with the identification-identification of professional models during professional insertion. The above is explained from the objective of the research, which did not seek to investigate experiences prior to undergraduate pedagogical training, this could explain the absence in the participants of STs that link the experiences prior to initial training as influential in the current variations of the process of construction of their PI.

Transversality of the profession's curriculum

The increase in the notion of transversality present in the teaching profession generates, according to the students' theories, that the teacher not only delivers knowledge but is also a trainer in integral value issues, considering the diverse contexts of the students and the educational community. This coincides with what was found in a recent systematic review of ten years of Chilean studies on teachers' thinking, where it is concluded that an important aspect of teachers' identity is the belief in their integral training role, that is, support, value and emotional containment, especially in contexts of vulnerability (VENEGAS, 2021). This is a recurrent result in the studies of Chilean teachers' beliefs, and in this case also in students in training, which leads to wonder if in some cases this belief could be working as subjective theories that justify inequalities in learning or be inhibiting improvement actions in the area of instrumental or "cognitive" learning, which is also important for development. On the other hand, it may be showing the construction of idealized teaching identities (FURLONG, 2013) and/or an early over-demanding of the teaching role and work. The latter from a limited conception that visualizes the teacher as the only education professional responsible for transversal or coexistence aspects in the school system (RETUERT; CASTRO-CARRASCO, 2017).

The above is also consistent with the results found in a recent study of TS, where it is concluded that transversality is expressed, according to teachers, in sporadic activities or in the face of the emergency of daily contingencies, where the teacher leaves the traditional structure of the class and is concerned with a more comprehensive formation of students (GONZÁLEZ; MEZA; CASTRO-CARRASCO, 2019). It draws attention here to a vision of transversal training apparently linked to intuitive, improvised (VINHA et al., 2017) and urgent reactions, not the product of a formative process. One could also delve deeper into the attitudes or value options of future teachers, since it would be interesting to know whether or not the STs of student teachers coincide value-wise (TATALOVIĆ VORKAPIĆ; LJEVER; BATISTIĆ...
ZOREC, 2020) with the competencies and attitudes that the current school system considers as part of transversality, and therefore, these findings could contribute to the understanding of the frequent formative "reality shock" versus the labor field.

**Context Pandemic and online training**

The COVID-19 pandemic caused higher education institutions to be forced to change from face-to-face to virtual mode in a limited period of time.

In the results of the interviews, it can be evidenced that the context of the Covid-19 pandemic has affected several areas related to the training of student teachers, being the most affected, as hypothesized by the students, the teaching work dimension of the PI, since it is questioned when making a certain comparison of their initial pre-pandemic practices, with their current practices in an online context, which would not be favorable for their performance as teachers. The above coincides with a research by Méndez, Cretton and Olguín (2021), where it was found that a large number of students indicated that they have not been able to adapt to the virtual system, that they prefer face-to-face teaching and that online learning is not optimal. However, our results also highlight subjective theories that show students' capacity to test their abilities and skills, as well as the need for a link with their own students. The elaboration by them of these STs, which we could call adequate coping or action initiators (CATALÁN, 2016), could be explained from the results of a study conducted in 34 Chilean universities during the pandemic, which showed that negative affective states were more intense in first and second year university students, more than in those of higher courses (VILLARROEL et al., 2021). These coping strategies have also been found in pandemic teaching practice, generating resilience when they allow overcoming the adversity of emergency education (PURWANTO et al., 2020).

In summary, the pandemic situation and that of online practices, constitutes for these students an atypical teaching experience, which they explain as having an important influence on their socialization process as teachers (FURLONG, 2013) and specifically, on some dimensions of their PI.

**Importance of practices**

Internships during academic progression, as explained by the interviewees, are seen as opportunities to get closer to the reality of work and its curricular requirements. Abundant
scientific literature identifies this formative method as key in the formation of the teacher's PI and professional autonomy (CHIKOKO; MSIBI, 2020; WILLIAMSON et al., 2015). The above coincides with Galaz (2014), who states that professional practice is a crucial stage for the constitution and conceptualization of the professional role, even, it should be considered as an activity that generates significant or critical actions that promote the construction and deconstruction of PI.

However, this has possibly been affected by the current context of online practice, where the interviewees narrate feeling distant from the students together with a feeling of not being adequately fulfilling their teaching work, in addition to a decrease in the feeling of teacher preparation. Another explanation could be the low effectiveness of the reflective accompaniment processes that universities have while students develop their professional practices, which could be limiting practical learning (SOTOS, 2021). Along with this, the difficulty of teacher educators to adequately support this formative process in pandemic context could also have an impact on the above, which could generate insecurity in student teachers and work overload, negatively impacting their PI (RODRIGUES; DE MATTOS, 2018; SAKALLI-GÜMÜŞ, 2015).

Final remarks

The teaching PI refers to what it means to be a teacher, and one factor that influences the construction of this identity is the STs that student teachers form throughout their lives and during their academic training. The results of this research show that of all the dimensions of the teaching PI, those that are most relevant in the change of this during initial training are the teaching work and the teaching processes. It is also observed that the practical instances experienced during university training are one of the elements that most favor the construction of teacher PI. Finally, the current pandemic context has diminished the quality of the training of student teachers, especially in relation to practices, which has led to questioning, insecurities and learning in future teachers.

This study has limitations, although conducting interviews remotely allowed the integration of students from universities in different regions of Chile, the online and pandemic context was an initial difficulty in conducting the interviews. Notwithstanding the above, learning to conduct a virtual qualitative study (TUNGOHAN; CATUNGAL, 2022) stimulates the question of the need to adapt not only the ways of collecting information but perhaps also its analysis.
Taking into account the results and limitations of the study, it is interesting to continue research on the understanding of changes in teacher PI during initial training. In this regard, specific comparison studies could be integrated in students at certain levels of the teaching career, in order to have a better understanding of the factors influencing the fluctuation of teacher PI during academic progression.

Finally, we consider that in times of questioning the current teacher education model (VAILLANT; MARCELO, 2021), studying how future teachers are constructing and explaining their professional teacher identity processes is a necessary process. Just as the educational sciences have devalued the professional knowledge elaborated daily by teachers for the design of public policies, we also believe that it is time to consider the knowledge of students in training as an essential input to improve teacher training processes and, in general, for educational change.

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