SECTION: PAPERS

FOR MATHEMATICS STUDENT TEACHERS PARTICIPATING IN THE PEDAGOGICAL RESIDENCY PROGRAM: WHAT IS TEACHER EDUCATION?[1]

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ABSTRACT

This article aims to investigate what is the meaning of teacher education for members of the Pedagogical Residency Program of the Mathematics course at a Federal Technological University in the state of Paraná. To this end, semi-structured interviews were conducted with students participating in the project. The interviewees' statements were analyzed according to the procedures indicated by Content Analysis, having as *a priori* categories the Strands of Teacher Learning, which are: (i) interest in teaching; (ii) practical knowledge of teaching; (iii) reflection on teaching; (iv) the teaching community; and, (v) teacher identity. Through this investigation, meanings were found related to personal progress, establishment of values, enabled experiences, reflections produced, highlighted questions, participations, lessons learned, elaborated constructions, elaborated strategies and inherent knowledge for the teacher.

Keywords: Teacher Education. Strands of Teacher Learning. Pedagogical Residency Program.

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PARA ESTUDIANTES DE MATEMÁTICAS PARTICIPANTES DEL PROGRAMA RESIDENCIA PEDAGÓGICA: ¿QUÉ ES LA FORMACIÓN DE LOS DOCENTES?

RESUMEN

Este artículo tiene por objetivo investigar cuál es el significado de la formación docente para los miembros del Programa de Residencia Pedagógica de la carrera de Matemáticas de una Universidad Tecnológica Federal en el estado de Paraná. Para eso, fueron realizadas entrevistas semiestructuradas con los estudiantes que participaron del proyecto. Los testimonios de los entrevistados fueron analizados según los procedimientos indicados por el Análisis de Contenido teniendo como categorías *a priori* los Enfoques de la Enseñanza del Aprendizaje, que son: (i) interés por la enseñanza; (ii) conocimiento práctico de la enseñanza; (iii) reflexión sobre la enseñanza; (iv) la comunidad docente y; (v) identidad docente. Por medio de esta investigación, fueron encontrados significados relacionados a los progresos personales, estabelecimiento de valores, experiencias hechas posibles, reflexiones activadas, preguntas evidenciadas, participaciones realizadas, lecciones aprendidas, construcciones elaboradas, estrategias efectivas, y conocimiento inherente al docente.

Palabras clave: Formación de docentes. Enfoques en el Aprendizaje Docente. Programa de Residencia Pedagógica.

PARA LICENCIANDOS EM MATEMÁTICA PARTICIPANTES DO PROGRAMA RESIDÊNCIA PEDAGÓGICA: O QUE É FORMAÇÃO DE PROFESSORES?

RESUMO

Este artigo tem como objetivo investigar qual o significado de formação de professores para os integrantes do Programa de Residência Pedagógica do curso de licenciatura em Matemática de uma Universidade Tecnológica Federal do estado do Paraná. Para tanto, foram realizadas entrevistas semiestruturadas com os alunos participantes do projeto. Os depoimentos dos entrevistados foram analisados segundo os procedimentos indicados pela Análise de Conteúdo, tendo como categorias *a priori* os Focos da Aprendizagem Docente, os quais são: (i) interesse pela docência; (ii) conhecimento prático da docência; (iii) reflexão sobre a docência; (iv) comunidade docente; e, (v) identidade docente. Mediante esta investigação foram encontrados significados relacionados a progressos pessoais, estabelecimento de valores, vivências possibilitadas, reflexões deflagradas, questionamentos evidenciados, participações realizadas, aprendizados ocorridos, construções elaboradas, estratégias efetivadas, saberes e conhecimentos inerentes ao professor.

Palavras-chave: Formação de professores. Focos da Aprendizagem Docente. Programa de Residência Pedagógica.

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INTRODUCTION

In this research we seek to ascertain the meaning of teacher education for Mathematics student teachers participating in the Pedagogical Residency Program. Given this, we initially bring some meanings and conceptions of teacher education that authors in the field present in their works.

Discussing teacher education requires that we understand the meaning of education. From the etymology, we find that the word education originates from the Latin educatĭo, ōnis "action of creating, nurturing, culture, cultivation"[4] and, searching for its meaning in the Houaiss (2009) dictionary of Portuguese language we have an "act, or process of educating oneself". In the Dictionary under construction - Interdisciplinarity, Martins (2002, p. 246) reports the understanding of education as "everything that dialectically can favor the subject in the realization of himself/herself, the development, and through education, this is all that can be related to intervention".

When we incorporate the noun teacher into these meanings, defined here as "the one who teaches, teaches classes (in school, college, university, courses or privately); master"[5] (HOUAISS, 2009), we perceive education as a result of the development of actions around the individual.

Nóvoa (1992), in the context of teacher education, explains that:

> [...] education must stimulate a critical-reflexive perspective, which provides teachers with the means of autonomous thinking and which facilitates the dynamics of participatory self-training. Being in teacher education implies a personal investment, free and creative work on ones own paths and projects, with a view on building an identity, which is also a professional identity (NÓVOA, 1992, p. 13, our translation).

Ponte (1995), when addressing the notion of teacher education, points out that it comes close to the concept of professional development and, when mentioning the differences between both, reports that teacher education is related to the idea of "attending" courses; it consists of a movement from the outside in, so that information is transmitted to the teacher; it focuses on what the teacher is lacking; it is generally considered in a divided way, separating it by subjects, disciplines, etc.; and begins, generally, with theory and often does not move out of it. For Ponte (1995), the concept of professional development represents a different way of looking at teacher education, since professional development represents a break with the idea

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[4] Search done in the Houaiss Electronic Dictionary of the Portuguese language 3.0.
[5] Meaning of the Houaiss Electronic Dictionary of Portuguese 3.0.

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that the teacher is merely an object of his/her education, transforming himself/herself as a subject responsible for it.

Pimenta (1996), when articulating about the reflective teacher (SCHÖN, 1990), points out the tendency to think of teacher education as a continuous process that involves the initial and continuous education of teachers. Taking this into account, the author understands that:

> [...] teacher education is, in fact, self-education, since teachers rework the initial knowledge in comparison with their practical experiences, experienced daily in school contexts. It is in this confrontation and in a collective process of exchange of experiences and practices that teachers are constituting their knowledge as a praticum, that is, one that constantly reflects on and about practice (PIMENTA, 1996, p. 29, our translation).

Passos *et al*. (2006), by making a conceptual theoretical synthesis of teacher education and professional development, conceive teacher education in a perspective of continuous education and, also, professional development. They understand it as:

> [...] a personal, permanent, continuous and unfinished process that involves multiple stages and formative instances. In addition to personal growth throughout life, it also includes professional education (theoretical-practical) of initial education - geared towards teaching and which involves conceptual, didactic-pedagogical and curricular aspects - and the development and updating of professional activity in processes of continuing education after graduation (PASSOS *et al.*, 2006, p. 195, our translation).

Roldão (2017), when discussing the nature of teacher education, presents a perspective related to the studies developed during the formative process. For Roldão (2017, p. 194, our translation) "teacher education is a contextualized process of professional socialization, of continuous construction and managed by the subject himself/herself during his/her professional career, with pre-service education being only a first stage, within a contextualized training logic".

When using literature, we find different meanings of teacher education. There are authors who conceive it with a personal perspective in which it starts from the individual's initiatives, others expose the idea that teacher education is precisely related to attending an educational environment and there are also those who define it as the contextualized action of what one learns in the educational environment.

In addition to the notions about teacher education presented here, we find in the Law of Guidelines and Bases of National Education (LDB) (BRAZIL, 1996) provisions about the fundamentals of education professionals' education - these principles are treated in items I, II and III of the sole paragraph of article 61 - which articulates about the presence of basic

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education, the association between theory and practice and the benefit of academic experiences during teacher education.

In view of the concepts presented above, we assume that it is up to the individual to define or elaborate the meaning of teacher education. It is in light of this understanding that we elaborated the objective of this research: to investigate the meaning of teacher education for the members of the Pedagogical Residency Program of the Mathematics course at a Federal Technological University in the state of Paraná, using, for this identification, the Strands of Teacher Learning.

In the continuation of the article, we bring clarifications about the Strands of Teacher Learning (STL); some information regarding the Pedagogical Residency Program in general and also within the scope of the investigated institution; details regarding methodological procedures; exemplifications of the data collected and the results that we could evidence; and finally, our concluding considerations.

STRANDS OF TEACHER LEARNING

The STL, according to Arruda, Passos and Fregolente (2012, p. 25, our translation), are "an instrument for the analysis of teacher learning that can be useful to assess teacher education in any area and configuration". They were developed in analogy with the Strands of Science Learning (SSL), which consist of a set of six strands for science learning in informal and formal environments (by adaptation) and are present in *Learning Science in Informal Environments: People, Places, and Pursuits* (NATIONAL RESEARCH COUNCIL, 2009). Like the SSL, STL can "enable a broad view of teacher education that incorporates multiple dimensions" (ARRUDA; PASSOS; FREGOLENTE, 2012, p. 33, our translation).

In the sequence we describe the five Strands of Teacher Learning, as conceived by their original authors:

> Strand 1 [interest in teaching]. The student experiences interest, emotional involvement, curiosity, motivation, mobilizing himself/herself to do and learn more and more about teaching.
>
> Strand 2 [practical knowledge of teaching]. Based on knowledge in action and based on reflection in action, the student develops knowledge of cases, a repertoire of didactic and pedagogical experiences that guide his/her daily practice *in actu*.
>
> Strand 3 [reflection on teaching]. Faced with new problems arising from his/her practice, which the student teacher was unable to solve at the time they occurred, the future teacher, based on theoretical instruments, systematically analyzes the situation, getting involved with research and *a*

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posteriori reflection on his/her practice and the accumulated knowledge about it, in order to solve the problems initially detected. It is about developing the research dimension in the future teacher.

Strand 4 [the teaching community]. The student participates in activities developed in a teaching community, learns the practices and language of teaching with other teachers or future teachers, assimilating the values of that community and developing collective reflection.

Strand 5 [teaching identity]. The student thinks about himself/herself as a teaching apprentice and develops an identity as someone who will become a teacher by profession (ARRUDA; PASSOS; FREGOLENTE, 2012, p. 33, our translation).

In research, the STL have been used as categories for the analysis of teacher learning. Demonstrating its use is the investigation by Moryama, Passos and Arruda (2013), who used the STL to understand what students in a Biological Sciences course learned about teaching, participating in PIBID (Institutional Program for Teaching Initiation Scholarships) and the research by Obara, Broietti and Passos (2017) that characterized the contributions of PIBID in the construction of the teacher identity of former scholarship holders and former students of a course in Chemistry and of teachers from the state school system.

Beforehand, we assumed that the STL would be used to interpret the collected data, arising from the manifestations of the members of the Pedagogical Residency Program under investigation, with each focus being considered as a category established as *a priori*, thus sustaining a deductive analysis process. Details regarding these procedures have been inserted in a subsequent section.

PEDAGOGICAL RESIDENCY PROGRAM

The Pedagogical Residency Program, according to the Coordination for the Improvement of Higher Education Personnel (BRAZIL, 2018), is a project (non-profit) carried out with the aim of stimulating the relationship between theory and practice in undergraduate courses in pre-service teacher education courses in Higher Education Institutions (HEI) that are Public and Private. According to art. 2 of Ordinance 38, of February 28, 2018, the objectives of the program are to:

I. Improve the education of students of undergraduate teacher education courses, through the development of projects that strengthen the field of practice and that lead the student to actively exercise the relationship between theory and professional teaching practice, using data collection and diagnosis about teaching and school learning, among other didactics and methodologies;

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II. Induce the reformulation of the supervised internship in undergraduate teacher education courses, based on the experience of the pedagogical residency;

III. Strengthen, expand and consolidate the relationship between the HEI and the school, promoting synergy between the entity that forms and those that will receive the undergraduates of the degrees, besides stimulating the protagonism of the teaching networks in the education of teachers; and to,

IV. Promote the adaptation of the curricula and pedagogical proposals of the pre-service teacher education courses for teachers of basic education to the guidelines of the Common National Base Curriculum (BNCC) (BRASIL, 2018, p. 1, our translation).

The program is developed in conjunction with the State and Municipal Education Secretariats. The HEIs involved articulate their program projects with the pedagogical proposals of the school that will receive the participating students (BRASIL, 2018).

To participate in the program, students of undergraduate teacher education courses at HEIs must be attending at least the 5th term or have attended 50% of the course, in addition, they must have 440 hours to be allocated to the program's activities, of which: 60 hours are intended for the school setting; 320 hours are for immersion, which include conducting, planning and executing at least one pedagogical intervention; and, 60 hours for the preparation of the final report, evaluation and socialization of activities. These activities are accompanied by an Institutional Coordinator, responsible for the project and a teacher at the HEI, by a Supervising Teacher, also a teacher at the HEI, and by a Preceptor, a teacher of basic education at the school that will receive the student.

In this research, we investigated the Pedagogical Residency Program of the Mathematics course at a Federal Technological University in the state of Paraná, which had 24 students, 3 preceptors and 1 supervising teacher and institutional coordinator. All participants in this program met monthly (or bimonthly) to discuss their difficulties and practices in the education networks in which they worked.

METHODOLOGICAL PROCEDURES

In order to investigate the meaning of teacher education for participants in the Pedagogical Residency Program, we used semi-structured interviews for data collection that were audio recorded and transcribed. To guide the interview, we elaborated questions that would enable a dialogue between the interviewee and the researcher, in order to follow a path that would lead to the questioning of teacher education. Every so often other follow-up questions, depending on the statements of the interviewee were also added.

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The following are the general, guiding questions, in the order in which they were presented to the student teachers at the time of data collection: "What is your name?" (for data organization only); "How long have you been in the Pedagogical Residency project?"; "What does the project mean for you?"; "Why do you participate in the Pedagogical Residency project?"; "What is teacher education for you?"

The *corpus*[6] was composed of 21 interviews conducted individually with undergraduate student teachers of the Mathematics course. Each interview was coded with the letter E, followed by a number to identify the research participant. We clarify here that the interviews of students E8 and E11 who did not attend the interviews are not registered in this *corpus*.

For data analysis, we used Content Analysis understood by Bardin (2011, p. 45, our translation) as "a set of communication analysis techniques that uses systematic and objective procedures to describe the content of messages". According to this author, Content Analysis is composed of the "pre-analysis", "material exploration" and "treatment of results" process, in which the researcher, in his/her investigative path, makes inferences that contribute to the interpretative movement.

In this research, we started the pre-analysis by performing the "floating reading" of the interview transcripts, proceeding to the definition of the *corpus*, when we selected the respondents' answers regarding the question "What is teacher education for you?", Among other answers that collaborated to understand the meaning of teacher education for the student. It should be noted that, for the results presented in this article, we do not consider the interviews in their entirety, but only the excerpts that referred to the STL, initially assumed by *a priori* categories, according to the objectives outlined.

After defining the *corpus*, we organized the selected speeches of the students in a spreadsheet. The header of this spreadsheet was composed of the following items divided into columns: "Student", which identifies to which interviewee each speech belongs to; "Speech number", in which we enumerate the phrases of the students in a continuous way - that is, the enumeration started in the first speech of student E1 and ended in the last speech of student E23; "Speech", this is the column in which the students' sentences are arranged; and, "Notes", in which we had observations (elaborated by the researchers) referring to the students' phrases in relation to the STL.

For the material exploration, we highlight excerpts from the students' phrases that refer to teacher education, we classified the highlighted excerpts questioning their meaning and categorized them using the strands. As a demonstration of this stage of the process, the

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[6] "[...] the set of documents taken into account to be submitted to the analytical procedures" (BARDIN, 2011, p. 126, our translation).

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highlighted excerpts classified in the category "practical knowledge of teaching" presented, for example, words and concepts about experiences of teaching practice, posture in the classroom, knowing how to teach, the domain of specific knowledge of the discipline and pedagogical knowledge, among other teaching practices that represented the activity in the classroom.

In the stage of treatment of results, we sought to understand the significant sets of speeches, for this we point out what we observed in each group of phrases categorized in each STL and we arranged, in a table, the number of times that each strand was evidenced in the speeches of each one of the interviewees. We chose this form of presentation because it allows a synthesized reading of the information collected, and it would be impracticable to show the completeness of the records analyzed in an article. Next, we approach this phase, bringing examples that clarify our selections and allocations in each strand, and we will present the table in question.

DATA ANALYSIS AND TREATMENT

To identify the speeches of the interviewees who fall under the STL, we sought to answer the question: "what does this speech mean?". When reflecting on this, we identified which strand the speech was related to and justified the characteristic that led to classifying it in a certain category. Therefore, we will present here some excerpts from the interviews categorized in each STL.

Strand 1: Interest in teaching

Regarding Strand 1, in which the teacher or future teacher demonstrates motivation and mobilization for teaching, we identified in the students' statements social aspects, as mentioned by E12:

> "[…] because you end up helping people when you're a teacher, even indirectly (sic)" (E12, our translation).

And, also, individual aspects, which mobilize the individual to seek progress towards teacher education in relation to his/her university journey, emotional involvement with students and professional teaching growth, as shown in the speech of E17 when manifesting that the interest in the educational process always needs to be present:

> "[...] teacher education... look, I think it is a constant growth that the teacher has to seek, with updating, it means understanding the student's side, always making progress, not stagnating, because we see this a lot, that the teacher stagnates in the situation he is in and stays, so I think it's ... I don't know if

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this position is right for me, but I think that teacher education is this, it's always progress (sic)" (E17, our translation).

Strand 2: Practical knowledge of teaching

Regarding Strand 2, referring to the practical knowledge of teaching, we observe in the speeches the recognition of the experience, of the student teacher or teacher, in the classroom as a component in the education of teachers. As E14 reports:

> "*[…] but only when we go to school, we experience what we see here in theory, looking at reality we start to have an idea and start to build our training (sic)*" (E14, our translation).

Included in this experience are the repertoires of methodological knowledge addressed in the speech of E16:

> "*[...] the education of a teacher I think is only acquired with a lot of experience, like, since when you participate not only in the Residency project, but since when you develop a lesson plan in the practical discipline classes that we have that is linked with the Pedagogical Residency*" (E16, our translation).

In continuity we have the manifestations about pedagogical and didactic knowledge, mentioned by E20 and E01, respectively:

> "*[…] understanding that each student has their time, right, each one has their own thoughts, their reasoning, their rights, their way of… thinking (sic)*" (E20, our translation).

> "*Ah you have to have… you have to know the content, you know, to be able to pass it on and to know how to teach you have to have good teaching skills to teach (sic)*" (E01, our translation).

There were interviewees who explained teacher education as "case knowledge", as E22 reports:

> "*[...] it is to enable a person to enter the classroom to deal with everything that happens inside (sic)*" (E22, our translation).

And also as a way of being attentive to the surprises of everyday teaching life, explained by E23:

> "*[...] I think that teacher education has to happen both in theory, but also mainly in practice, because this daily practice will help you to face future problems (sic)*" (E23, our translation).

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Strand 3: Reflection on teaching

About Strand 3, which deals with the reflection of the teacher or future teacher on their knowledge and practices, covering the dimension of the research, we find in the speeches, considerations about the education of teachers that refer to the reflection on the students' individual learning:

> *"[...] each student has his problem, right, his individual problem, there are students who work in high school, they have their problems at home, they are going to study hard, so they don't want to learn things, this is not the fault of the teachers who are there, so the reality is something else... (sic)"* (E10, our translation).

We also observed that E17 explains about teacher education as an act of developing teaching strategies and reflecting on their use, when E17 says that:

> *"[...] it is to create strategies, right, that will be better for the students and also to have the discernment of knowing when that strategy is working or not, always looking closely at the student's side, I think it's more focused on that (sic)"* (E17, our translation).

In addition to reflections on student learning and teaching strategies, there were highlights regarding the academic subjects taken in higher education as an item that "made a difference", or not, in teacher education:

> *"[...] we [...] spoke like this... that we thought there were many didactic subjects here at UTF, we would not remove any of the maths, the maths we think are essential, the didactics we think that most of them are almost the same thing... there is very little teaching subjects, how to work, for example, how you are going to teach [...] I am doing practice in teaching C, until now it was the subject that had the most difference among the others, because most of the didactics are always about curricula, methodologies, these things, but not how you teach 'that' to the student, it is one of those that I think is lacking in the subjects here (sic)"* (E19, our translation).

Finally, in relation to Strand 3, one of the interviewees commented on some situations that occurred during classes which they accompanied, reporting that the teacher was in constant education:

> *"[...] it's not even a matter of teaching mathematics, I think it's a matter of knowing how to deal with some things that you see even at the Residency, like you arrive in the classroom, the thirty-five students are disinterested, and what am I going to do? Will I continue the class? Will I wait for them to calm down? Will I try to know why they are like this? Will I ignore it? And I think this is constant, I think I'm always in education, I think teacher education doesn't end (sic)"* (E14, our translation).

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Strand 4: The teaching community

As for the strand that highlights the presence of the teaching community, we verified the importance of participation in groups as a place of learning for teacher education, with several mentions, and we brought as an example the statements of E02 and E03, respectively:

> "*[...] these training experiences, I think the course doesn't provide as much, I think the [Pedagogical Residency] project provides a lot, I think it's very important (sic)*" (E02, our translation).

> "*[...] projects like the Residency is one of the very good things that I have, I think, there are the disciplines, the project that we have to present (sic) [...]*" (E03, our translation).

Adding to this relationship, E20 explained that participation in these groups contributed, above all, to their practice:

> "*[...] much [...] before participating in the project like this, I didn't have, so much... I didn't feel so comfortable at the front like this, because here we only make presentations to the people in the classroom, and everyone is quiet, you know, it's different from the [school] classroom, there you do not know... other people you don't see every day, yeah, everyone has their thoughts, the teacher is watching you, and it's a moment like this, you're correcting what you're doing wrong, too, and for you, you feel like it is right, on a daily basis, so for me it's very important, so much to learn this, it's being in front of them, doing the conducting, as well as the content too (sic)*" (E20, our translation).

Strand 5: Teacher identity

With regard to Focus 5, we note in the interviewees' statements three considerations that are relevant to teacher education: learning to be a teacher, thinking of oneself as a future teacher and building one's own teacher identity.

About learning to be a teacher, E04 said:

> "*[...]I think it's more of a preparation for myself and also... to work in the classroom, not a lesson plan as these things teach (sic)*" (E04, our translation).

In addition, E04 reported that teacher education is a unique process of practice that does not involve didactic aspects. Thinking about yourself as a teacher refers to being a teaching apprentice. In E05's speech, we can verify E05's reflection on becoming a teacher:

> "*R.[7] who is my supervising teacher... before I learned math with her, the first thing I learned was how to behave in the classroom, like if you should or*

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[7] We omit the teacher's name, leaving only the initial letter of the name followed by a period.

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should not speak, or how you... your posture is as a teacher, what things you can pass on to your students, not necessarily involving mathematics, but the way for you to build the identity of a human being is to model to those who are more oriented to improve the focus a little bit too... I think the teacher, like I talked about R., the teacher first of all is a father or a mother, of course it is not his/her role to do this, but inside the classroom they end up becoming this, especially when you work with the sixth grade year, which is my case (sic) [...]" (E05, our translation).

And, finally, about the teacher being the builder of his/her identity, E21 argued:

"[...] to be able to absorb this [teachings of people who were once teachers] and build your own vision of what it means to be a teacher, it is an education professional (sic)" (E21, our translation).

Synthesis of speech analysis from the perspective of the STL

In view of what was possible to identify in the reports of the interviewees in relation to the STL, we elaborated Table 1 which presents the number of strands present in the speeches of each interviewee, and, in the same table, the total of each strand in the statements of the group.

Student/Strand	Strand 1	Strand 2	Strand 3	Strand 4	Strand 5
E01		4			
E02		2		2	
E03		6	1		
E04		1			1
E05				1	1
E06		2			
E07		1	1		
E09		2			
E10			1	2	1
E12	2	1			
E13		1			
E14		1	1		1
E15		2			
E16		1		1	
E17	1		1		
E18		1	1		
E19		1	1	1	
E20	1	1	1	1	
E21				1	1
E22		2			

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E23		1			
Totals	4	30	8	9	5

Table 1 – Focuses present in the interviewees' statements
Source: elaborated by the authors, 2019.

When we add the totals inserted in the final line of Table 1, we have a result of 56 statements that included some of the STL in their scope. Observing these records percentagewise, and checking line by line, that is, student by student, we have that 33.33% of the interviewees expressed themselves only in relation to one of the strands (for example, E1, who expressed only about Strand 2), 47.61% highlighted two strands in their reports (such as E2, presenting Strands 2 and 4), 14.28% had their speeches allocated in three strands (E10, for example), 4.46% in four strands (check E20), and none of the undergraduate students expressed their opinion regarding all five strands.

In view of these results summarized in Table 1, we bring the conclusions of another interpretive movement carried out, which we explain in the section on methodological procedures, which contribute to the answer to what we seek to understand with this investigation: what meanings do these students attribute to the education of teachers and what could be highlighted by the STL?

In the sequence, we list the evidences made possible by this analytical process, which considered the disposition of the STL, from 1 to 5: to value the social aspects of education; to make progress in the university journey; to progress in emotional involvement with students; to progress with the teaching professional's own growth; to experience the classroom; to have methodological knowledge; to have pedagogical knowledge; to have didactic knowledge; to have knowledge of cases in order to deal with surprises in the school routine; to reflect on the education of students; to develop teaching strategies; to reflect on the strategies used for teaching; to reflect on the syllabus of higher education courses; to question situations in the school environment; to participate in teacher education groups; to learn to be a teacher; to think of oneself as a future teacher; and, to build their own teacher identity.

In short, we were able to understand that teacher education for the undergraduates which were interviewed is a personal and collective activity developed in the context of initial teacher education and in continuing education in the classroom, through knowledge and reflection on practices, theories, teaching, learning and on their own education, which contributes to the construction of their own teacher identity and the improvement of their career.

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FINAL CONSIDERATIONS

Throughout the research process, we reflected on the meaning of teacher education, whether in defining the research objectives, in the preparation of the interviews or in the analysis of the data.

We have seen that teacher education is determined by reflective actions of the teacher, and that these actions follow various conceptions. In this investigative process we could see that the statements of the interviewees participating in the Pedagogical Residency Program added meanings to the teacher or future teacher who experiences the training.

Given the objective of this article, with the results of an investigation that was dedicated to seeking the meaning of teacher education, according to the participants in the Pedagogical Residency Program, we identified that the teacher education process is continuous and requires a reflective view of the school environment from the professional.

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