



## Author's Correspondence

<sup>1</sup> Eduarda da Silva Lopes  
E-mail: [eduardalopes.bio@gmail.com](mailto:eduardalopes.bio@gmail.com)  
Pontifícia Universidade Católica do Rio Grande do Sul - Porto Alegre, RS, Brazil  
CV Lattes  
<http://lattes.cnpq.br/1355545866794112>

<sup>2</sup> Franciele Siqueira Radetzke  
E-mail: [francielesradetzke@gmail.com](mailto:francielesradetzke@gmail.com)  
Universidade Regional do Noroeste do Rio Grande do Sul - Porto Alegre, RS, Brazil  
CV Lattes  
<http://lattes.cnpq.br/6007927453058608>

<sup>3</sup> Roque Ismael da Costa Güllich  
E-mail: [francielesradetzke@gmail.com](mailto:francielesradetzke@gmail.com)  
Universidade Regional do Noroeste do Rio Grande do Sul - Porto Alegre, RS, Brazil  
CV Lattes  
<http://lattes.cnpq.br/9570948289140345>

Submitted: Apr. 28 2021  
Accepted: Oct. 30 2022  
Published: Nov 01. 2022

 10.20396/riesup.v10i00.8667147  
e-location: e024020  
ISSN 2446-9424

Antiplagiarism Check



Distributed on



## Continuing Teacher Education in Higher Education: Processes, Interactions and Challenges

Eduarda da Silva Lopes  <https://orcid.org/0000-0002-1753-5429>

Franciele Siqueira Radetzke  <https://orcid.org/0000-0002-3222-7977>

Roque Ismael da Costa Güllich  <https://orcid.org/0000-0002-8597-4909>

### RESUMO

**Introduction/Objective:** The intention of the article emphasizes the discussion about continuing education processes in Higher Education (ES) as important in the consolidation of Professional Teacher Development (DPD). **Methodology:** The dialogue presents interlocutions with the actions of the Pedagogical Support Center (NAP) of the Federal University of Fronteira Sul (UFFS), campus Cerro Largo, RS, in the development of the training course: “Higher Education: training challenges”. The Thematic Content Analysis (ATC) brings arguments relating to the understanding of course participants (teachers, administrative technicians in education (TAEs) and Graduate students (masters) anchored in answers to questions directed through the application of a questionnaire on the objectives of the training process in question. **Results:** In addition to the course's contributions, attention is also directed to the teaching conceptions of the participating subjects. **Conclusion:** Action (IFA), in which each participant in the process is invited to research their own practice and, in this way, critical reflection starts to have formative potential, especially with regard to the DPD.

### KEYWORDS

Higher education. Pedagogical practice. Professional development

## Formação Continuada de Professores no Ensino Superior: Processos, Interações e Desafios

### ABSTRACT

**Introdução/Objetivo:** A intenção do artigo acentua-se sobre a discussão acerca de processos de formação continuada no Ensino Superior (ES) como importantes na consolidação do Desenvolvimento Profissional Docente (DPD). **Metodologia:** O diálogo apresenta interlocuções com as ações do Núcleo de Apoio Pedagógico (NAP) da Universidade Federal da Fronteira Sul (UFFS), *campus* Cerro Largo, RS, no desenvolvimento do curso de formação: “Educação Superior: desafios da formação”. Pela Análise Temática de Conteúdo (ATC) são trazidos argumentos atinentes às compreensões dos participantes do curso (professores formadores, técnicos administrativos em educação (TAEs) e alunos da Pós-Graduação (mestrandos) ancoradas em respostas a perguntas direcionadas por meio da aplicação de um questionário sobre os objetivos do processo de formação em questão. **Resultados:** Para além das contribuições do curso também é direcionada atenção para as concepções de docência dos sujeitos participantes. **Conclusão:** As concepções implicam situar as possibilidades formativas decorrentes do desenvolvimento de encontros balizados pelo modelo da Investigação-Formação-Ação (IFA), na qual cada participante do processo é convidado para a pesquisa da própria prática e, dessa maneira, a reflexão crítica passa a ter um potencial formativo, especialmente no tocante do DPD.

### PALAVRAS-CHAVE

Formação superior. Prática pedagógica. Desenvolvimento profissional.

## La formación continua del profesorado en la educación superior: procesos, interacciones y desafíos

### RESUMEN

**Introducción/Objetivo:** La intención del artículo enfatiza la discusión sobre los procesos de educación continua en Educación Superior (ES) como importantes en la consolidación del Desarrollo Profesional Docente (DPD). **Metodología:** El diálogo presenta interlocuciones con las acciones del Centro de Apoyo Pedagógico (NAP) de la Universidad Federal de Fronteira Sul (UFFS), *campus* Cerro Largo, RS, en el desarrollo del curso de capacitación: “Educação superior: desafios de la formación”. El Análisis de Contenido Temático (ATC) aporta argumentos relacionados con la comprensión de los participantes del curso (docentes, técnicos administrativos en educación (TAE) y estudiantes de Posgrado (maestrías) anclados en respuestas a preguntas dirigidas a través de la aplicación de un cuestionario sobre los objetivos de la formación. proceso en cuestión. **Resultados:** Además de los aportes del curso, la atención también se dirige a las concepciones docentes de los sujetos participantes. **Conclusión:** Acción (IFA), en la que se invita a cada participante en el proceso a investigar su propia práctica y, de esta forma, crítica La reflexión comienza a tener potencial formativo, especialmente en lo que respecta al DPD.

### PALABRAS CLAVE

Formación superior. Práctica pedagógica. Desarrollo profesional.

### CRedit

- **Recognitions:** Not applicable.
- **Funding:** Not applicable.
- **Conflicts of interest:** Authors certify that they have no commercial or associative interest that represents a conflict of interest in relation to the manuscript.
- **Ethical approval:** Yes.
- **Availability of data and material:** Not applicable.
- **Authors' contributions:** GÜLLICH, R. I. C. : Conceptualization, Formal Analysis, Supervision, Methodology; Writing - review & editing; RADETZKE, F.S.: Conceptualization, Formal Analysis, research; draft original Writing; review & editing; LOPES, E. S. L. L. : Data Curation, Formal Analysis, Research, Writing - original draft; Writing - review & editing.

Editor de Seção: Diego Palmeira Rodrigues

## 1 Purpose of the investigation: continuing training in higher education

This paper has as central discussion the teaching in Higher Education (HE), emphasizing the continuing education as a fruitful process to the development of formative situations about the experience and professional life (ARAÚJO *et al.*, 2021). We intend to look at the defense that the formative processes of teaching in ES with a focus on methodologies that enable reflection on the actions and teaching intentions can be a crucial factor with a view to the Teacher Professional Development (TPD). For Marcelo (2009), TPD is constituted in the intrinsic relationship to the teaching work, that is, it considers the reflections produced by the teacher in the context of teaching performance.

In the ES context, we have noticed a movement of sensitization on the part of ES teachers towards proposals for teacher training. In the Brazilian context, there are no public policy guidelines that focus on the need for continuing education processes in ES, when it is pointed out that in order to exercise teaching in ES: "the preparation for the exercise of higher teaching will be done at the graduate level, primarily in master's and doctoral programs" (BRASIL, 1996). In this direction, in the formative context of Graduate Studies, we have directed understandings that it is not enough to present the diploma/curriculum of training, it is necessary the development of pedagogical skills and competences that imply in the interest in acquiring knowledge and professional improvement, being, therefore, important the exchange of experiences, planning workshops, activities of sensitization to teaching that make them seek beyond their specific training (MASETTO, 2003).

When it comes to the development of continuing education processes focused on ES, we understand that the promotion of these has been left to the commitment and concern of the ES institutions and, therefore, worked differently in each work context. Moreover, the trainings have been, most of the times, reduced to professional updating courses, in which specific knowledge assumes greater prestige than pedagogical investigation (CUNHA, 2005). For Maldaner (2006), such training does not change the teacher's practice in the classroom, because it is external to his or her reality and does not consider his or her professional knowledge and problems.

According to Radetzke and Güllich (2021), continuing education is already something to be strengthened and, in this sense, there is the need to raise discussions about pedagogical practice, in a movement of self-criticism, providing the shortening of paths between research and the classroom, in order to use it in practice and, above all, to give another meaning to the teaching performance; against the idea that to teach, it is enough to know the content (SILVA; SCHNETZLER, 2000).

Continuing education marks an aspect that changes the essence of teachers, since by going through this process, teachers acquire the position of subject of their training and no longer the object of it (IMBERNÓN, 2010). Therefore, identity processes of the teaching profession are listed, built through the knowledge of: experience, knowledge and pedagogical, according to the historical-social context in which the teacher is situated (PIMENTA; ANASTASIOU, 2014).

Often, teachers are defined as to their area of training, more specifically the areas of knowledge to which they belong, leaving in another plan the teaching function, which according to Isaia (2006) is linked to the formative processes of the ES. In the passage, "much

more than mastering scientific content with the intention of simply passing on ready content, it is necessary study and planning/organization in front of knowledge, knowledge understood with formative bias" (RADETZKE; GÜLLICH, 2019, p. 20) and, thus, the processes that permeate the teacher development are beyond the knowledge produced during their performances, but also the knowledge that is performed during their life stories as teachers, entering this territory of experiences and learning (CUNHA, 2005).

In the context of discussions that touch the intentions of the research when we highlight the continuing education in higher education as an important condition for TPD, we directed our investigation to the formative processes enabled by participation in the training course "Higher Education: training challenges", organized by the Pedagogical Support Center (PSC) of the Universidade Federal da Fronteira Sul (UFFS), Cerro Largo campus, RS, in 2020. The objectives that guide the development of this course, offered by the PSC, focus on the development of actions aimed at structuring, planning and coordinating the workflows related to pedagogical support in the institution and, in this sense, there is interest in meeting the needs of the participants, articulating issues of interest that can provide didactic and pedagogical improvement, in addition to strengthening interdisciplinary communication between the different areas of knowledge.

The problem that guided the study encouraged us to seek comprehensions about: in what way has the formative context developed in the training course "Higher Education: training challenges" met the demands of the participants? Do the dialogues produced imply in improvements in pedagogical practice? We analyzed the formation process in the context situated on the formative unfoldings made possible by the course in the dialog with the needs for teacher formation.

## 2 From intentions to methodological developments to investigate the formative context

In order to enable a breakthrough about the understandings established before the processes of continuing education, together with the training environment, we will direct this investigation in search of the speeches expressed by the participants of the training course: teachers trainers (university professors), Administrative Technicians (ATs) and graduate students (master students), aiming at the whole plot of the ES, through an interactive triad, exchange of knowledge and experiences. This look will be directed specifically to the context of the course "Higher Education: challenges of training", promoted in 2020 by the PSC of UFFS, in pandemic scenario, with its actions developed via online platform (Cisco Webex Meetings).

The methodology prioritized for these meetings was guided by collective dialogues, in approach, the proposal of Research-Training-Action (RTA) based on the critical, reflective and collaborative potential (ALARCÃO, 2010; GÜLLICH, 2013) in which, through meetings on different thematic approaches (TABLE 1), it was possible to dialogue and systematize different experiences, pointing out reflection processes as possibilities to mediate training processes and see possible paths towards continuing education for teachers (GÜLLICH; ZANON, 2020). The time allotted to the course is around three hours long, the meetings are recorded, with the consent of the lecturers and participants, and then made available on the Facebook page of PSC /CL.

**Table 1.** Dates and thematic approaches of the course meetings

28/05/2020	ICTs in Higher Education: challenges and possibilities
25/06/2020	The evaluation of/in Higher Education: some concerns
13/08/2020	Webex as a didactic tool: functionalities, potentialities, and limitations
01/03/2020	Use of Moodle at UFFS: planning and teaching tools
16/09/2020	Experience reports: Remote Teaching at UFFS
16/10/2020	Remote teaching: how to build the pedagogical process in Higher Education

Source: Authors, 2021.

Based on these meetings and in order to analyze the training process provided by the course and its main directions to the participating community (teacher educators, ATs, and graduate students) the participating subjects were all invited to answer an evaluation questionnaire on the Google Forms platform related to the course they had attended during the year 2020. In this questionnaire, ten (10) aspects were scored that were able to allow the visualization of the interest, the speech and the contribution of the course to the practical and pedagogical training of these teacher trainers, technicians and post-graduate students, among them i) the role of the course in the formation of each one, ii) time allocated for the meetings, iii) space made available for holding the meetings, iv) methodological organization, v) participation and interaction among the participants, vi) participation of each one in the meetings, vii) reflection of the course in the teaching performance, viii) suggestions of themes to be addressed, ix) evaluation process, and x) authorization of the data. For all the questions, a space was given for argumentation and justification after marking the alternatives: excellent, good, fair, and poor, with the exception of question vii) reflection of the course on the teacher's performance, in which items "yes", "no", "partially", and "does not apply" are scored, and of the last item (x), in which we only presented a suggested answer, yes or no.

From the results obtained, 32 (thirty-two) participants responded, one of which was excluded from the analysis because he did not want his data to be published. At the end, we analyzed the answers of 31 (thirty-one) participants, being 20 (twenty) professors, 7 (seven) graduate students and four ATs.

To discuss these data, we performed the Thematic Content Analysis (TCA), proposed by Bardin (2004), following: pre-analysis, material exploration, treatment, and inference of results. Initially, in the pre-analysis, we delimited the questionnaire as the object of study to perform the analyses, together with its answers and graphs to visualize them. In a second moment, through the exploration of the material, we extracted the excerpts from the answers given and discussed them according to our research intentions. For question number (vii) referring to the reflection of the course for teacher training, we expanded the look to the conceptions of teaching, based on Cunha (2005) and Radetzke and Güllich (2019): teaching as a notion of experience, teaching as a notion of research, naturalized teaching. Since the

dialogue made possible by the various themes worked on during the meetings and also by the unfolding of the course based on the IFA framework, provided an opportunity for reflection about teaching in ES, its conceptions, theories, and practices.

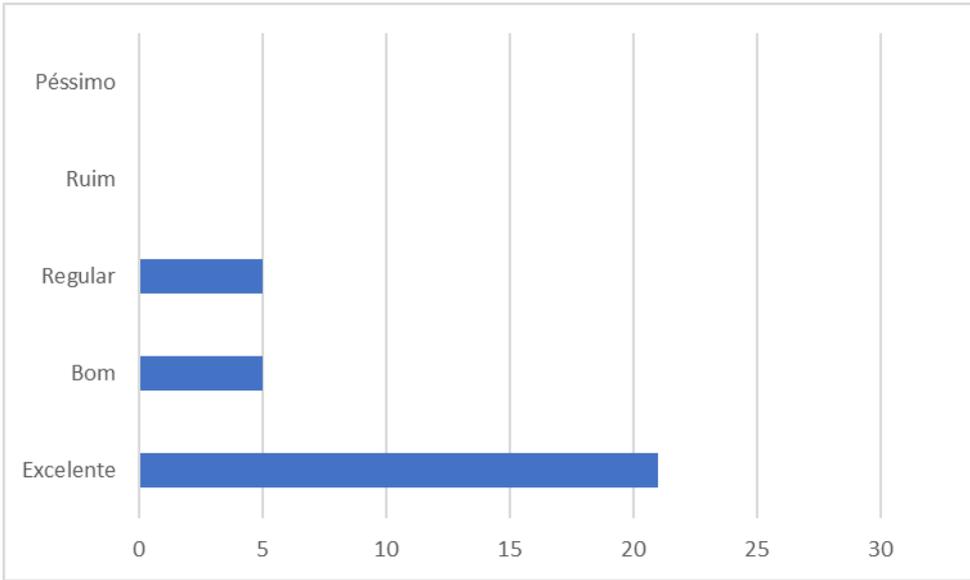
In order to preserve identities, we will use the higher level to which these participants belong, naming them as Professor, TAE, and Graduate Student, herein referred to as "master students", following the consent and research ethics, as well as the order of the numbered responses. Furthermore, the excerpts brought into the dialog are found in the body of the text. Below are the results emerging from the analysis process carried out.

### 3 Results and analysis for considering continuous training processes in Higher Education

Among the main objectives that permeate the proposal of this course, one of them is to promote the continuing education of teachers, aiming at the didactic and pedagogical improvement, in order to qualify the teaching practice in the ES. In this sense, the analyses raised here seek to understand the formative needs, thinking about the qualification and improvement of pedagogical practices, in order to potentiate them through critical and reflective dialog. To this end, we considered seven of the ten (10) aspects raised in the evaluative questionnaire, since question seven represented an aspect of improvements about the course and personal interests and eight, nine and 10 portrayed simpler questions with "yes" and "no" answers that did not allow further reflections for the present investigation.

Regarding question number 1 - How do you evaluate the role of the course in your education as a teacher? We visualized the following result (Figure 1).

Figure 1. Role of the course in teacher training



Source: Authors, 2021.

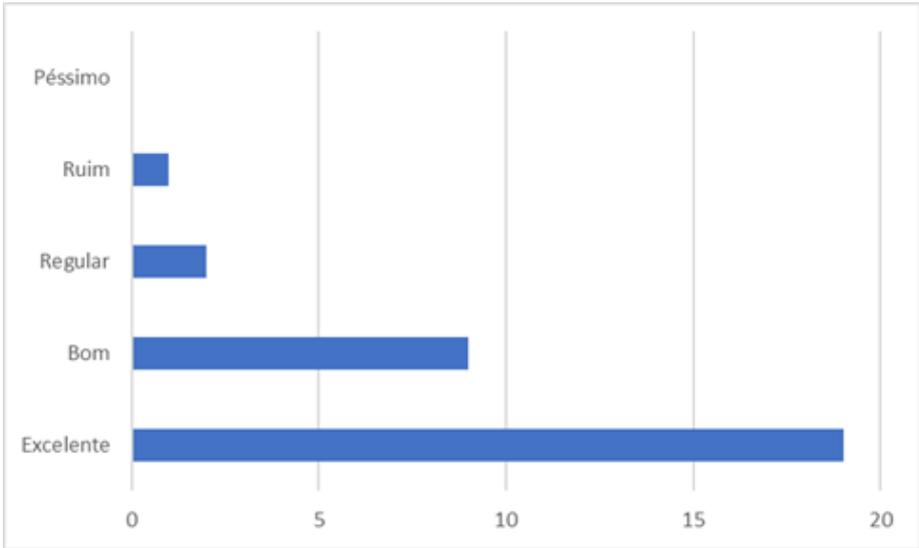
Twenty-one (21) responded using the term "excellent", five (5) "good", and five (5) "regular". These results imply in understanding the role attributed to the course and its importance for the continuing education processes. The justifications that led to these answers were articulated by the sense that:

Being a teacher is an action of constant learning. Dedicating a few hours to listen to specific topics related to training is of fundamental importance and necessary for the teaching career. Personally, I find it especially important to participate in the trainings, and I take advantage of the information and put it into my teaching practices (Teacher 17). We need to have dialogue among our peers, to have a space for training for teaching in higher education, and I think that this year the NAP has achieved the necessary engagement on the part of the professors (Professor 18).

According to Maldaner (2006), continuing education needs to be articulated to pedagogical practice, in order to increase the demands for the search of knowledge. The formative dialogue, according to Güllich (2013, p. 282) "make/make/will make teachers in constant formation to progress, assuming and understanding more strongly their role as authors and actors of their own Formation". Such movement leads to a critical look at the formation invested here: "we could have more practical formations, which demonstrate practical tools to improve our teaching and research practice" (Professor 21) and also, "who knows, more exchanges of experiences and openness to dialog about specific pedagogical themes on a regular basis could contribute a little more to the formation" (Professor 23), crossing the ideas of contributions on a regular basis. It is important to note that meetings with reports and exchanges of experience take place annually, and that in 2020 was held on September 16, as shown in table 1.

Regarding question number 2 - How do you evaluate the time allotted to the meetings of the Training Course? We obtained the following results (Figure 2):

Figure 2. Time dedicated to the course

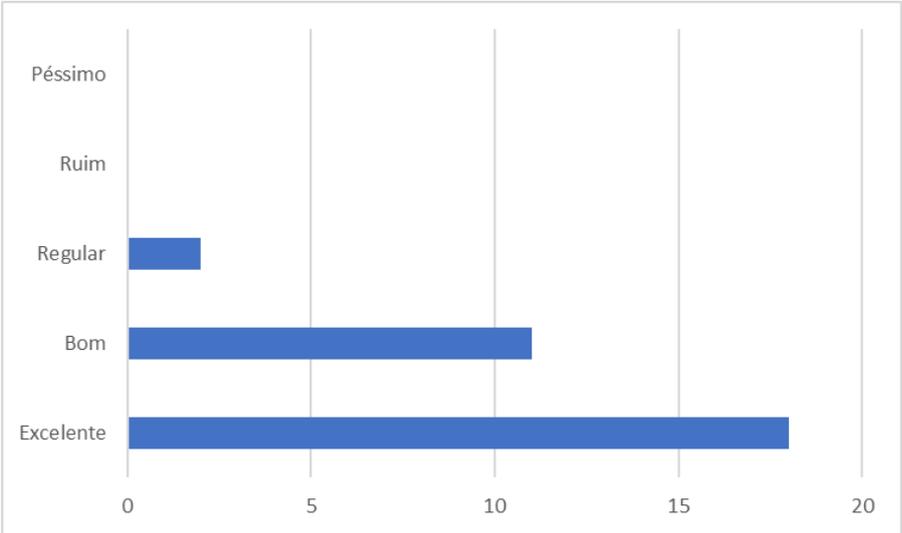


Source: Authors, 2021.

In view of these answers: 19 (nineteen) "excellent", 09 (nine) "good", 02 (two) "regular" and 01 (one) "bad" and the speeches were divided between: "from so good, I suggest more hours" (Master student 10), "I think it is excellent the way of distribution between one meeting and another and the time duration of the meetings is also enough for all teachers to participate and conciliate with the other activities" (Teacher 18), "many subjects to be treated and little time for them" (Teacher 26), These justifications allow us to identify the importance of the continuing education courses and, through their evaluation processes, to see the disparity about the speeches presented, leading us to a scenario of positive discussions that allow exploring new possibilities in the ES scenario (CUNHA, 2005).

Regarding question number 3 - How do you evaluate the space of the place where the meetings of the Training Course take place? And considering the pandemic context of COVID-19, the results are presented as follows (Figure 3):

Figure 3. Training space



Source: Authors, 2021.

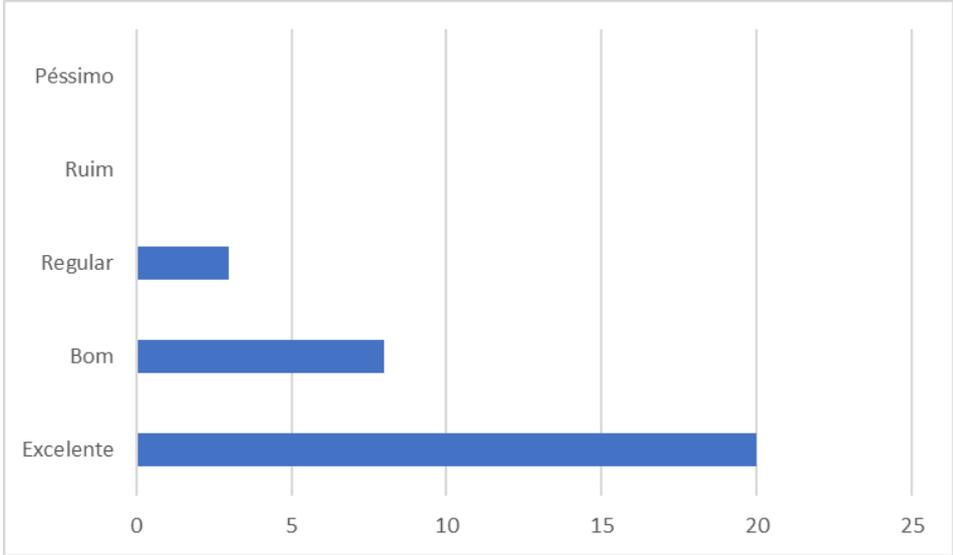
Evidencing 18 (eighteen) responses to the term "excellent", 11 (eleven) to the term "good", and 02 (two) to the term "regular". Such answers signal the place of execution of the meetings partially appropriate, although having to be adapted to the remote format, Professor 18 presents some advantages through his conceptions "I believe that the format by videoconference contributes to the adhesion of teachers and also propitiated the dialogue with other research teachers geographically distant. I think we would have to stay with this webinar format by Webex even post-pandemic".

For Valente *et al.* (2020), we are experiencing a health crisis that is spreading throughout society and that leaves us with many doubts about how we should act, and about which are the best strategies to abate the limitations that plague our didactic and pedagogical activities. Naturally, this makes many teachers leave their comfort zone and search for new

possibilities, but the continuing education in ES is characterized by a slower process, but one that, in small steps, seeks to adapt to the new challenges.

The speeches described involving the methodological process presented by the course are evidenced this way (Figure 4):

Figure 4. methodological process of the course



Source: Authors, 2021.

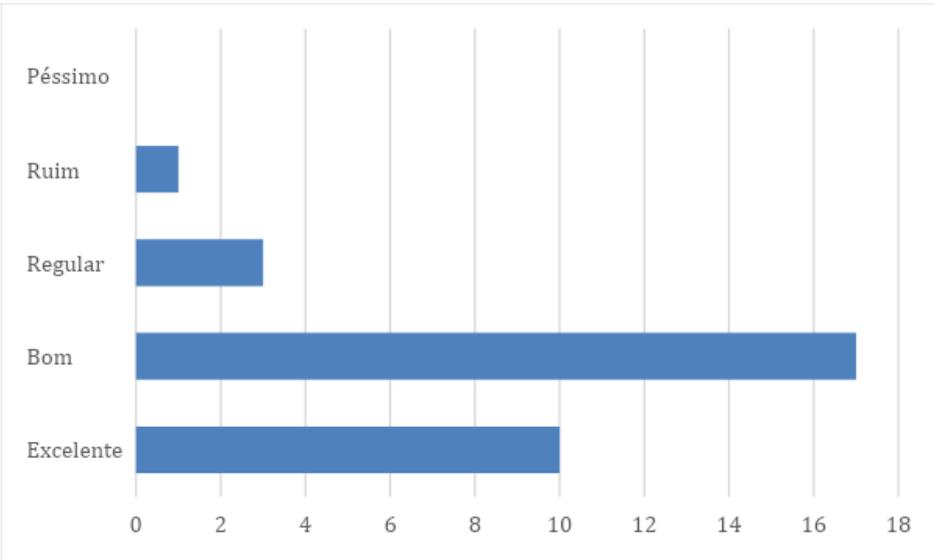
Therefore, 20 (twenty) were "excellent", 08 (eight) "good", and 03 (three) "regular". These results are important for us to be able to visualize the methodological understanding of each participant and if it is possible to bring together the interests and proposal of the course. Thus, we visualized the following aspects: "the organizers were concerned with every detail and organized the methodology of the course in a didactic and coherent way with the intentionality of the course proposal" (Professor 18). When looking at these notes, we corroborate the idea of Bolzan and Isaia (2006) that:

There is a need for teachers to consider the specificity proper to higher education, understanding its epistemological and methodological status that is qualitatively different from that of basic education. The university has its own epistemological culture - its own way of understanding and manifesting the theory assumed in action - which presupposes a set of basic procedures, identified through educational rules that have both social and cognitive functions (BOLZAN; ISAIA, 2006, p. 494).

In this sense, it is important to investigate the understandings attributed to the methodological aspects of the training course in the expressions of the research participants themselves, in order to understand if in fact there was understanding on their part, so as to positively result and enable contributions, since the methodological process is focused on articulating the practice and reflection, through the IFA, which sets up an action capable of giving new meaning to the educational practice.

Starting from question 5 - How do you evaluate the participation/interaction between post-graduate students, ATs and UFFS Professors in the Training Course? (Figure 5).

Figure 5. Participation and interaction



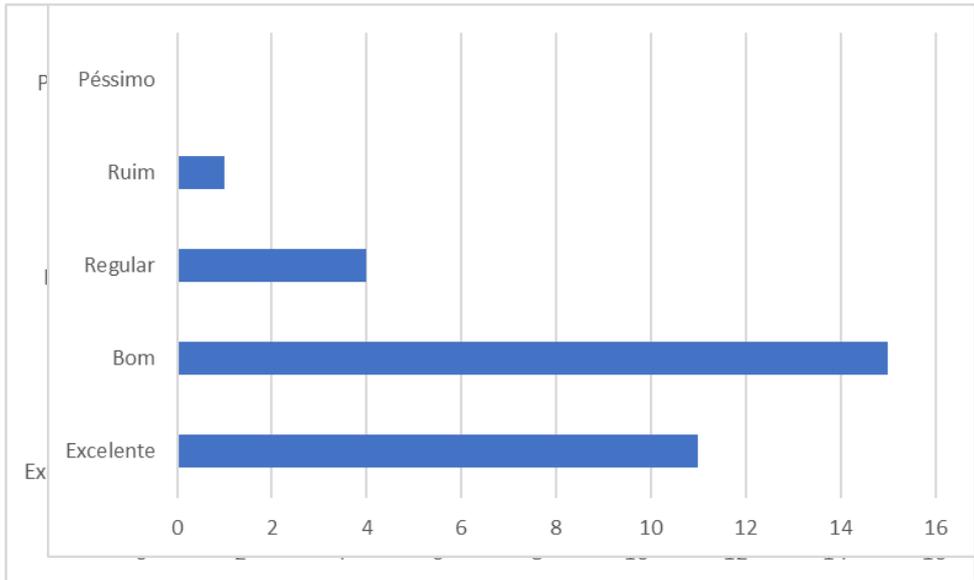
Source: Authors, 2021.

Seventeen (17) answered "good", ten (10) "excellent", three (03) "regular" and one (01) "bad". The arguments that justify such answers are mirrored in the following aspects highlighted and brought by us: "it is extremely important the interaction among everyone" (Professor 2), "many do not speak, leaving only the trainer with the word even though he is available to all" (Master's student 4), "there could be a greater adherence of teachers, I still notice little participation" (Professor 17), "this interaction between sectors needs to improve" (Professor 23), "we still need greater participation of graduate students" (Professor 26), "it was impaired due to online classes" (Master's student 27).

In this sense, we justify the processes of interaction and exchange of experiences as fundamental to the process of re-signification about pedagogical practices and incipient discourses, emphasizing that the construction of this process occurs through a circle of dialogues, strengthening the reflective processes about the practice itself (ALARCÃO, 2010), as already perceived by Professor 18: "I found it very interesting and I don't see a problem in expanding concerns about teaching in Higher Education to graduate students and ATs. As for the teachers, I think that the adhesion was quite significant". In this way, the course is inspired by Zanon's triad of interaction (2003), constituting another triad of ES with ES teachers, future ES teachers, as well as the TAE's themselves, characterizing collaborative moments of dialogues and interactions.

The answers obtained to question 6 - How was your participation in the activities promoted during the meetings of the Training Course?

Figure 6. Individual participation



Source: Authors, 2021.

They show that: 15 (fifteen) answered "good", 11 (eleven) "excellent", 04 (four) "regular" and 01 (one) "bad" signaling to the perception of the participants that, even though they mark presence in these meetings, they are not giving their maximum in the question of involvement, as listed by Teacher 17: "I would like to be able to participate more" and Teacher 23: "I need to get more involved". These small fragments highlight the importance of calling attention to the continuation of the trainings, through a process of critical reflection and permanent reconstruction, as pointed out by Nóvoa (1995).

Moreover, we list some questions that are brought up by Bolzan and Powaczuk (2017):

Who trains or how are higher education teachers trained? What are the existing academic institutional spaces for teacher training at this level of education? How does the process of learning to be a teacher take place? What are the constructive movements of university professionalism? (BOLZAN; POWACZUK, 2017, p. 162).

In the sense that, in general, continuing education in ES is not as natural as the continuing education designed for teachers of Basic Education and, therefore, the questionings show to be potent when signaling elements to be considered and that can contribute to the consolidation of pedagogical practices, enabling reflections and exchanges of experiences (ISAIA; BOLZAN, 2007).

From question number 7: "Do you believe that your participation in the training course has reflected positively on your teaching performance? Explain how", we can visualize the conceptions of teaching, since emphasis is given to the practices and the importance of positioning yourself outside them and observing possible improvements through reflections,

and these aspects are raised by the course, to the extent that suggestions of interventions that they consider relevant are brought, aiming at their interests and needs.

In the sense of impregnation with the research data and in order to enhance the discussions, we devoted ourselves to categorizing the questions brought up by the research subjects, based on Cunha (2005) and on their conceptions of ES, distributed in: teaching as a notion of experience, teaching as a notion of research, and naturalized teaching. In this way, to better understand these conceptions, we bring the Chart 2:

**Table 2.** Conceptions of teaching

Category	Definition
Teaching as a notion of experience	Knowledge that comes from the teachers' life history, their professional training, experiences, and lived experiences
Teaching as a notion of research	Teachers who produce knowledge, taking the area of knowledge as the object of research
Naturalized teaching	Teacher who teaches taking into account his/her experience as a student, instigated to follow the profession based on his/her teachers

Source: Cunha, 2005.

For Radetzke and Güllich (2019, p. 9) "recognizing teachers' conceptions of teaching refers to thinking about the understanding about their consequences for teaching practices and perspectives, from their assumptions and the way they were constituted throughout the formative processes". In general, teacher educators with their experiences and knowledge in constant development, imply considering formative articulations in favor of the PDD of other levels of knowledge (graduate students and ATs, for example, in the case of the NAP training course). At this point, we place the importance of continuing education processes in ES being produced in a collective context of dialogue and reflection among peers (teacher trainers), but also in the set of other spheres that constitute Higher Education.

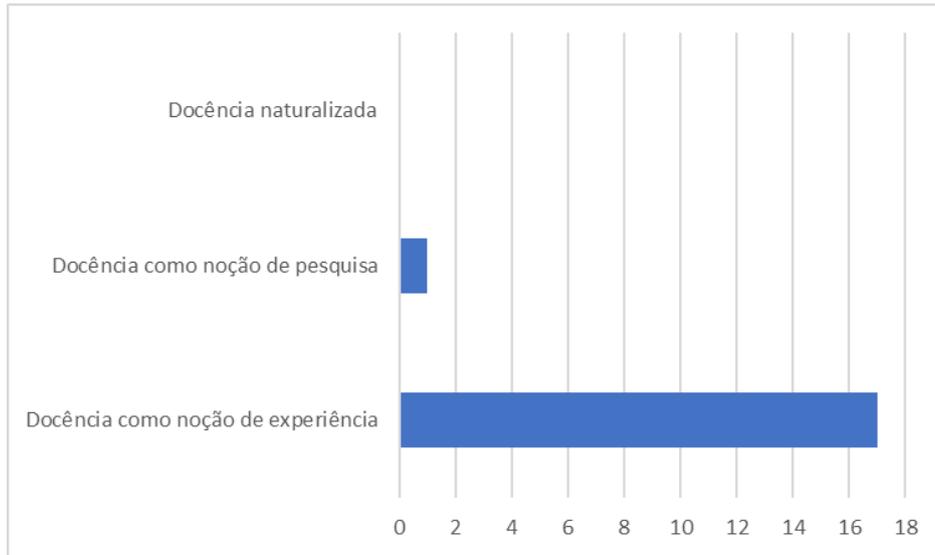
According to Zanotelli (2006, p. 49):

Teaching experiences can turn the teacher trainer's work into a process of critical self-training, since, through the epistemology of practice, teacher trainers build a wider knowledge about work relations, about the real conditions where this work is carried out with all its difficulties and possibilities.

In this passage, the challenge becomes to understand the movements articulated to the formative processes and the curricular structuring that supposes moments for reflection and analysis of the institutional practices and teachers' actions (PIMENTA; LIMA, 2004). Seeking to analyze and discuss speeches that refer to the pedagogical practice and the premises postulated by this course, we brought the conceptions of teaching of Cunha (2005), in order to dialogue about these and the assumptions brought by these participants.

From the thirty-one (31) answers obtained, we can see the figure 7 that distributes the conceptions of teaching as they were found and discussed:

Figure 7. Most evidenced conceptions of teaching



Source: Authors, 2021.

The first conception, teaching as notion of experience, shows itself strongly grounded in the speeches of what we are dependent of our experiences and of the meanderings of our experiences, sprinkling significantly in our pedagogical practice (CUNHA, 2005). In this way, the teaching trajectory directly influences what is done today, because there is the presence of the relations of knowing and doing (ISAIA; BOLZAN, 2006).

In the answers given to question number 7, in which was disposed the interest in understanding in what way the execution and the repertoire of the course contributed to the teaching practice, we observed, out of 31 (thirty-one) answers, 17 (seventeen) delegating this conception, once they report to justify their understandings in the following way, as postulated by Professor 15: "by the experiences of colleagues", together with Professor 10: "I believe that we constitute better teachers by the interaction with other colleagues through a formative dialogue". In this sense, we bet on this continuous formative process, articulating the formative needs, in which teachers can interact with their peers, acquiring awareness about their training processes and building their teaching conceptions (RADETZKE; GÜLLICH, 2019). Calling attention to a continuous construction of knowledge, in which through experience there is improvement, emphasized by master's student 4: "we are always in constant learning and improvement", imbued by the idea of Bolzan (2008), when addressing pedagogical knowledge as broad, built through relationships, as stated by Professor 6: "listening to students and colleagues favors my practice. Furthermore, one always learns from the other.

For Junges and Behrens (2015):

These actions, by having a sense of continuity and being linked to the interests of teachers, can provide them with a space for reflection on their professional practice in the university, making them aware that teaching in higher education is an activity

that requires preparation and does not require improvisation (JUNGES; BEHRENS, 2015, p. 290).

The space demarcated by the course represents an impulse for pedagogical transformations, to the extent that there are reflection processes, as pointed out by the Master's student 3: "every exchange of knowledge in the courses I take, I practice in my classes" or still, according to Professor 16: "yes, it helps in the reflection on the classroom practice", justifying the need for a training project based on the needs to be met, thinking about improvements regarding pedagogical practices.

Regarding the conception of teaching as a notion of research, we take as an issue what is postulated by Cunha (2005), when he points out, in this view, research as superior to pedagogical interests, that is, there is more interest in training researchers and scientific producers than training to act and reflect pedagogically on the practice. In this passage, we can see an answer that refers to the course discussions as important for the area of Science Teaching, failing to point out aspects that may help in their training, according to master's student 1: "Very relevant themes are dealt with for Science Teaching and teacher training". Highlighting that, to improve the practical-pedagogical interests, there is no need to disconnect from research, but on the contrary, to have articulation in a mutualistic process in which both are benefited (JUNGES; BEHRENS, 2015).

In the perspective of naturalized teaching, an affective process stands out, when remembering experiences, thinking about teachers who have already passed or participated in their training and that, in a certain way, served as inspiration to make them follow the career (CUNHA, 2005). Thus, "the choice for the degree stands out, either by affinity with the course, due to school or childhood experiences, or by the possibility of professional performance in the technical or research area" (RADETZKE; GÜLLICH, 2019, p. 13). However, despite these assumptions, no fragment/answer capable of confirming such statements had been evidenced, because in a way the question should have been directed in another direction or perhaps expanded to an interrogative that would make them resume processes that made them get here.

For Rodrigues (2006), teachers feel the need for that which exists, but which they don't have, therefore, we highlight the training course as a possibility to provide contact with new knowledge and concepts that when they become useful will influence the pedagogical practices in a continuous process. We believe that it is necessary to advance in face of the answers and conceptions that are still seen as superficial in the search for participation to update tools and practices, as stated by Professor 17 when he inferred that he takes advantage of the "information" and "puts it" in his teaching practices, or even by Professor 21, who launched the idea of proposing "more practical trainings". These are answers that imply challenges with the continuing education spaces and, for now, signal important reflections to be considered in their planning and organization.

## 4 Continuing Education in Higher Education: some reflections

The research intentions were directed to look at the contributions provided by the training course "Higher Education: training challenges" organized by the NAP of a HE institution. The methodology of the course, by working in its training proposal with the IFA model that has critical reflection as a differential and the investigative-formative category, enabled the dialogue among the participants around issues relevant to teaching in ES. The course prioritized collective reflection meetings among the participants organized by means of dialogued lectures, systematization of practices and dialogue among peers.

The interactions among teacher educators, ATs, and graduate students gave rise to reflections about the importance of continuing education in ES, when it is important to highlight that dialog about such perspectives is the starting point when the subject is quality education. The possibility of bringing together UFFS teachers, together with graduate students and ATs helps to bring theory and practice closer together, constituting important links for the qualification of teaching practice, in order to contribute to improving the quality of courses at the UFFS, Cerro Largo Campus. This type of experience becomes important within the courses as a space for the recreation of pedagogical practices and the consolidation of the UFFS training policies, such as the creation of the NAP itself, which in the proposal of the training course "Higher Education: training challenges" finds a seat for its intervention. According to Carvalho and Andrade (2019, p. 415) "by promoting a complementary training course, participants move from the position of mere spectators to active professionals, able to promote changes and improvements in their teaching activities".

Furthermore, we highlight the opportunity of the PDD process along with the participation of continuing education processes anchored on the IFA training proposal, understanding the process of subjects' constitution for a proper and authentic action-research from the point of view that each teacher in training, participant of the process, researches his/her own practice and, thus, the critical reflection has a formative potential, that is why we insist on the IFA model as a great differential of continuing education proposals for ES. It is interesting to point out, through the analysis of the expressions brought by the participants, the validity and relevance of the proposed course, verifying conceptions of teaching and lecturing, and from that perspective, we perceive teaching not as a solitary activity, but as an involving activity together with other factors intertwined within the university, such as: the need for the continuing education collective.

## References

ALARCÃO, I. **Professores reflexivos em uma escola reflexiva**. 7. ed. São Paulo: Cortez, 2010.

ARAÚJO, K. de T.; VARELA, S.; OLIVEIRA, M. R. F.; TRESSE, M. L. G.; PEDROTTI, M. A.; DIAS, E. P.; MARCILINO, P. A. da C. NAPE: Núcleo de Apoio Pedagógico – UniFil. **Revista Terra e Cultura**, n. 41, p. 91-96, 2021. Disponível em:

<http://periodicos.unifil.br/index.php/Revistateste/article/view/1277/1158>. Acesso em: 20 mai. 2021.

BARDIN, L. **Análise de Conteúdo**. Portugal: Edições 70, LDA, 2004.

BOLZAN, D. P. V.; ISAIA, S. M. de A. Aprendizagem docente na educação superior: construções e tessituras da professoralidade. **Educação**, v. 29, n. 3, p. 490-501, 2006. Disponível em: <https://revistaseletronicas.pucrs.br/index.php/faced/article/view/489/358>. Acesso em: 20 mai. 2021.

BOLZAN, D. P. V. Pedagogia universitária e processos formativos: a construção do conhecimento pedagógico compartilhado. In: ENCONTRO NACIONAL DE DIDÁTICA E PRÁTICAS DE ENSINO, 2008, Porto Alegre. **Anais [...]**. Porto Alegre: PUC/RS, 2008. Disponível em: <https://www.ufsm.br/app/uploads/sites/373/2019/02/6bd9982dc814272dbbedbdac75bd96ed.pdf>. Acesso em: 12 jun. 2021.

BOLZAN, D. P. V.; POWACZUK, A. C. H. Docência universitária: a construção da professoralidade. **Revista Internacional de Professores**, v. 2, n. 1, 2017. Disponível em: <https://periodicos.itp.ifsp.edu.br/index.php/RIFP/article/view/660/652>. Acesso em: 16 ago. 2021.

BRASIL. **Lei de Diretrizes e Bases da Educação Nacional**, LDB. 9394/1996.

CARVALHO, E. de; ANDRADE, M. A. B. S. de. Formação complementar de professores: análise de um curso de atividades por investigação. **Revista Insignare Scientia**, v. 2, n. 4, p. 396-415, 2019. Disponível em: <https://periodicos.uffs.edu.br/index.php/RIS/article/view/11028/7337>. Acesso em: 07 ago. 2021.

CUNHA, M. I. da. (Org.). **Formatos avaliativos e concepção de docência**. Campinas: Autores Associados, 2005.

GÜLLICH, R. I. C. **Investigação-Formação-Ação em ciências**: um caminho para reconstruir a relação entre livro didático, o professor e o ensino. Curitiba: Prismas, 2013.

GÜLLICH, R. I. C.; ZANON, L. B. Investigação-Formação-Ação: a reflexão crítica como mediadora da formação de professores de ciências. In: SEMINÁRIO INTERNACIONAL DE ESTUDOS E PESQUISA EM EDUCAÇÃO NAS CIÊNCIAS, I, 2020. **Anais [...]**. IJUÍ: UNIJUÍ, 2020. Disponível em: <https://publicacoeseventos.unijui.edu.br/index.php/enacedesiepec/article/view/18725/17506>. Acesso em: 04 jun. 2021.

IMBERNÓN, F. **Formação continuada de professores**. Porto Alegre: Artmed, 2010.

ISAIA, S. M. de A.; BOLZAN, D. P. V. Aprendizagem docente na educação superior: construções e tessituras da professoralidade. **Educação**, v. 60, n. 3, p. 489-501, 2006. Disponível em: <https://revistaseletronicas.pucrs.br/ojs/index.php/faced/article/viewFile/489/358>. Acesso em: 19 jun. 2021.

- ISAIA, S. M. de A. Desafios à docência superior: pressupostos a considerar. *In*: RISTOFF, D.; SEVEGNANI, P. **Docência na educação superior**. Brasília: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2006.
- ISAIA, S. M. de A.; BOLZAN, D. P. V. Construção da profissão docente/professoralidade em debate: desafios para a educação superior. *In*: CUNHA, M. I. (Org.). **Reflexões e práticas em pedagogia universitária**. Campinas: Papirus, 2007.
- JUNGES, K. dos S.; BEHRENS, M. A. Prática docente no Ensino Superior: a formação pedagógica como mobilizadora de mudança. **Perspectiva**, v. 33, n. 1, p. 285-317, 2015. Disponível em: <https://periodicos.ufsc.br/index.php/perspectiva/article/view/2175-795X.2014v33n1p285/31220>. Acesso em: 25 jun. 2021.
- MALDANER, O. A. **A formação inicial e continuada de professores de química: Professor/pesquisador**. Ijuí: UNIJUÍ, 2006.
- MARCELO, C. G. Desenvolvimento Profissional Docente: passado e futuro. Sísifo. **Revista de Ciências da Educação**, v.1, n.8, p. 7-22, 2009.
- MASETTO, M. T. **Competência pedagógica do professor universitário**. São Paulo: Summus, 2003.
- NÓVOA, A. **Os professores e a sua formação**. Trad. Graça Cunha, Cândida Hespanha, Conceição Afonso e José António Souza Tavares. 2. ed. Lisboa: Instituto Inovação Educacional, 1995.
- PIMENTA, S. G.; LIMA, M. S. L. **Estágio e docência**. São Paulo: Cortez, 2004.
- PIMENTA, G. ANASTASIOU, L. das G. C. **Docência no Ensino Superior**. 5 ed. São Paulo: Cortez, 2014.
- RADETZKE, F. S.; GÜLLICH, R. I. C. As pesquisas sobre a Docência no Ensino Superior em Contexto Brasileiro: desafios para pensar a formação em Ciências. **Revista Internacional de Educação Superior**, v. 6, e020029, p. 1-25, 2019. Disponível em: <https://periodicos.sbu.unicamp.br/ojs/index.php/riesup/article/view/8655876>. Acesso em: 04 jul. 2021.
- RADETZKE, F. S.; GÜLLICH, R. I. C. Formação continuada dos formadores de professores da área de ciências da natureza: que elementos considerar? **Revista Docência no Ensino Superior**, v. 11, p. 1-17, 2021. Disponível em: <https://periodicos.ufmg.br/index.php/rdes/article/view/24488>. Acesso em: 15 ago. 2021
- RODRIGUES, Â. **Análise de práticas e de necessidades de formação**. Lisboa: Ministério da Educação, 2006.
- SILVA, L. H. de A.; SCHNETZLER, R. P. Buscando o caminho do meio: a “sala de espelhos” na construção de parcerias entre professores e formadores de professores de Ciências. **Ciência & Educação**, v. 6, n. 1, p. 43-54, 2000. Disponível em: <https://www.scielo.br/j/ciedu/a/jBv8nWQ7s5JwLkKhmPxSJLy/?lang=pt&format=pdf>. Acesso em: 12 mai. 2021.
- VALENTE, G. S. C.; MORAES, E. B. de; SANCHEZ, M. C. O.; SOUZA, D. F. de; PACHECO, M. C. M. D. Ensino a distância frente às demandas do contexto pandêmico:

reflexões sobre a prática docente. **Pesquisa, Sociedade e Desenvolvimento**, v. 9, n. 9, 2020. Disponível em: <https://www.rsdjournal.org/index.php/rsd/article/view/8153>. Acesso em 16 ago. 2021.

ZANON, L. B. **Interações de licenciandos, formadores e professores na elaboração conceitual de prática docente: módulos triádicos na licenciatura de Química**. Orientador: Roseli Pacheco Schnetzler. 2003. 451 f. Tese (Doutorado em 2003) – Universidade Metodista de Piracicaba – UNIMEP, Faculdade de Ciências Humanas. Piracicaba, 2003.

ZANOTELLI, G. A. C. **Docência no ensino superior: professores formadores e sua formação**. Orientador: Maria Socorro Lucena Lima. 2006. 126f. Dissertação de Mestrado Acadêmico em Educação (Universidade Estadual do Ceará). Fortaleza, Ceará, 2006. Disponível em: <http://www.uece.br/ppgewp/wp-content/uploads/sites/29/2014/05/Dissertacao-Germana.pdf>. Acesso em: 20 jun. 2021.