

RESEARCH ARTICLE (ORIGINAL) 

# Association between pedagogical reasoning and action and the trajectory of the faculty of postgraduate nursing programs

*Relação da ação e raciocínio pedagógicos com trajetória de docentes de programas de pós-graduação em enfermagem*

*Relación de la acción y el razonamiento pedagógico con la trayectoria de los profesores de programas de posgrado en Enfermería*

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**Abstract****Background:** Pedagogical reasoning and action are underpinned by sources of the knowledge base for teaching, which support the phases of the Pedagogical Reasoning and Action Model.**Objective:** To analyze the association between the trajectory of access to the sources of the knowledge base and the processes of pedagogical reasoning and action of permanent faculty members of postgraduate nursing programs, as well as their implications for didactic-pedagogical training.**Methodology:** Mixed-methods study with 28 permanent teachers from two *stricto sensu* postgraduate programs in northern Brazil. Data collection took place in three stages, through documentary sources (Sucupira and Lattes Platform) and (1) interview. The constant comparative method was used for qualitative analysis, and descriptive statistics based on Shulman's concepts was used for quantitative analysis.**Results:** Access to sources of knowledge along the way, wisdom acquired during teaching practice and experience as a student, better pedagogical reasoning of teachers in the stages of understanding, transformation, and teaching**Conclusion:** The faculty's pedagogical reasoning suggests weaknesses in the investment in didactic-pedagogical training in the curricula of both postgraduate nursing programs.**Keywords:** faculty; education, nursing, graduate; education, nursing; curriculum; higher education institutions**Resumo****Enquadramento:** A ação e raciocínio pedagógico são sustentadas por fontes e conhecimentos base para o ensino, que subsidiam as fases do Modelo de Ação e Raciocínio Pedagógicos.**Objetivo:** Analisar as relações entre a trajetória de acesso às fontes de conhecimento base e as fases da ação e raciocínio pedagógicos de professores permanentes de programas de pós-graduação em enfermagem, bem como as suas implicações para a formação didático-pedagógica.**Metodologia:** Métodos mistos, 28 docentes permanentes de dois programas de pós-graduação *stricto sensu* (PPGENF) da Região Norte do Brasil. A colheita dos dados ocorreu em três etapas, fontes documentais (Plataforma Sucupira e Lattes) e (1) entrevista. Análise qualitativa - método de comparações constantes, e quantitativa (estatística descritiva, à luz de conceitos de Shulman).**Resultados:** Acesso às fontes de conhecimento na trajetória, a sabedoria adquirida durante a prática docente e experiência como estudante, melhora o raciocínio pedagógico dos professores nas fases de compreensão, transformação e ensino.**Conclusão:** O raciocínio pedagógico dos professores sugere fragilidades no estímulo à formação didático-pedagógica curricular em ambos os PPPGENF.**Palavras-chave:** docentes; educação de pós-graduação em enfermagem; educação em enfermagem; currículo; instituições de ensino superior**Resumen****Marco contextual:** La acción y el razonamiento pedagógicos se apoyan en fuentes y conocimientos base para la enseñanza, que sostienen las fases del Modelo de Acción y Razonamiento Pedagógico.**Objetivo:** Analizar las relaciones entre la trayectoria de acceso a las fuentes de conocimiento base y las fases de la acción y el razonamiento pedagógicos de los profesores titulares de programas de posgrado en enfermería, así como sus implicaciones para la formación didáctico-pedagógica.**Metodología:** Métodos mixtos, 28 profesores titulares de dos programas de posgrado *stricto sensu* (PPGENF) de la Región Norte de Brasil. La recogida de datos se realizó en tres etapas, fuentes documentales (Plataforma Sucupira y Lattes) y (1) entrevista.**Análisis cualitativo:** método de comparaciones constantes, y cuantitativo (estadística descriptiva según los conceptos de Shulman).**Resultados:** El acceso a las fuentes de conocimiento en la trayectoria, la sabiduría adquirida durante la práctica docente y la experiencia como estudiante mejoran el razonamiento pedagógico de los profesores en las fases de comprensión, transformación y enseñanza.**Conclusión:** El razonamiento pedagógico de los profesores indica que existen deficiencias en la estimulación de la formación didáctico-pedagógica curricular en ambos PPPGENF.**Palabras clave:** docentes; educación de postgrado em enfermmería; educación en enfermmería; curriculum; instituciones de enseñanza superior**How to cite this article:** Silveira, S. C., Menegaz, J. C., Backes, V. M., Queiroz, A. M., & Silva, G. T. (2022). Association between pedagogical reasoning and action and the trajectory of the faculty of postgraduate nursing programs. *Revista de Enfermagem Referência*, 6(1), e21139. <https://doi.org/10.12707/RV21139>

## Introduction

Training teachers for higher education is a prerogative of *stricto sensu* postgraduate studies (Alves et al., 2019). Researchers' training is a priority in Brazil and emphasizes the production of knowledge and development of pedagogical projects that focus on teaching the production of technical-scientific method, techniques, and products (Vosgerau et al., 2017).

Thus, from a curricular perspective, these excerpts from the literature may reveal limitations in the didactic-pedagogical training in postgraduate nursing programs. We intend to understand the faculty's pedagogical reasoning and action (PRA) regarding the process of reflection on and in the action of teaching (Shulman, 1987).

Given the above, this article aimed to analyze the associations between the trajectory of access to the sources of the knowledge base and the processes of PRA of permanent faculty in postgraduate nursing programs and their implications for didactic-pedagogical training.

## Background

PRA is underpinned by sources of the knowledge base for teaching, illustrated in the processes of the Model of Pedagogical Reasoning and Action (MPRA). It is structured into four sources of the knowledge base (scholarship in content disciplines, educational materials and structures, formal educational scholarship, and wisdom of practice), seven categories of the knowledge base for teaching (content knowledge, general pedagogical knowledge, curriculum knowledge, knowledge of educational contexts, knowledge of learners and their characteristics, knowledge of educational ends, and pedagogical content knowledge), and six processes (comprehension, transformation, instruction, evaluation, reflection, and new comprehensions; Backes et al., 2017; Shulman, 1987).

As in a circle, as teachers teach, they also learn how to teach, emphasizing the practical component of teaching, which allows learning to be learned through reflection.

The postgraduate teacher assumes two perspectives: trainer and trainee. While they educate in the educational setting or other relational environments, they are also educated. This process also occurs in their training path as undergraduate students by reflecting competency-based curricular innovation (Zamprogna et al., 2020).

The trajectory is defined as the path followed by the teacher throughout their professional career (Menegaz et al., 2019). Along this trajectory, the teacher has access to sources of knowledge and develops them through experience, reflection, and the knowledge base that influences PRA.

Today, there is intense scientific research on the faculty's trajectory, namely the construction of identity in their teaching processes and the experiences triggered by teaching (Steinert et al., 2019). One of the studies with nursing teachers differs from the others because it uses Shulman's concepts that provide a more pragmatic analysis of the trajectory in the associations between the

access to sources and the processes of the MPRA, seeking to point out possible effects influencing didactic-pedagogical training. Besides the curriculum, it is important to analyze the faculty's PRA to understand how didactic-pedagogical training occurs in postgraduate nursing programs (Shulman, 1987).

## Research question

What is the association between the trajectory of access to sources of the knowledge base and the processes of pedagogical reasoning and action that underpin the didactic-pedagogical training of permanent faculty in graduate nursing programs?

## Methodology

A mixed-methods study with a qualitative-quantitative approach (Creswell, 2010) was conducted based on Shulman's constructs of sources of the knowledge base and the processes of PRA (Shulman, 1987) to understand postgraduate faculty's views of these constructs using the MPRA.

The sample included faculty who taught in the postgraduate nursing programs (PPGENF 1 and PPGENF 2) of two public universities (one federal and the other state) in northern Brazil. Data were collected in three stages using different techniques: two documental analyses through the Sucupira and Lattes platforms and one interview between May and August 2019. Initially, the sample consisted of all 28 permanent faculty members registered on the Sucupira platform. This number decreased at each stage based on inclusion and exclusion criteria.

In the first stage, data were collected from the Sucupira platform (2020) on the pedagogical proposal of the PPGENF, such as purpose of the program, areas of focus, lines of research, courses, and type of faculty employment contract (collaborator or permanent). In the second stage, the Lattes platform was used to collect data from the Lattes curricula of the 28 teachers in the programs. The variables were extracted to fill out the questionnaire created in the Survey Monkey software to characterize the participants' education level, trajectory, and performance. The variables of interest were years of experience as a nurse; higher education institution in which they work; years of experience as a teacher; training in *stricto sensu* postgraduate programs; having a post-doctoral degree; ongoing teaching, research, and extension projects; supervising scientific research initiation; supervising institutional extension, teaching, research, and innovation projects; having a funded project; number of published articles; number of articles published in the area; teaching undergraduate courses; teaching graduate courses; holding a management position in the university; number of supervised Master's students; and number of dissertations supervised in the program in the last 5 years. In the third stage, the qualitative analysis of the representative sample, the following inclusion criteria were applied: having an

undergraduate nursing degree and having taught a course in 2018 in one of the program's focal areas.

Exclusion criteria included being on leave, not reporting a link with the program in the Lattes curriculum vitae, or not having updated the curriculum for more than 6 months. After applying the criteria, 10 teachers were excluded for the following reasons: not being a nurse (4); not having reported a link with the program on the Lattes platform (3); not having taught classes in 2018 (2); and conflict of interest (1). Thus, 18 potential participants were invited by email to participate in the semi-structured interview (stage 3). Of these, one did not accept to participate, and six did not respond to the invitation. So, the sample in stage 3 consisted of 11 permanent faculty members: seven from PPGENF 1 and four from PPGENF 2. The interview was held in person at the university where the teachers worked. The teachers who accepted the invitation were interviewed using a semi-structured guide designed to highlight the constructs elaborated by the author adopted as the theoretical framework of this study. The questions in the guide were: 1. "How did you become a teacher? (highlights trajectory and sources)"; 2. "What motivated you when you decided to teach in postgraduate programs?"; 3. "What is your opinion about the objective of the PPGENF? (highlights sources, curriculum knowledge, knowledge of educational contexts, knowledge of educational ends, comprehension)"; 4. "Tell us a little about your activities as a teacher in the program"; 5. "Your preparation process when teaching a subject"; and 6. "How do you usually teach a subject (highlights the stages of transformation and instruction"; Shulman, 1987).

The interviews were transcribed and validated. The analysis occurred at the same time as data collection in two aspects: the quantitative analysis through the simple descriptive statistical technique, and the qualitative analysis through the constant comparative method in open, axial, and selective coding (Straus & Corbin, 2008), using the ATLAS.ti software, version 8.2.

In open coding, 51 codes were created. In axial coding, based on Shulman's concepts (Backes et al., 2017), 20 codes were refined and grouped into the following meta-categories: General pedagogical knowledge, Knowledge of educational contexts, and Knowledge of learners and their characteristics shaping the understanding of didactic-pedagogical training and Academic training and wisdom acquired from teaching practice reaffirming Pedagogical Reasoning and Action.

The concept of sources for graduate programs was contextualized (Shulman, 1987) to identify the sources in the trajectory as they relate to the PRA. It is assumed that the source of scholarship is characterized by the doctoral degree, a requirement for admission into *stricto sensu* programs, and that the wisdom acquired from teaching practice is divided into undergraduate and postgraduate studies since the entry into postgraduate studies occurs after entry into the teaching career at the undergraduate level.

Initially, the study population was identified and characterized based on data from the 28 faculty members

regarding the variables of contract, certification, and area of training (Stage 1). The number of participants decreased throughout the study based on the variables "training time," "professional activity," and "research areas." Data were obtained only from 24 permanent faculty members because they were nurses (Stage 2). Then, 11 permanent faculty members were selected for the final sample (Stage 3).

Verbatim transcriptions were identified with the letter 'P,' followed by Arabic numbers in the order the interviews were conducted, the number of insertion of the transcription in the software, and the number of the interview citation.

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## Results

The results show that 46.43% ( $n = 13$ ) of permanent faculty members teach in PPGENF 1 and 53.57% ( $n = 15$ ) in PPGENF 2. As for certification, 53.57% ( $n = 15$ ) started teaching in the first years of implementation of the programs (2010-2012), 17.86% ( $n = 5$ ) from 2013 to 2015, 14.29% ( $n = 4$ ) from 2016 to 2018, and 14.29% ( $n = 4$ ) did not mention this information in the curriculum. As for the area of training, 14.29% ( $n = 4$ ) were not nurses but had degrees in Pharmacy, Medicine, Biology, and Pedagogy. In the Lattes curriculum vitae, 83.33% ( $n = 20$ ) were nurses, of whom 20.83% ( $n = 5$ ) worked in care delivery, 29.17% ( $n = 7$ ) in management, and 33.33% ( $n = 8$ ) in both. A total of 70.83% ( $n = 17$ ) were linked to current research areas.

As for research areas, 20.83% ( $n = 5$ ) were developing studies in nursing on emerging and neglected diseases, 20.83% ( $n = 5$ ) in adult and elderly health nursing, 16.67% ( $n = 4$ ) in collective health nursing, 16.67% ( $n = 4$ ) in women's health nursing, 8.33% ( $n = 2$ ) in mental health nursing, 8.33% ( $n = 2$ ) in fundamental nursing, 4.17% ( $n = 1$ ) in child and adolescent health nursing, and 4.17% ( $n = 1$ ) in management nursing.

### Trajectory, access to the sources, and comprehension before entry into postgraduate programs

There are two movements of access to the sources among the nurses: before and after the entry into postgraduate teaching, distinct elements in the first phase of the PRA, that is, comprehension. The trajectory in teaching of most interviewed teachers began with opportunities and the presence of professional skills, which was confirmed with the approval in a competitive examination.

We even plan some things, but I didn't plan to become a teacher. I already had my degree, I was working in the inner state and here in the state capital when a friend invited me. I was working in

the leprosy control program, so she said it would be ideal to have my resume and type of work linked to teaching to take the experience to the classroom. (P5)

The professional experience source, which is not a source original to Shulman's work (Shulman, 1987), was the first most interviewees accessed. They envisioned the possibility of drawing on their skills as nurses to enter the educational context, where they developed the wisdom acquired from teaching practice source throughout their trajectory. In this sample, 58.33% ( $n = 14$ ) completed their master's degree between 2000 and 2006, and 70.83% ( $n = 17$ ) completed their doctoral degree between 2001 and 2007. Of these, 33.33% ( $n = 8$ ) had a post-doctoral degree. Concerning the region of the doctoral training institutions, 62.5% ( $n = 15$ ) were in the Southeast, 33.33% ( $n = 8$ ) in the South, 12.5% ( $n = 3$ ) in the North, and 4.17% ( $n = 1$ ) in the Northeast. In this sample, 33.33% ( $n = 8$ ) of the teachers had participated in doctoral training in the DINTER (Interinstitutional Doctorate) modality.

Associated with the access to the source of postgraduate scholarship, the teachers accessed the source of experience as a student. Some aspects influence the understanding of what it means to teach in a postgraduate program and how one should teach in general. "Training researchers capable of intervening within the Amazonian context, of critical thinking. Being a researcher was linked to being a teacher. (P1)"

The access to the sources came from: 1. Professional experience as a nurse, 2. Wisdom acquired from undergraduate teaching practice, and 3. Scholarship and experience as a postgraduate student.

A particular aspect of the comprehension of teachers who accessed the source of scholarship after they started teaching is the mixture between a strategic look and the idea of duty, which also ends up being the motivation for teaching at the postgraduate level. However, this comprehension is not observed in teachers who first accessed the scholarship source.

Institutional commitment, the university does not allow a teacher to do a doctorate, paying a scholarship, a salary for nothing, for a mere title, just for the sake of my career.

The university makes a proposal within an institutional policy, and after doing it, I would help at least with creating the master's degree in nursing because there was not one program in the northern region for almost 40 years. (P8)

Sources and phases of PRA after entering postgraduate, teachers have access to the source of educational materials and structures. About this source, it should be noted that the programs propose the following:

The mission of the PPGENF is to meet the demand for local, regional, and national qualification and develop strategies to promote the exchange with researchers from other national and international universities, institutions, centers, and organizations to establish partnerships in training and knowledge production, strengthening the HEIs in the area of Nursing. (P14)

The postgraduate nursing programs in the northern region are organized as master's degrees, focusing only on the area of Nursing in the Amazonian context and with a maximum of three lines of research, encompassing training, management, health education, care technologies, and health policies. The PPGENF included 13 courses, with a minimum of two and a maximum of four mandatory courses. In PPGENF 1, "Didactic-pedagogical training in health," "Education, professional and teacher training in health and nursing," and "Teaching internship" stand out among the courses related to didactic-pedagogical training. In PPGENF 2, "Education, health, and nursing" and "Teaching internship" stand out.

Upon entering postgraduate studies, there is a negotiation of the teacher's comprehension, based on previous experiences and reflecting the demand of developed activities.

Concerning the activities in the program, I participate in boards and supervision. In my opinion, I would not have time for so many activities . . . I was responsible for the theoretical and practical components of the undergraduate program, the practical component takes a whole shift, then the postgraduate degree takes another shift, and sometimes we have night meetings, so what time is left? (P6)

For the Coordination for the Improvement of Higher Education Personnel (CAPES), being a permanent faculty member in a postgraduate program in Brazil requires developing undergraduate or postgraduate teaching activities, participating in research projects as an accredited supervisor, and performing administrative tasks in higher education institutions, in which the workload is established with the coordinator of the program (Ministério da Educação, 2016).

As for ongoing institutional projects, 91.67% ( $n = 22$ ) develop research projects, 45.83% ( $n = 11$ ) extension projects, 16.67% ( $n = 4$ ) teaching projects, and 4.17% ( $n = 1$ ) innovation projects; 8.33% ( $n = 2$ ) had no projects; 66.67% ( $n = 16$ ) had a funding source for their projects. Considering the predominance of research projects in terms of scientific

productivity throughout the trajectory, 41.67% ( $n = 10$ ) of them published up to 10 scientific articles, 37.5% ( $n = 9$ ) 20 expanded abstracts in general, and 45.83% ( $n = 11$ ) in their areas of expertise.

As for teaching, 83.33% ( $n = 20$ ) reported teaching undergraduate courses in their Lattes. In the postgraduate program, 45.83% ( $n = 11$ ) reported that they only taught in *stricto sensu* programs, 41.67% ( $n = 10$ ) in *stricto sensu* and *lato sensu* programs, and 29.17% ( $n = 7$ ) did not report teaching postgraduation courses.

Besides these activities, 87.5% ( $n = 21$ ) have management positions at the HEI. When facing a new reality, there is negotiation of the previous comprehension based on the wisdom acquired from postgraduate teaching practice. Although there is a collective organization in administrative tasks and teaching activities in the transformation phase, according to the information in the Lattes curriculum, part of them are not performed by all permanent faculty members.

The PPGENF does not have a single teacher for a single course; at the very least, we have two teachers for each course. Preparation is based on this principle of syllabus and program content. Dividing the workload is part of teachers' work planning. Sometimes we take on more workload, we exceed 40 hours a week because the university offers a very big number of undergraduate and postgraduate degrees in the nursing school. (P7)

In the teaching of subjects, teachers are divided to include more specialized content and manage the load of activities. In the teaching phase, in contrast to the previous ones, there seems to be a back-and-forth between individual understanding and collective transformation, returning to the individual scope in teaching. To teach at the postgraduate level, teachers access the source of scholarship as a postgraduate student and add the wisdom acquired during their undergraduate practice. In this journey, they move between known experiences and the search for innovation through information, the Internet, or dialogue with colleagues.

I decide to start [the classes] always based on my experience, what I am most qualified to do. When I see other teachers do something interesting, I ask how they do it. (P3)

I got some strategies from other examples, other programs, and the doctorate itself, but others I took from the Internet. Even though we are used to it, each class is a class with different goals and different behaviors, so an update is necessary. (P4)

In the evaluation phase, they signal the need for didactic content, active methodologies, public speaking, specific scientific knowledge, and an evaluation of the program's objectives. They also demonstrate the perception of their capacity to contribute to its achievement. I always believed that the purpose of the program was to prepare me for teaching.

But, as you mature within your structure, you realize that we are not structured for that... because I believe that the master's degree has to prepare us for teaching. Research is part of it but, at this moment, the student is prepared to teach (P9).

Another teaching activity in postgraduate studies is supervision. In this aspect, there is an individual and relational transformation movement as mentoring.

The teacher provides other ways of teaching the master's student through a closer work relationship with them, including activity planning, production of scientific knowledge, dissertation development, participation in research groups, and lecturing.

As for supervisions, 66.67% ( $n = 16$ ) supervised final projects.

Considering the last 5 years, for master's degrees, 17.86% ( $n = 5$ ) of the teachers had supervised up to two dissertations; 28.57% ( $n = 8$ ) up to four dissertations; 14.29% ( $n = 4$ ) up to six dissertations; 10.71% ( $n = 3$ ) up to eight dissertations; and 17.86% ( $n = 5$ ) up to 10 or more dissertations. Concerning doctoral theses, only 10.71% ( $n = 3$ ) supervised at least one, and 10.71% ( $n = 3$ ) reported not supervising any thesis.

"I was never taught how to supervise a dissertation. I was oriented on how to write a thesis. The system I used was following a model or imitating" (P1).

Supervision is individual. We start working on the project as soon as classes begin. I address not only the thesis itself but also their feelings or difficulties, then I try to discuss these things or the decisions that need to be made. (P11)

## Discussion

The two movements of access to the sources of the permanent faculty members of the postgraduate nursing programs in the northern region correspond to the movements in the trajectory of higher education teachers in Brazil. For the younger generation of teachers, access to the source of scholarship occurred before access to the source of wisdom of teaching practice because, for those who entered in the 2000s, the degree became a requirement for access to a teaching position. The opposite occurred for the older generation, who entered before or during the 1990s, since the degree was not a requirement for access to a teaching position but became necessary for career advancement and the development of universities (Shulman, 1987; Núñez & Ramalho, 2017).

The degree is directly related to the development of postgraduate nursing studies in northern Brazil. The emergence of the programs was influenced by the cooperation in Interinstitutional Doctoral Programs (*doutoramento interinstitucional*, DINTER). Two professional master's programs have recently been approved. However, the region still lacks doctoral programs, which is a recurring concern of the area panel, particularly in the National Postgraduation Plan 2011-2020, which advocates for reducing regional asymmetries (Ministério da Educação, 2016).

The trajectory of access to the sources of experience as a postgraduate student and educational materials and structures is linked to the region's educational context. A study classifies public universities into public research universities and public regional universities, whose differentiation process occurred along with the establishment of the postgraduate system in Brazil (Núñez & Ramalho, 2017).

One significant distinction is that public research universities are dedicated to postgraduate education, especially to doctoral training. To this end, most of the faculty have doctoral degrees and are in an exclusive dedication regime, thus able to capture most of the resources allocated to research (Núñez & Ramalho, 2017).

Public regional universities are more dedicated to undergraduate studies, and postgraduate education is a parallel objective, and focus on master's degrees. These universities have a lower percentage of faculty members with doctoral degrees and in an exclusive dedication regime (Núñez & Ramalho, 2017). This reality is closer to that of the universities offering the analyzed PGENFs.

The lack of postgraduate nursing programs in the region and the cooperation initiatives justify the degree being lo-

cated in the southeastern and southern regions for teachers who became tenured after entering the teaching career. Both factors also justify the entry of tenured teachers since these regions concentrate the majority of programs with grades 6 and 7 in public research universities (Ministério da Educação, 2016).

In this emigration movement, teachers access the source of experience as a student in HEIs with different characteristics from those they (will) work in, which, in the absence of didactic training or even access to the source of research on schooling, interferes in PRA at all stages, particularly through imitation and reproduction (Shulman, 1987; Lima, 2018).

More than half of the permanent faculty members became involved in the programs in the early years, namely DINTER, which justifies the discourse of commitment and feedback to the HEI for their participation in the programs and having provided access to the source and teaching materials, explicitly, by reading and knowing the course project.

Even with different trajectories up to this point, after entering the postgraduation, the group of teachers acquires wisdom of teaching practice. Throughout their practice, they recognize that their activities are not restricted to postgraduate studies and go beyond teaching, including lecturing, thesis supervision, and teaching internship supervision. This negotiation of comprehension that seems to occur upon entry into the programs is related not only to the content but also to socially expected roles, which are independent of university classification but may be more complex for faculty in public regional universities (Shulman, 1987).

Teachers are expected to fulfill several roles: teacher, researcher, extensionist, manager, and evaluator; among all these, one seems to be more valued than the others: that of researcher (Barbosa et al., 2018). Data extracted from the Lattes curricula show that teachers in these programs seek to fulfill all these roles. Most work in undergraduate teaching, postgraduate teaching, and as managers, a characteristic of public regional universities, associated with the prevalence of research projects, as is expected of postgraduate faculty members according to the funding agencies and postgraduate regulators. However, there is still limited scientific production, as corroborated by the reports, which may influence the perception of multiple efforts, sometimes perceived as being beyond the capacity of universities whose postgraduate studies are not a priority of action in a region that has no tradition of research (Zamproga et al., 2020).

Within the scope of PRA, when entering the programs, the teachers acquire wisdom of teaching practice by reflecting on previous experiences and new ways of understanding the postgraduate activities, such as teaching subjects and supervising dissertations. Thus, they negotiate their understanding between expected and perceived roles, distinguishing themselves from each other and acting in the transformation and teaching phases that reflect what is possible. This negotiation of understanding results in transformation and instruction, which do not necessarily reflect what it means to intervene in postgraduation according to the program design but rather the oppor-

tunities they have to intervene considering the broader context (Shulman, 1987).

With so many roles, postgraduate teaching, although present, does not seem to be the most highlighted component, as it is divided into other various activities. The teachers themselves identified aspects for improvement within the evaluation phase (Zamproga et al., 2020). In this space, transcending the discourse that advocates for curricular changes with a view to didactic-pedagogical postgraduate training on the grounds of not preparing teachers for teaching and focusing on the relationship between the trajectory of access to sources and the PRA, one wonders: how to emphasize didactic-pedagogical training within the PRA, if along the trajectory, in the access to the sources of scholarship and experience as a postgraduate student, teachers are little stimulated to develop pedagogical content knowledge?

One also wonders how, in the absence of these sources, when entering postgraduate school, in accessing the source of pedagogical structures and materials, one can foster didactic-pedagogical training in curricula that do not prioritize it. The answer may lie in the expectation of performing multiple roles, such as developing wisdom of teaching practice to overcome gaps and promote didactic-pedagogical training.

The limitations of the study include data collection, since it was based on the teachers' reports and the analysis of their interviews, without considering the observation of the teaching practice *in loco*, which would assess the interactions within their context. Furthermore, it should be noted that this study only investigates postgraduate nursing programs at the master's level in the northern region, without considering the recently approved professional master's programs in 2019.

## Conclusion

The PRA of the permanent faculty members of postgraduate nursing programs, through access to the sources of knowledge throughout the trajectory, had repercussions at moments that influenced the teacher's figure, with implications for faculty didactic-pedagogical training, initially through DINTER, and the training of future teachers. The northern region is characterized by few postgraduate programs, with the challenge to train graduates linked to the teacher's particularities and the educational context, arising from the intense involvement in activities resulting from the low technical productivity. Thus, it is necessary to realign the co-responsibilities and intentions between the educational institutions and the faculty of these programs to mitigate the teachers' overload and precarious work and provide more training opportunities for new teachers.

### Author contributions

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