

**RESEARCH AS AN EDUCATIONAL PRINCIPLE IN TEACHER TRAINING FOR
TEACHING IN BASIC EDUCATION: A STUDY ON THE PERCEPTION OF
PEDAGOGY STUDENTS**

***A PESQUISA COMO PRINCÍPIO EDUCATIVO NA FORMAÇÃO DO PROFESSOR
PARA A DOCÊNCIA NA EDUCAÇÃO BÁSICA: UM ESTUDO SOBRE A PERCEÇÃO
DOS ACADÊMICOS DE PEDAGOGIA***

***LA INVESTIGACIÓN COMO PRINCIPIO EDUCATIVO EN LA FORMACIÓN
DOCENTE PARA LA DOCENCIA EN EDUCACIÓN BÁSICA: UN ESTUDIO SOBRE
LA PERCEPCIÓN DE LOS ESTUDIANTES DE PEDAGOGÍA***



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ABSTRACT: The article aims to analyze the perception of Pedagogy students regarding the importance of research as an educational principle in the training of basic education teachers. The qualitative research was conducted through a case study, and empirical data was collected by administering questionnaires to 37 students of the Pedagogy course offered in the distance education mode at a Higher Education Institution in Northwestern Minas Gerais. The sample selection was based on responses demonstrating greater incorporation of theoretical frameworks (DEMO, 2006; FREIRE, 2009). The results indicate that Pedagogy students recognize the relevance of research in teacher training to develop reflection, critical thinking, investigative spirit, and argumentative skills in the classroom.

KEYWORDS: Research as an educational principle. Teacher education. Pedagogy students. Basic education.

RESUMO: O artigo tem por intencionalidade analisar a percepção dos acadêmicos do curso de Pedagogia, acerca da importância da pesquisa como princípio educativo na formação do professor da educação básica. A pesquisa qualitativa foi efetivada por meio de estudo de caso e os dados empíricos foram coletados com a aplicação de questionário aplicados a 37 alunos do curso de Pedagogia ministrado na modalidade de Educação a Distância em uma Instituição de Ensino Superior do Noroeste de Minas Gerais. A seleção da amostra estabeleceu como critério de inclusão as respostas que demonstram maior introjeção dos referenciais teóricos (DEMO, 2006); (FREIRE, 2009). Os resultados apontam que os acadêmicos de Pedagogia reconhecem a relevância da pesquisa na formação do professor como um instrumento para desenvolver a reflexão, criticidade, o espírito investigativo e a capacidade de argumentação em sala de aula.

PALAVRAS-CHAVE: Pesquisa como princípio educativo. Formação docente. Acadêmicos de Pedagogia. Educação básica.

RESUMEN: El artículo tiene como objetivo analizar la percepción de los académicos del curso de Pedagogía sobre la importancia de la investigación como principio educativo en la formación de los profesores de educación básica. La investigación cualitativa se realizó a través de un estudio de caso y los datos empíricos se recopilaron mediante la aplicación de cuestionarios a 37 estudiantes del curso de Pedagogía impartido en la modalidad de educación a distancia en una Institución de Educación Superior del Noroeste de Minas Gerais. La selección de la muestra estableció como criterio de inclusión las respuestas que demuestran una mayor internalización de los referentes teóricos (DEMO, 2006); (FREIRE, 2009). Los resultados indican que los académicos de Pedagogía reconocen la relevancia de la investigación en la formación del profesorado como un instrumento para desarrollar la reflexión, la criticidad, el espíritu investigativo y la capacidad de argumentación en el aula.

PALABRAS-CLAVE: Investigación como principio educativo. Formación docente. Estudiantes de Pedagogía. Educación básica.

Introduction

We live in a constantly changing world, where knowledge quickly becomes outdated, and society evolves quickly. Therefore, schools must educate critical, participatory, and creative citizens prepared to thrive in these new times. And for this task, teaching students to develop research skills from an early age is essential. However, to effectively embark in this direction, it is crucial to train teacher-researchers.

At the beginning of the 20th century, Brazil did not have a strong tradition of research in basic education. Only a few decades ago, some pioneering voices began to take a stand on the national scene, advocating the need to discuss the topic and, most importantly, to equip future teachers for this teaching practice. However, the country has awakened to this need, and currently, research is present in the works of many renowned thinkers and numerous postgraduate studies, both from a scientific and educational perspective.

It is important to differentiate research in the educational context from scientific research. In this work, these concepts are analyzed from the perspective theorized by Demo (2006). The author in question understands that

Educating through research has as its essential first condition that the education professional be a researcher, that is, they handle research as a scientific and educational principle and have it as a daily attitude [...]. The goal is not to seek a research professional but a professional in education through research (DEMO, 2006, p. 02, our translation).

Demo (2006) further emphasizes that the refinement involving the research universe is not itself a problem but how Brazilian education perceives it, distancing it from the classroom. Therefore, it is essential to train teachers to be familiar with scientific research methodologies and capable of applying them in daily classroom practice.

Based on this premise, this article aims to analyze the representations¹ of eighth-semester students in the Pedagogy program at FINOM College regarding educational research in their training and daily practice as teachers in the classroom.

The Higher Education Institution (HEI) pioneered higher education courses in the Northwest region of Minas Gerais, establishing itself in Paracatu in 1987 with degree programs

¹According to Pesavento (2003), representations are mental and historical operations that give meaning to the world. Without them, the world itself has no significance. It is through representations that we act in the world and construct identities. In this sense, representation takes the place of reality, but not with a perfect image of the real: the representative is not represented, but they **share relationships** of similarity, meaning, and attributes. Representations are expressed in discourses, assuming multiple configurations that compete and establish power relations. As a result, the dominant perception gains the status of reality, of truth, and becomes naturalized.

in History and Pedagogy. Over the years, the college has expanded its offering of teacher training courses, including Geography, Mathematics, and Physics. However, it was in 2002 that a milestone in the institution's history occurred with the implementation of the "Veredas Project," which offered a full teaching degree (in the semi-attendance modality) for teachers working in the early years of elementary education who did not have higher education qualifications. The college received from the Secretary of Education the Polo 9, lot G, covering the regions of Vale do Mucuri and Jequitinhonha. From then on, the college prepared to work with distance education modality (SILVA; GONÇALVES; SILVA, 2011).

In 2006, the institution obtained accreditation from the Ministry of Education to offer undergraduate courses in Geography, History, and Pedagogy in the Distance Education modality (with the latter being the course analyzed in this study)². Since then, the HEI has been authorized to provide the training of these professionals through distance learning, according to Ministerial Order No. 1,066, dated 25/05/2006, in the state of Minas Gerais (SILVA; GONÇALVES; SILVA, 2011).

From the beginning of its activities, there has been a concern among directors, course coordinators, and professors regarding research in the training of future teachers. Many educators working in various regions of the Northwest of Minas Gerais obtained their academic training at this higher education institution, which is this research's main object of study. Throughout its existence, the college has always prioritized forming a new teacher, including educational research (SILVA; GONÇALVES; SILVA, 2011).

Based on these observations, the present study aims to answer the following question: to what extent, in the perception of the students, do the theoretical and methodological contents related to research in the Pedagogy Course at FINOM contribute effectively to a higher quality initial training of students who will work as teachers in basic education?

The interest in the topic is justified according to the authors' perception of the value of research in both teacher training and their teaching practice. According to Demo (2006, p. 17, our translation), "research is part of every practice, part of the information process, as a fundamental tool for emancipation, for having and being, one must know." The author also points out that "[...] in the face of our ignorance and limitations, there is always something to

²Another field of activity for FINOM is the engineering courses that are gradually becoming its largest niche of action in the Northwest of Minas Gerais. The engineering programs offered at this institution include Telecommunications Engineering, Production Engineering, Mining Engineering, Civil Engineering, Electrical Engineering, Environmental Engineering, and Agronomy. They also offer courses in Accounting and Law, which were not part of the research universe (SILVA; GONÇALVES; SILVA, 2011, our translation).

be known, and above all, knowing is part of the concept of a creative life" (DEMO, 2006, p. 17, our translation). Students must recognize and learn how to conduct research, as their education is directly related to their professional practice.

In the academic and social context, these reflections contribute to understanding the educational process and how research integrates into this practice within the scope of the proposed investigation. Thus, it is possible to know how research is addressed in the analyzed teacher training course, identify the problems arising from this approach, and develop an action plan based on the representations of the students involved in the study, graduating students of the Pedagogy course. In this sense, it is essential to consider how our present representations can contribute to our peers, researchers in the educational field, and especially to the context addressed in this research.

Methodology

For the completion of this study, a qualitative and exploratory methodological approach was chosen. This choice is based on the understanding that this approach allows for a deeper immersion in the social context in which education is embedded. Furthermore, it enables the comprehension of the representations, feelings, and perceptions of the social actors involved in the studied process. Empirical data collection was conducted through a Case Study in which a three-question questionnaire was administered to 37 students in the eighth semester of the Pedagogy program. These students were enrolled in the second semester of 2022 and attended the course in the Distance Education modality at a Higher Education Institution (HEI) located in the Northwest of Minas Gerais. The class comprises students residing in different cities within the mentioned region who attend the institution above. The professor in charge of the discipline titled "Research Seminar II: experiencing education in Practice" expressed the desire to use the questionnaire responses to write an article, and the students promptly authorized this request.

The Case Study strategy is suitable for this study since the authors are also professors at the mentioned institution, which grants them access to various sources of information about the course. According to Yin (2005, p. 32, our translation), "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between the phenomenon and the context are not evident and in which multiple sources of evidence are used."

A sample of fifteen students was selected based on inclusion criteria related to their responses, demonstrating greater assimilation of the theorists discussed and studied during the semester (DEMO, 2006; FREIRE, 2009). The students were numbered from 01 to 15 to preserve their identities in confidentiality. The collected content analysis follows the guidelines Bardin (2011) advocated in this text.

Research in education and everyday classroom practice: a journey through the state of the art and the research observation plan

This interest in understanding the importance of research in education arises from the need for research-oriented education, as advocated by Pedro Demo, who asserts that emancipation in education requires research as a method of formation. Research is understood here from the perspective presented by:

The act of diligently seeking answers to inquiries or information. The research contributes to the construction of knowledge. In education, research should produce "new" knowledge about a specific subject, relating the obtained information to the knowledge of the world (XAVIER; BRITO; CASIMIRO, 2009, p. 1, our translation).

Research in teacher education should provide conditions for teachers to experience practice and understand the mechanisms and theories of learning. In his work, Demo (2006) presents his research's guiding principles, highlighting research as the foundation of education and a scientific principle. He also criticizes educational institutions that limit themselves to teaching without practicing research, arguing that "the basis of school education is research, not the lesson. Research should be a daily attitude for both the teacher and the student" (DEMO, 2006, p. 06, our translation).

The Pedagogical Political Project of the Pedagogy course under analysis establishes:

The objective of the course is to develop and promote the training of teachers qualified to work in teaching positions in Early Childhood Education and the initial years of Elementary Education, in Secondary Education courses in the Normal modality, and Professional Education courses in the area of school services and support, as well as in other areas where pedagogical knowledge is required, as prescribed by the National Education Guidelines and Bases Law 9394/96, as well as regulatory milestone 9.057 of May 25, 2017, which regulates article 80 of Law No. 9.394, dated December 20, 1996, establishing the guidelines and bases of national education (FINOM, 2021, p. 24, our translation).

Referring to what is advocated by the Pedagogical Political Project (PPC) of the course, there is a concern with research and extension, especially in promoting research initiation developed by the Research Initiation Center (NIP), in the Northwest Minas Scientific Initiation Congress (CONNIC), in activities during the Academic Week, and in the Distance Education Congress (CEAD), as well as providing students with the opportunity to publish their work in the institution's journal, titled "Humanities and Technology in Review."

The investigative work focuses primarily on developing the Research Project (TCCI) and writing a paper (TCCII) defended in the TCC Seminar, which takes place at the end of each academic semester. In addition to preparing and defending a research project at the end of the course, students also have the opportunity to take courses that provide direct contact with research activities throughout the academic period (FINOM, 2021).

As established in the Pedagogical Political Project (PPC), the Bachelor's Degree in Pedagogy was designed to provide graduates with a conscious understanding and the formation of a research-oriented teacher. To achieve this goal, the curriculum structure of the course was developed to offer disciplines that develop skills related to scientific investigation, integrating teaching and research. Among these disciplines, Methodology of Research, Research in Education, Seminar on Research I: Experience and Practice in Education, Seminar on Research II: Experience and Practice in Education, TCC I, and TCC II stand out. The purpose of these disciplines is to prepare students for research practice. The course coordination requests that teachers, regardless of the specific content of each discipline, incorporate research throughout the teaching process to provide students with the opportunity to learn through research.

Thus, the course aims to strengthen the interrelationship between teaching, research, and extension, integrating theory and practice through connecting disciplines. This enables the acquisition of knowledge that promotes differentiated and quality education sought by the course graduates. For this reason, the Course Structuring Teaching Committee (NDE) strives to maintain disciplines and activities that provide conditions for students to experience, through research, the benefits of meaningful learning and an intrinsic construction of teaching practice.

Representations of academics regarding research in the everyday life of schools and the training and practice of teachers

The Pedagogy course at Universo University, the subject of this research, has always adopted the perspective of forming teacher-researchers. This approach is present both in the pedagogical and political projects of the course and in the classroom practices of the teachers, and in the annual events promoted to involve students in the world of research. When analyzing the curriculum framework and the pedagogical and political project of the course, we observe that the institution seeks to provide theoretical and methodological support to students to develop their practice and interest in research. However, the assimilation of the content depends greatly on each student and how they perceive the construction of knowledge and the teaching-learning process.

The institution's concern in promoting these reflections on the importance of research arises mainly from the fact that it is educating teachers and educators to work in Basic Education. In this sense, it considers the principles of knowledge as a construction. The research seminars offered in the course aim to provide reflections on the relevance of research in the formative and educational process.

In this context, research is a discipline (Research Seminar: Experiences in Educational Practice) that aims to equip future teachers with these everyday practices in the classroom. Thus, the first question posed to the academics was about their conception of the importance of research in education as a scientific and educational principle.

Pedro Demo (2006) emphasizes the importance of research as a structuring element of the teaching process and highlights how problematization and searching for answers to questions enable the continuous construction/reconstruction of knowledge. This contribution can be observed in the responses of several academics, as shown in the following transcriptions:

Education research is extremely important. Through research, the student can enter a different world. There are great possibilities for new reflections and knowledge in this world. In this context, research emerges as a new way of rethinking oneself and becoming a critical person capable of living in an adverse society (ACADEMIC 01, our translation).

Research has a significant contribution to education. It is through research that facts are discovered (ACADEMIC 02, our translation).

Research is a way to gather knowledge, address doubts, or satisfy curiosity about a specific topic or point of view. The teacher acts as a knowledge mediator, and research helps emphasize understanding. Research facilitates teaching and learning, thus becoming a path to be pursued in the quest for wisdom (ACADEMIC 03, our translation).

Research is of utmost importance in education. Through research, it is possible to create a difference in learning. Research is discovery, a guiding principle that enables teaching and learning to contribute and constitutes a new way of seeking knowledge and adding quality to learning (ACADEMIC 05, our translation).

Through research, researchers expand their knowledge and transmit their expertise to those who read what they have researched and written (ACADEMIC 06, our translation).

Research is the foundation of quality education, and it is through questioning a particular subject, that we seek to research possible answers to ensure that they are grounded in educational principles (ACADEMIC 07, our translation).

Upon analyzing the narratives presented earlier, we observe an understanding of research as a central element in knowledge construction. This perception aligns with what Minayo (1998, p. 17, our translation) stated, who considers research as a "basic activity of Science in its inquiry and construction of reality." Through research, teaching is nourished and updated in light of the world's reality. Therefore, although it is a theoretical practice, research is intrinsically linked to thought and action.

In the words of Luckesi *et al.* (1985, p. 51, our translation),

Knowledge is an ability available to us, human beings, to process our lives more appropriately, with fewer risks and dangers. Knowledge can transform reality's opacity into "illuminated" paths, enabling us to act with certainty, security, and foresight.

In the narratives of the academics, we can perceive that they have understood the importance of working with research to construct and reconstruct critical knowledge. In addition to the contributions related to knowledge construction, some have highlighted how research fosters the development of critical thinking and autonomy.

Research is essential for education because the search leads to the construction of knowledge. Research leads us to seek knowledge, to be more critical, and to understand specific problems. It gives us a broad perspective on a particular subject (ACADEMIC 08, our translation).

The students' narratives in the Pedagogy course under study demonstrate a good understanding of Paulo Freire's thinking, especially regarding the role of knowledge as a promoter of autonomy. Freire (2009, p. 35, our translation) states, "Respect for autonomy and dignity of each individual is an ethical imperative, not a favor that we can choose to grant or not to grant to each other." The students have shown an understanding of the importance of

teachers promoting the formation of critical and thoughtful students, individuals who are producers of knowledge and not just recipients. These students should know how to read, question reality, and, above all, transform it. Research may seem related to sophisticated environments distant from most people's lives, but its function is to interpret and transform the society in which the individual is embedded.

Academic 09 made this very clear in their statement, stating:

Education research is of utmost importance, through it, students can expand their knowledge and learn how to seek information. It enables our autonomy, not limited to the knowledge transmitted in the classroom. Through research initiatives, it is possible to shape citizens who seek new knowledge and individuals who are critical and prepared (ACADEMIC 09, our translation).

Tozoni-Reis (2010, p. 12, our translation) defends the idea that education as an instrument of social transformation "refers to critical education, one that has as its main purpose the empowerment of individuals so that they have a critical and transformative social practice." The author emphasizes that in societies characterized by great social inequalities, people need to acquire meaningful knowledge, concepts, and values in a reflective manner to act in transforming these societies.

When considering education research, it is important to consider what Tozoni-Reis (2010) theorized as a constant and thorough search for understanding reality. This understanding involves reading the world, as Freire (2009) proposed, teaching students to investigate reality not only for the pleasure of inquiry but also to transform the world in which they are embedded. Freire emphasizes that there can be no effective teaching without the practice of research by the teacher. This aspect was highlighted in the statement of Academic 11:

Research is a tool of utmost importance for education, being an instrument that educators/mediators should use throughout teaching; as Paulo Freire says, there is "no research without teaching and no teaching without research." As a mediator, educators need to conduct research in their careers because everything is constantly evolving. Modern generations have preferences for their way of life, so teachers must research to stay informed and updated to meet their students' needs (ACADEMIC 11, our translation).

Contrary to being a demonstration of neutrality in science and educational practice[...]The research as an educational principle articulates knowledge production with a pedagogical, political project, with a conception of education (ACADEMIC 12, our translation).

The narrative of Academic 12 refers to the thinking of Pedro Demo when he emphasizes that science is never neutral. If science does not have a project of liberation, it is certainly "colonized" and exerting dominance. According to the author: "to research, therefore, is always also to dialogue, in the specific sense of producing knowledge from the other to oneself, and from oneself to the other, within a communicative context that is never completely penetrable and that can always collapse" (DEMO, 2006, p. 39, our translation). The same was observed by (ACADEMIC 13).

Research generates knowledge. Encouraging students to conduct research is synonymous with pursuing new knowledge. This allows them to delve deeper and broaden their horizons. Consequently, they are not confined to what is spoken in the classroom, presented as fixed and final. The purpose of assigning research to students is to encourage them to delve into and expand their understanding through the acquisition of new content. A teacher who engages in research leads students to seek knowledge through their research. It prompts them to rethink their perspectives and learning approaches, enabling them to engage in discussions with their peers, mediate knowledge, and gain a deeper understanding of specific subjects. Teaching requires research from both the teacher and the student. Engaging in research stimulates the quest for knowledge and teaches students how to delve into specific subjects and acquire expertise (ACADEMIC 13, our translation).

Education research aims to promote guidelines that can help highlight better educational methods and approaches, facilitating teaching and learning (ACADEMIC 15, our translation).

The student presented a perspective on research contributions to the teacher's practice, viewing it as a crucial tool in restructuring pedagogical approaches. Demo (2006, p. 14, our translation) issues a warning in line with this thinking,

Demystifying research also entails recognizing its natural involvement in practice beyond all possible theoretical virtues, particularly its necessary connection to the socialization of knowledge. Those who teach need to research, and those who study need to teach. A teacher who only teaches is never truly a teacher. A researcher who only researches is privileged and complacent.

The author understands there is no separation between teaching and research, for him, they are two inseparable aspects of the teacher's work. According to Demo (2006), a teacher who teaches without researching is considered a "scammer," while a researcher who refuses to share their knowledge in the classroom is complacent because they fail to socialize it. For the mentioned author, research is not just a quest but also a political attitude that should permeate the everyday life of all schools. In his words:

It should also be part of its everydayness in the political space as an instrument of access to power, critical levels of social consciousness, technological mastery in the face of social and natural data, and one's own culture. In colloquial terms, research is not an isolated, intermittent, or special act but a processual attitude of investigation in the face of the unknown and the limits imposed by nature and society. It is part of all practice to avoid becoming an activist and fanatic. It is part of the information process as an essential tool for emancipation. It is necessary to have the knowledge and, above all, to become knowledgeable (DEMO, 2006, p. 16, our translation).

Research practice can be emancipatory as it empowers students to understand the world and the society they are part of. This enables them to problematize reality and construct their solutions rather than just memorizing ready-made answers, perpetuating the instructionism present in basic Brazilian education. Demo (2006) considers research as an educational and everyday process that offers the opportunity for meaningful and emancipatory learning, capable of intervening in social reality.

Tozoni Reis (2010), reflecting on the relevance of knowledge, highlights how it can be both an instrument of liberation and alienation. When a teacher uses research for knowledge production in the classroom, they promote the autonomy of their students. According to Paulo Freire (2009, our translation), "Autonomy is the capacity and freedom to construct and reconstruct what is taught to you." Freire also emphasizes the educator's responsibility, stating that they must respect the learner's autonomy, identity, and dignity.

Through the statement of Academician 14, we perceive that they understood that "*the idea of research as a scientific and educational principle stems from the knowledge that this relationship between education and knowledge production can be useful for projects of domination or emancipation.*"

Demo (2006, p. 17, our translation) emphasizes that:

Research takes on distinct and challenging contours, beginning with recognizing that the best knowledge can surpass itself. The emancipatory path cannot come from external sources, imposed or donated, but must be an internal conquest, a self-construction, for which it is necessary to utilize all supporting tools: teachers, educational materials, physical equipment, and information. Ultimately, it is either a conquest or a domestication.

One of the academics mentions research as a scientific method. They acknowledge its relevance but exemplify research as presenting investigation results in a scientific paper. "*It is through research that we collect data for an article, a monograph. Researching to acquire knowledge for writing an article. We have to conduct research, there are various methods*" (ACADEMIC 10, our translation). This leads us to understand that, for them, there is a

separation between research conducted in the academic environment and research in the basic education classroom. In this sense, we perceive the need to rethink research as a fundamental element in knowledge construction without dissociating it from the scientific and critical perspective that should permeate research and derive from the theories that underpin the practice.

Pedro Demo (2006) emphasizes that there is no divorce between research as an educational and scientific principle. On the contrary, these two approaches complement each other and contribute to an effective educational practice capable of overcoming the instructionism in Brazilian basic education. But what is research as an academic principle? According to the author, the spirit of inquiry, questioning, experimentation, and construction/reconstruction of knowledge should guide a teacher's daily work. On the other hand, scientific research is governed by methods and techniques established within the standards of the sciences. The author highlights that these methods are essential and fundamental for advancing science, but they do not explain everything. Therefore, it is crucial to maintain a constant investigative stance to educate critical and creative citizens.

In an ethnographic context, we mention the experience of one of the authors who worked as a tutor in an in-service teacher training program offered by the institution during the Veredas Project. She is also a professor in the Pedagogy course analyzed in this study.

As a tutor, I witnessed the practice of a teacher, our student, in the rural area of Itinga municipality, located in the northern region of Minas Gerais. In 2002, it was still part of the drought polygon and considered the poorest municipality in Minas. The teacher taught a multi-grade class, prepared meals, and cleaned the school. The children traveled relatively long distances on foot to attend classes, many barefoot as they did not have shoes. The school didn't even have electricity. Therefore, the teacher always demonstrated her practices inspired by Pedro Demo's book "PESQUISA Princípio Científico e Educativo" (RESEARCH Scientific and Educational Principle). I mentioned her science classes, where she brought a chicken to hatch at the school, allowing the students to observe the entire process. The students would make daily notes until they saw the chicks hatching. In another experience, she planted beans in wet cotton placed inside glass jars. Every day, she presented the stages of bean plant development, and the students would draw and take notes in their notebooks. They would also question how long it would take for the plants to grow and if they would produce beans if planted. From this, I understood that this is educational research, a way to foster critical thinking and constructing knowledge connected to the students' culture and reality (TEACHER from the Pedagogy Course at FINOM, our translation).

In this aspect, the teacher's narrative allows for a critical reflection on the role of the investigated Pedagogy course, as the teacher in training appropriated new knowledge that

resulted in investigative practices in her classroom. This practice is grounded in the research proposal with educational objectives theorized by Demo (2006). In other words, her students constructed knowledge through observations instead of simply memorizing information from science books.

Pedro Demo (2006) defends the idea that research is an essential reference in universities, a privileged space for constructing new knowledge, theoretical contributions, and methodologies. However, it should also be an integral part of everyday school life, becoming a daily practice. According to the author, we learn through researching and constructing new knowledge, not just by listening and reproducing what is told. This implies the development of a critical and questioning consciousness and the ability to intervene in our social environment. Thus, problematizing reality and seeking answers are crucial for the continuous construction/reconstruction of knowledge.

One of the points addressed in the responses of some academics was the importance of teachers knowing how to conduct research and, through this knowledge, encouraging and teaching their students to practice research.

Since research is fundamental in the life of any individual, teachers must learn about research and become researchers themselves to be even more motivating as inspirations for their students (ACADEMIC 06, our translation).

Quality teaching requires that teachers conduct research for quality education (ACADEMIC 07, our translation).

The teacher needs to be prepared first, it's about having good training. When teachers become researchers, they encourage their students to seek new knowledge (ACADEMIC 08, our translation).

The students' considerations reinforce the idea that addressing research in teacher training courses is extremely important. They emphasize the need to acquire knowledge about research practice during their training and later apply it in their daily practice in schools. In this sense, the need to work on research as a motivation and a strategy that permeates teacher training and practice is evident. This raises questions about the responsibility of Higher Education Institutions (HEIs) in teacher education so that teachers can experience research more effectively, both in theoretical and methodological terms.

This research experience in education provides teachers with the necessary conditions to apply their expertise in practice. Furthermore, through continuous education and reading

relevant literature on the subject, teachers can go beyond intuitive or solely experience-based practices in the classroom. It is essential to reflect on the theories that underpin our practice and how we allow them to "transform" our way of teaching.

The academics emphasized, in their responses, the responsibility of teachers to stimulate interest in research in the everyday classroom setting.

The Basic Education teacher must teach their students, through their practice, to be interested in research (ACADEMIC 01, our translation).

Research is a tremendous source of knowledge, thus providing unique opportunities for students and teachers to learn and teach each other. The challenges in research are diverse, but an educator needs to learn how to awaken their students' desire to learn how to research (ACADEMIC 03, our translation).

The possibility of research in education helps the teacher better understand the content taught in the classroom. It is up to the teacher to stimulate the students in their day-to-day classroom activities, encouraging them to become student researchers. They should prompt them to seek solutions to problems through research (ACADEMIC 04, our translation).

We observe in the reflections of the academics a consideration of the teacher's role in sparking students' interest in research. Thus, the teacher's enthusiasm for research becomes a motivating factor for incorporating research practices into the classroom and ensuring the goal of promoting student learning.

In this context, it is essential for the teacher's reflection on the importance of research and its use in the school's daily life to be grounded in theories that enable the interpretation of the reality experienced in the classroom, providing them with the conditions to teach through research.

However, besides knowing how to conduct research, the teacher needs to employ methodologies and strategies that allow students to learn through research. This issue was highlighted by academics 10 and 11.

The teacher must establish methodologies so that the student can learn and teach enjoyably, allowing the student to awaken interest, desire, curiosity, and pleasure in learning through research. The teacher must be an encourager, creative, and always strive for the best teaching method (ACADEMIC 10, our translation).

For an educator, research is a fundamental tool for their profession. They must know how to apply it to their students and show them the importance of research in their lives, leading to possibilities and problematizing questions that prompt students to think and research the topic (ACADEMIC 11, our translation).

Regarding the implementation of research in the classroom, one of the academics mentioned using technology as a resource that enables research, as, according to them, "*the teacher has the possibility to work on research through technology. This facilitates and can even encourage the student's interest in this area. It is also possible to develop research work in the community, and museums, among others*" (ACADEMIC 09, our translation).

As for the challenges, few academics mentioned this issue. We hypothesize that the silence regarding this theme is because many have only had teaching experiences during supervised internships. Along this line of reasoning, we assume that they recognize the importance of research based on the literature, but in practice, they do not know how to deepen their approach because they are not currently working as teachers. Thus, they reproduce in their answers the discourses derived from the readings throughout the course.

Currently, there are many possibilities for research, and practically all students, from all classes, have some opportunity to become researchers. Basic education has some challenges, but with wisdom and goodwill, these difficulties can be overcome. Adapting to the type of research and the reality of each place (ACADEMIC 05, our translation).

Among the many challenges, one recognizes the teacher's role in their student's lives (ACADEMIC 08, our translation).

Academic 09 mentions the lack of material and didactic support that teachers face daily, emphasizing that "*the challenges of working on research are the lack of didactic and technological material support that can be offered to the students*" (ACADEMIC 09, our translation). The student is right in their statement because when entering remote areas of the "deep Brazil," it is possible to find schools that don't even have running water or electricity. These factors certainly hinder the effective practice of research and access to knowledge produced by universities. Some municipalities, such as João Pinheiro, located in the Northwest region of Minas Gerais, still have rural schools with multi-grade classrooms, meaning that teachers teach multiple grades in the same space and time, making their work more challenging.

Additionally, it is essential to mention that not all schools in the region, especially those in rural areas, have a physical library or access to the Internet, making it impossible for students and teachers to access the World Wide Web. It is also necessary to highlight that many parents do not have internet access at home, which hinders access to digital research sources.

Academic 14 mentions a fact already propagated by many scholars, such as Síveres (2006), which explains the difficulty of knowledge produced in universities reaching elementary school classrooms from the academic's perspective.

The challenges consist of integrating research into the routine of teachers' work in schools. Factors such as lack of time and opportunities hinder their participation in continuing education from acquiring methodological grounding that supports their actions and research development (Academic 14, our translation).

With this study, it was possible to perceive that the academics understand that research enriches the perspective regarding education, and it is the teacher's responsibility to establish a connection between research on practice and the implementation of research in the educational context. However, the question arises as to whether they will be able to translate this theory into practice in the day-to-day basic education classroom.

The third question addressed the importance of using research in basic education and how teachers can facilitate knowledge construction by encouraging the pursuit and interest in scientific investigation in the educational environment. The academics provided the following responses:

Research in the classroom becomes a great ally of elementary education's teaching and learning process. Daily discussions constitute a strong instrument for developing reflection, investigative spirit, and argumentation skills (ACADEMIC 01, our translation).

Research in the classroom should not only aim to occupy the student's time so that they do not have anything to do at home; its purpose goes beyond that. It aims to form curious individuals about what is happening in the world so that the learners will construct knowledge through this pursuit (ACADEMIC 02, our translation).

Academics 01 and 02 highlighted "research in the classroom" as an educational practice that can assist the teacher in empowering students, fostering critical thinking, and consequently producing more solid knowledge about the studied content. In this sense, Demo (2006, p. 34, our translation) mentioned that "it is the research process that, through discovery and questioning the existing knowledge, establishes new relationships within the given and generates new knowledge. It is research that, through creating and questioning the current situation, suggests, requests, and forces the emergence of alternatives."

According to Freire (2009, p. 41, our translation), another essential knowledge for the educational experience is related to its nature. "As a teacher, I need to clarify my practice. I need to know the different dimensions that characterize the essence of practice, which can make

me more confident in my performance." Influenced by this author's theories and when responding to the third question of the questionnaire, some academics emphasized the importance of the teacher acting as a researcher. This is because:

It is through research that the educator has the foundation to teach, which is why it is so important. The teacher must be passionate about research and know how to utilize this powerful tool to reflect and pass on to their students the methods to be used during the construction of knowledge. In other words, they encourage their students to seek research to enhance their knowledge (ACADEMIC 03, our translation).

Research in Basic Education is essential for students to learn to develop the habit of not simply accepting what is told to them but being able to seek knowledge and elevate their understanding. The teacher can facilitate this practice by providing incentives and academic support to their students for their development (ACADEMIC 04, our translation).

In addition to being a pathway to knowledge construction, information is the foundation for progress in the world. For the teacher to build a foundation of research and interest in their students, they must know how to teach, which requires research. They should research solutions to problems relevant to their students (ACADEMIC 05, our translation).

The statement by Academic 05, "teaching requires research," demonstrates an understanding of Paulo Freire's thinking (2009, p. 16, our translation), as according to the author, only those who have sought, questioned, investigated, and created/recreated knowledge have the power to teach. Freire is emphatic in stating:

There is no teaching without research and no research without teaching. These acts of doing are found within each other's bodies. While engaging in the process of teaching, I consistently pursue research endeavors. My motivation for teaching stems from a perpetual quest for knowledge, driven by my inherent inclination to question externally and introspectively. I engage in research for validation, and through this validation, I actively intervene, facilitate intervention, educate, and enhance my knowledge and understanding. I study to know what I don't yet know and to communicate or announce the news.

In this direction, the following academics highlighted the importance of research as an educational practice in the basic education classroom.

Research in Basic Education is of great importance because it is through research that knowledge is expanded. As a mediator, the teacher can stimulate students to enhance their learning through research and research to promote diverse knowledge (ACADEMIC 06, our translation).

Research in the classroom can become a great ally in the process of teaching and learning in elementary education. The teacher can and should encourage

students to become interested in scientific research and engage in activities that prompt them to seek inquiries in enjoyable ways (ACADEMIC 13, our translation).

Research has excellent importance in Basic Education, and it is through research that students make discoveries. Research can be mediated in the student's knowledge construction, as when a teacher presents a problem, the student will seek its solution (ACADEMIC 14, our translation).

As mentioned in the previous categories, material resources such as infrastructure and Information Technologies are extremely important in applying research in the classroom. However, a teacher training course dedicated to preparing professionals capable of working through problematization and criticism is fundamental.

In the same vein, Academic 15 emphasizes that:

As a mediator of knowledge, the teacher should encourage students to seek knowledge, suggesting online research and through dynamics, field trips, and visits to specific places where research fits, as research awakens curiosity to delve deeper into knowledge (ACADEMIC 15, our translation).

We have observed in the statements of the student's various points of approach, which leads us to reflect on the academics' interpretations regarding the experiences they have lived and conceived during the Pedagogy course. All of them, in one way or another, recognize the importance of research in knowledge construction. Some highlight the need for teachers to be research practitioners so that, through their knowledge and experience, they can mediate research practice in their daily classroom.

In addition to mediation, the teacher needs to encourage students to become enthusiasts of research and understand that knowledge is not definitive or complete. As Paulo Freire (2009, p. 291, our translation) aptly wrote, human beings are the only ones aware of their incompleteness, and in his words, "the unfinished nature of being or its inconclusiveness is inherent in the vital experience. Where there is life, there is incompleteness." Therefore, it is necessary to always be in search of the new.

The teacher should teach students to observe reality, problematize it, and provide support in the search for answers, guiding them on where and how to find them. It is essential to help establish the research foundation and point out pathways. Demo (2006) emphasizes that students who research properly graduate more comprehensively and capably. In this sense, research qualifies and enables a deeper understanding of reality, transforming educational practice.

For this reason, one of the requirements for completing a Bachelor's degree in Pedagogy is the development and defense of a research project and the presentation of the results in a scientific article. However, according to the professor in charge of the Research Seminar course, many university students encounter obstacles in formulating their research proposals and conducting their investigations, while others struggle to implement the principles of academic research in practice. In this context, one of the challenges lies in the concrete application of the acquired theoretical knowledge.

Final considerations

As we conclude this research, we recognize the relevance of addressing the theme of research in teacher education. The teachers' understanding of research as an essential element in the construction of school knowledge contributes significantly to their understanding of the reality in which they are immersed.

By offering academics the opportunity to reflect on research, experience scientific investigation, and utilize methods and theoretical foundations, the higher education institution enables Pedagogy graduates to learn how to conduct research. By becoming researchers and recognizing the value of research in knowledge construction, autonomy, and critical thinking, teachers are prepared to teach through investigation. After all, one cannot teach what one does not possess. To teach study in the classroom, the teacher needs to know how to conduct the work and understand the value of this process.

This reflection becomes even more relevant because the course is also offered in the distance education modality. In this mode of education, students need to adopt a different approach to knowledge construction. They must dedicate themselves more to research and knowledge construction, seeking answers independently and autonomously. Therefore, it is crucial for the curriculum structure and the practices, of course, instructors to provide moments of investigation, debates, interactivity, and activities that promote interest in the study and the improvement of this practice.

We also highlight the importance of an initial education that values the practice of research, a fundamental element in training teachers who work or will work in this broad territory addressed in this article.

We noticed that, to varying degrees, students provided indications of understanding the relevance of research in the teaching process in basic education. However, from the perspective

of teacher education, this perception is expected to transform into practice in their daily classroom activities. They must transform their work into an element that enables the construction of knowledge and not turn their classrooms into spaces of mere reproduction of what is taught through expository lectures, where students absorb what the teacher conveys.

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