

Research in education: historical and thematic trends in *stricto sensu* graduate studies in Pará, Northern Region, Brazil

A pesquisa em educação: histórico e tendências temáticas na pós-graduação *stricto sensu* do Pará, Região Norte, Brasil

Investigación em educación: historia y tendencias temáticas em studios de posgrado *stricto sensu* em Pará, Región Norte, Brasil

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Abstract: This research analyzed the scientific productions on the emergence of research in Education in the Northern Region and the thematic trends of three *stricto sensu* graduate programs of the federal and state public universities of Pará, Brazil between the years 2005 and 2021 through bibliographic and documentary research, in which a total of 820 dissertations were analyzed based on thematic and descriptive analysis. As a result, it was found that the emergence of Research in Education occurred after a long journey that culminated in the intellectual militancy of the leaders of research groups in the scientific-academic work. In the scope of graduate studies, a high diversity of themes was identified, with the program PPGED-UFPA (55), PPGED-UEPA (37) and PPEB-UFPA (22) having an absolute higher frequency in the theme of Teacher Education, Mathematics Teaching and Curriculum. Both following historical, socio-political and economic trends of each era in which they were produced.

Keywords: history of education; postgraduate in education; higher education.

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Resumo: Esta pesquisa analisou as produções científicas sobre o surgimento da pesquisa em Educação na Região Norte e as tendências temáticas de três programas de pós-graduação *stricto sensu* das universidades públicas federal e estadual do Pará – Brasil, entre os anos de 2005 e 2021, por meio da pesquisa bibliográfica e documental. Foram analisadas um total de 820 dissertações com base na análise temática e descritiva. Como resultado, constatou-se que o surgimento da Pesquisa em Educação ocorreu após um longo percurso que culminou na militância intelectual dos líderes de grupos de pesquisas no fazer científico-acadêmico. No âmbito das pós-graduações, identificou-se elevada diversidade de temas, sendo no programa PPGED-UFPA (55), PPGED-UEPA (37) e PPEB-UFPA (22) com maior frequência absoluta na temática da Formação de Professores, Ensino de Matemática e Currículo. Ambos seguindo tendências históricas, sociopolíticas e econômicas de cada época em que foram produzidas.

Palavras-chave: história da educação; pós-graduação em educação; educação superior.

Resumen: Esta investigación analizó las producciones científicas sobre el surgimiento de la investigación en Educación en la Región Norte y las tendencias temáticas de tres programas de posgrado *stricto sensu* de las universidades públicas federales y estatales de Pará, Brasil entre los años 2005 y 2021 a través de la investigación bibliográfica y documental, en la que se analizaron un total de 820 disertaciones basadas en el análisis temático y descriptivo. Como resultado, se encontró que el surgimiento de la Investigación en Educación ocurrió después de un largo viaje que culminó en la militancia intelectual de los líderes de los grupos de investigación en el trabajo científico-académico. En el ámbito de los estudios de posgrado, se identificó una alta diversidad de temas, quedando en el programa PPGED-UFPA (55), PPGED-UEPA (37) y PPEB-UFPA (22) con absoluta mayor frecuencia en el tema de Formación Docente, Enseñanza de Matemáticas y Currículo. Ambos siguiendo las tendencias históricas, sociopolíticas y económicas de cada época en la que se produjeron.

Palavras-clave: history of education; postgrado en educación; enseñanza superior.

1 Introduction

The emergence of educational research in Brazil dates back to the beginning of the 20th century, in the late 1930s, from initiatives of bodies linked to the state apparatus that enabled the creation of the Instituto Nacional de Pesquisa (INEP) and its Regional Research Centers. These centers contributed to a certain institutionalization of research in education, in which the entire bureaucratic-administrative apparatus for its operation (technical bodies) under the State's direct control was created.

In this sense, research in education in Brazil was not born out of a movement by the universities themselves, but induced by government bodies with a clear utilitarian and practical meaning: to provide subsidies for government actions. However, the evolution or development of research only occurred at the end of the 60s, as the product of graduate courses (masters and doctorates), among other later initiatives that made it possible to increase the researches' number in this area. (GATTI, 2001; COSTA; SALVIANO, 2018).

It is worth noting that the expansion of research in education in Brazil has undergone visible thematic and methodological convergences, which have accompanied the historical trends of each era. Among the main approaches are the psychopedagogical (GOUVEIA, 1971; 1976), cultural conditions and trends in the development of Brazilian society in the 50s, during the dictatorial cycle (GATTI; SILVA; ESPOSITO, 1990). Economic nature's studies were also carried out during the 1960s, during the period of the military government. In the 70s, with the expansion of higher education, there was an expansion of the range of themes and approaches, resulting in different problems and methodological improvement (GATTI, 2001). All these approaches were influenced by the social political context, marked by interests and ideologies, which brought problems of different orders to research in education, as pointed out by Gatti (2001); Andrew (2006); André and Gatti (2008); Bittar (2009).

To understand the current situation of research in education, André (2006) stated that it is necessary to recompose its trajectory in order to situate its advances and contemporary challenges. In the context of the Eastern Amazon (Northern Region), for example, despite the advances achieved by public higher education institutions, there is still a lack of historiographic production of education compared to other areas, since the history of education in Pará being a fertile and promising field (DAMASCENO; PANTOJA; DOURADO, 2023). In addition, Graduate Studies and educational research in the Amazon are aspects that require reflection, in order to regard the region and its singularities (LIMA; COLARES, 2021). Thus, the need to understand the dynamics and evolution of research over the years in this region becomes evident.

Therefore, this research aimed to investigate the emergence and trajectory of scientific production in Education in the North region of Brazil, as well as the thematic trends of three (3) *stricto sensu* graduate programs in the state of Pará from 2005 to 2021.

2 Method

This research was developed based on the mixed approach (TAHERDOOST, 2022), using bibliographical research as a methodological procedure, which consists of seeking works already studied to solve the problem through the study of the theme (SOUSA; OLIVEIRA; ALVES, 2021). Furthermore, documentary research was conducted, which involves sources that have not yet received analytical treatment (LIMA JÚNIOR *et al.*, 2021).

The research took place from January to November 2022, divided into two moments. The first one addressed the emergence of research in education in the North Region, with data collection carried out in scientific journals, Scielo, Google Scholar and institutional websites. The following keywords were used: research in education in Brazil/Northern Region/Amazon/State of Pará/graduation, history of education, among others related to the emergence within the North region. A total of eight (08) scientific productions corresponding to the defined objectives were selected.

In the second moment, documentary research was carried out with data collection on the official websites of three (03) *stricto sensu* graduate programs in Education at federal and state public universities in Pará, Brazil (Chart 1). These programs were chosen due to their historical trajectory of implementation, being the first two pioneers in the state, with sixteen years of operation, and the most recent one started in 2015.

Table 1 - Three graduate programs in Education at Federal and State Public Universities in Pará.

STRICTO-SENSU GRADUATE PROGRAMS	ACADEMIC DEGREE	RESEARCH CENTERS/CAMPUSES	YEAR OF IMPLEMENTATION
Education – PPGED	Master's and Doctorate degree	Instituto de Ciências da Educação – ICED, UFPA, Belém, Pará	2003
Education – PPGED	Master's and Doctorate degree	Centro de Ciências Sociais e Educação – CCSE-UEPA, Belém, Pará	2005
Curriculum and School Management (PPEB)	Master's degree	Núcleo de Educação Básica – NEB, UFPA, Belém, Pará	2015

Source: Authors.

The Brazilian Digital Library of Theses and Dissertations, a platform of recognized national scientific relevance, was also consulted. Inclusion criteria were dissertations that were consolidated and available since the beginning of the implementation of graduate programs in Education in the state of Pará, specifically productions with a research locus within the scope of that state. The choice of dissertations is justified by the programs' trajectory, which since their implementation offer vacancies for the Master's degree.

After the survey of scientific productions, the data were analyzed based on thematic analysis, as proposed by Souza (2019, p. 56). This analysis corresponds to six (06) phases:

- 1) Familiarization with data: transcribe data and review them; read and reread the bank; write down initial ideas during the process;
- 2) Generating initial codes: code interesting aspects of the data in a systematic way throughout the database; gather extracts relevant to each code;
- 3) Searching for themes: gather the codes on potential themes; unite all pertinent data to each potential theme;
- 4) Reviewing the themes: check whether the themes work in relation to the extracts and the database as a whole; generate thematic map of the analysis;
- 5) Defining and naming themes: refine the details of each theme and the story that the analysis tells; generate clear definitions and names for each theme;
- 6) Producing the report: provide vivid examples; last analysis of the extracts chosen in relation to the research question and literature; scientific account of the analysis.

Microsoft Excel spreadsheets were used as support for grouping and categorization of the set of themes based on the works' titles. Subsequently, the absolute frequencies were analyzed, which correspond to the number of times the values appear in the total sample. In this study, repeated patterns were considered, with the total of dissertations being analyzed together, as well as separately for distinct periods: (2005-2010), (2011-2016) and (2017-2021), for both programs.

3 Results e discussions

3.1 The Emergence of Research in Education in the Northern Region of Brazil

Research in Education in the Northern Region of Brazil began after a long journey that involved several factors, actors, institutions and the occupation process that took place in the Amazon. This process included the development and encouragement of professional qualification, which later culminated in an awareness of trained subjects and militancy in the research field.

A remarkable episode in Amazonian history was the so-called "Rubber Cycle", in which rubber plantations were established in areas with greater amounts of *hevea brasiliensis* for latex extraction. Through specific techniques, such as vulcanization, latex has become a nationally and internationally marketable product (ALVES, 2017). As a consequence of this process, Silva; Monteiro and Dantas (2021) highlight a great economic, cultural and scientific development in the region, especially in the state of Amazonas.

According to these authors, the demand for qualified labor became urgent in this period, which led to the creation of spaces and institutions that prioritized knowledge, intellectual development and ensured technical and professional training. An example of this was the creation of the National Guard Club in 1906, which originated the Practical Military School of Amazonas two years later, in 1908. The following year, this institution became the Free University School of Manáos. According to Ramalho and Madeira (2005), this initiative aimed to supply the demand for qualified teachers for tertiary education in the region.

In this context, among the created institutions, the Federal University of Amazonas (UFAM) was established, founded on January 17, 1909. The UFAM was a pioneer in a broader scenario of research and science in the Northern Region of Brazil, originating from the extinct Free University School of Manáos, spun off from the Faculty of Law. It is widely considered to be the first institution of higher education in Brazil, according to Silva; Monteiro and Dantas (2021), its historical link characterizes it as the oldest in the country.

Initially, only Law, Medicine and Engineering were offered in the 1910s. Later, in the late 1920s, the faculties of Dentistry and Agronomy began to function in isolated units of higher education, but they were extinguished, leaving only the Law School, which formed the first bachelors in 1914. This faculty was incorporated by UFAM in 1969, after its new name, consolidation and structural expansion, having the functioning of the faculties: of Law of Amazonas, Social Studies; Philosophy, Sciences and Modern Languages; Engineering; Medicine; Pharmacy and Dentistry. Currently, UFAM consists of six campuses, and the area of the university campus, located in the Coroado neighborhood, in the East Zone of Manaus, has 6.7 million square meters, it's the third largest green fragment in an urban area in the world. and the first in the country (ARAÚJO *et al.*, 2006).

In addition, private institutions and other higher-level state and federal public institutions emerged, which were later implemented in the other states of the region. Among them, we can highlight the Federal University of Pará (UFPA-1957), which expanded with the interiorization process; the Federal University of Acre (UFAC-1974); the Federal University of Rondônia (UNIR-1982); the Federal University of Roraima (UFRR-1989); the Federal University of Amapá (UNIFAP-1990); and the Federal University of Tocantins (UFT-2002), among others.

Thus, with the implementation of public institutions of higher education in the North Region, little by little, the development of master's degrees took place, and research in Education was strengthened. In the North region, the Graduate Program in Education (PPGE), established at UFAM in 1986, was a pioneer in training professionals. "And, after more than thirty years, this program has consolidated itself in offering master's and doctoral degrees, which until mid-2018 had formed around 426 masters and 30 doctors, according to the institution's website" (GARCIA; YASUDA; BENE, 2020, p. 38).

However, it is worth mentioning that, although research in Education in the North Region and, in general, in Brazil, is closely linked to post-graduation activities, as several theorists approach, its historical origin cannot be associated only to this academic sphere. (HAYASHI, 2007).

The studies developed by Corrêa (2013) proved that research in Education began to develop more effectively from the emergence of research groups. Many of these groups were created after their leaders obtained a doctorate, most of whom completed their graduate courses between the 1990s and 2000s. However, in two cases, these leaders joined the groups during the second year of their graduate programs. Statistics confirm that among the fourteen (14) leaders of research groups at the time, only seven (07) were officially linked to undergraduate or graduate teaching, while the others were mainly dedicated to scientific activity. This activity required a long intellectual investment, from undergraduate to graduate, and a consequent engagement with research in the field of education in the region. This

allows us to conclude that the scientific-academic work occurred more precisely from the intellectual militancy of these leaders.

There was a process of awareness among intellectuals in that context:

"Academic awareness of the inseparable integration between research and teaching has grown, increasingly seen as a collective construction based on the relationship between theory and practice. Thus, lines of research began to be developed as rails on which the graduate process runs, in a new dynamic that has been demanding its own curricular and methodological restructuring. [...]. In other words, there is a growing awareness that we cannot wait for the educational solutions needed in the North and Northeast regions to come from other regions. (RAMALHO; MADEIRA, 2005, p. 79-78)

Thus, major research topics began to emerge, which were the subject of theses and dissertations produced within the scope of graduate programs in the North Region (COSTA; MORAES, 2018). Dissertations and theses were products of the formation and consolidation phase of leaders for teaching in higher education, improvement in scientific practice, as well as in the production of knowledge (CORRÊA, 2013).

It is important to point out that researchers from inside and outside the North Region of Brazil have contributed to Research in Education in this region. Recent studies developed by Costa and Moraes (2018) found that much research in Education in the North Region has been carried out in graduate programs in other parts of the country, including in reference centers in this field, which, incidentally, is not a recent phenomenon. An example are the productions in History of Education in the North Region that are based on predominant approaches in other regions, notably the Southeast.

In view of this, the aforementioned authors emphasize the need to build heterogeneous platforms that encompass the diversity of knowledge production in the area, recognizing the potentialities and limits of other traditions, and this may be even more possible from the intellectuals themselves who experience the reality of the studied region. According to Lima and Colares (2021):

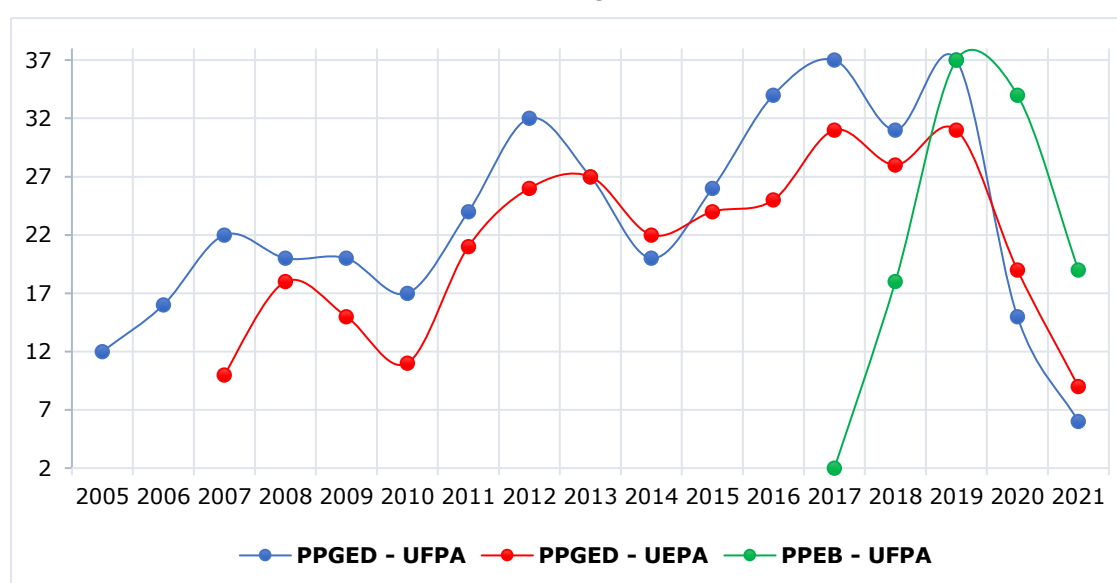
"The researcher in education in the Amazon needs to be committed to the socio-cultural appreciation of the Amazonian peoples and contextualized understanding of the region, in order to think about possibilities of combining the concepts discussed with the quantitative data and implementing resistance actions. Studies should bring significant information that contribute to a greater and better understanding of reality, leading to significant knowledge, especially for those who were sidelined, and thus reflect with studies that characterize the Amazon. This debate only reinforces the importance of training researchers and the need for greater and better systematization of information. It is necessary to have reliable and more complete data for understanding the problems, analysis and interaction with a view to qualitative change." (LIMA; COLARES, 2021, p. 11-12)

For this, it is also necessary to revisit the works already produced over time by intellectuals in the field of Research in Education, in order to understand the evolution and development over the years of research in the Region, especially within the scope of the state of Pará, which already has *stricto sensu* graduate programs institutionalized since 2003.

3.2 Thematic trends in *stricto sensu* postgraduate studies in Education in the state of Pará.

The survey of scientific productions at the master's level of three graduate programs, according to the established selection criteria, accounted for three hundred and ninety-three (393) PPGED-UFPA dissertations, followed by the PPGED-UEPA program with three hundred and seventeen (317) and PPEB-UFPA with one hundred and ten (110), totaling eight hundred and twenty (820) productions analyzed in this research (Figure 1):

Figure 1 – Graph of the total quantity of consolidated and available productions of the three programs.



Source: Survey data.

It was found that the programs advanced over the years in the quantity of productions, including a significant increase between the years 2016 and 2019. However, there was a drastic decrease between the years 2020 and 2021 in the PPGED-UFPA and UEPA programs compared to previous years, coinciding with the onset of the Covid-19 pandemic. This decrease may have been influenced by physical distancing and changes in academic activity calendars, as highlighted by Niskier, Xavier and Diniz (2020). In addition, the reduction in research funding, including cuts in grants and

resources, may have affected research activities in general. On the other hand, the PPEB-UFPA program, started in 2017, maintained a high number of productions until 2020, but also registered a certain reduction in 2021, as well as the other programs.

Among the analyzed productions, the thematic trends of each of the programs stand out, which were categorized based on the titles of the scientific productions and grouped in Microsoft Excel spreadsheets.

3.2.1 Graduate Program in Education PPGED – UFPA (2005-2021)

According to the data available on the official website of the PPGED-UFPA program, the program was consolidated in three sections of research: a) educational public policies; b) education, culture and society; c) teacher training, teaching work, educational theories and practices. The program has a total of twenty-six (26) professors with degrees from various institutions in Brazil and France, such as UNIFAP, UFMG, UFU, UFRJ, UNESP, Gama Filho, USP, UFRGS, UFPA, UFSCar, UFRN, PUC-SP, UNIMEP and Université des Sciences et Technologies-Lille (France).

With the thematic analyzes of the dissertations, a total of fifty-five (55) categories were found, which shows a high diversity of research themes. Among the seven (07) most frequent themes, in descending order, are: teacher training, public policies, career and remuneration of teachers/PCCR, teacher training/continuing education, professional education, curriculum and environmental education.

This program also stands out for addressing various social and denunciative issues, such as the violation of rights and various types of violence, such as gender violence (crimes against women), exploitation and sexual violence against children and adolescents, bullying and illness of teachers. These themes have a collective and social meaning, which leads us to reflect on the relevance of degrees in graduate studies. According to Freitas and Souza (2018) it should not be restricted to guaranteeing employability, due to the high quality investments made for this type of training, but it is expected that there will be a return to society, through better teachers in undergraduate courses, best experts and researchers who contribute to the continuity and improvement of scientific knowledge with collective and social meaning. Table 2.

Table 2 - Thematic categories of PPGED-UFGA master's research, 2005 to 2021 and absolute frequency

PPGED's Thematic Categories - UFGA 2005-2021	Frequency
Teacher Training (Mathematics; Parfor; Physical Education; Portuguese; in Grão-Pará's province; Technology in Education; Inclusive Education; Religious Education; History; Graduate Studies; Literacy Teachers; Basic Education; Proletras; Information Technology)	29
Public Policies (Student Assistance; Teacher training; Teachers' remuneration; Curriculum; <i>Pronex-Saúde</i> ; Youth; Technological Education; Professional Qualification; Social Inclusion; Municipalization; Literacy)	23
Teacher's Career and Remuneration/Pccr	13
Continued Teacher Training	13
Professional Education	12
Curriculum	11
Environmental Education	11
Inclusive Education	9
School Management/Education	9
Race Relations	9
Educational Programs (<i>Escola Ativa</i> ; <i>Mais Educação</i> ; <i>Ensino Médio Inovador</i> ; <i>Programa Dinheiro Direto Na Escola</i> (Pdde); <i>"Amigos da Escola"</i> ; <i>Programa Universidade para Todos</i> (Prouni))	9
Education Financing (private-commercial higher education; public higher education; education salary)	8
Gender (teaching; crime against women; sexuality)	8
Social representations (Bullying; Rural Education; Teenagers; Student Movement; Juvenile Sexual Exploitation; Rural Youth; Pregnant Teenagers)	8
Teaching work (in the Court of Justice; in Health; Higher Education; Graduation; Parfor)	8
Early Childhood Education	7
High School (Integrated/Full)	7
Articulated Actions Plan (PAR)	7
Special Education	6
Exploitation and Sexual and Intrafamilial Violence of Children and Teenagers	6
Youth (Quilombola, from the countryside; Social Movements)	6
Pedagogical practices	6
Teaching System (Municipal; School; Modular Teaching (Some);	6
Educational Evaluation	5
Teachers' illness	5
Youth and Adult Education (EJA)	5
Rural Education (in the Amazon; and Health)	5
Identity (quilombola, fisherman, teacher, pedagogue)	5
Education History	4
Literature	4
National Teacher Training Plan (Parfor)	4
Learning/emotional self-regulation	3
Councils	3
Children (abandoned; indigenous; photography)	3

Comprehensive Education	3
Religious Education (Christian and Afro-Brazilian)	3
Philosophy of Education/with children	3
Literacy	3
Academic Productivism	3
Public and Private in Education	3
Valorization of Teaching Profession	3
Cartographies/cartographems	2
Conceptions about the body/corporeities	2
Conception of social quality in Education	2
Pedagogical coordination	2
Distance Education	2
Physical Education	2
Teaching and research	2
Brazilian Sign Language (Libras)	2
Fishermen/fishing	2
Teaching Practice	2
Cultural Practice	2
Student Assistance Program	2
Cultural Knowledge (Riverside People; Handcrafted Naval Carpentry)	2
Physical Education Pedagogical Work	2
Others	67
Total	393

Source: Survey data.

As noted by Gatti (2012), in recent years there has been the emergence of new problematizing approaches in the field of education, expanding the range of topics for investigation. However, the diversity of approaches requires a more intense dialogue between groups of researchers, in order to clarify the interfaces and contradictions between the different perspectives. This represents a new step, not towards the construction of a hegemonic consensus, but towards establishing the limits of elaborated knowledge and their intersections.

By correlating the thematic categories of the three distinct historical periods (2005-2010), (2011-2016) and (2017-2021), which were analyzed separately for a better understanding of the program's thematic focus trends, a total of forty and four (44) categories. This means a reduction of eleven (11) categories in relation to the total set analyzed, due to the diversity of themes that are often not repeated from one period to another. When analyzing the periods separately, there was an increase to sixty-nine (69) categories. Table 3:

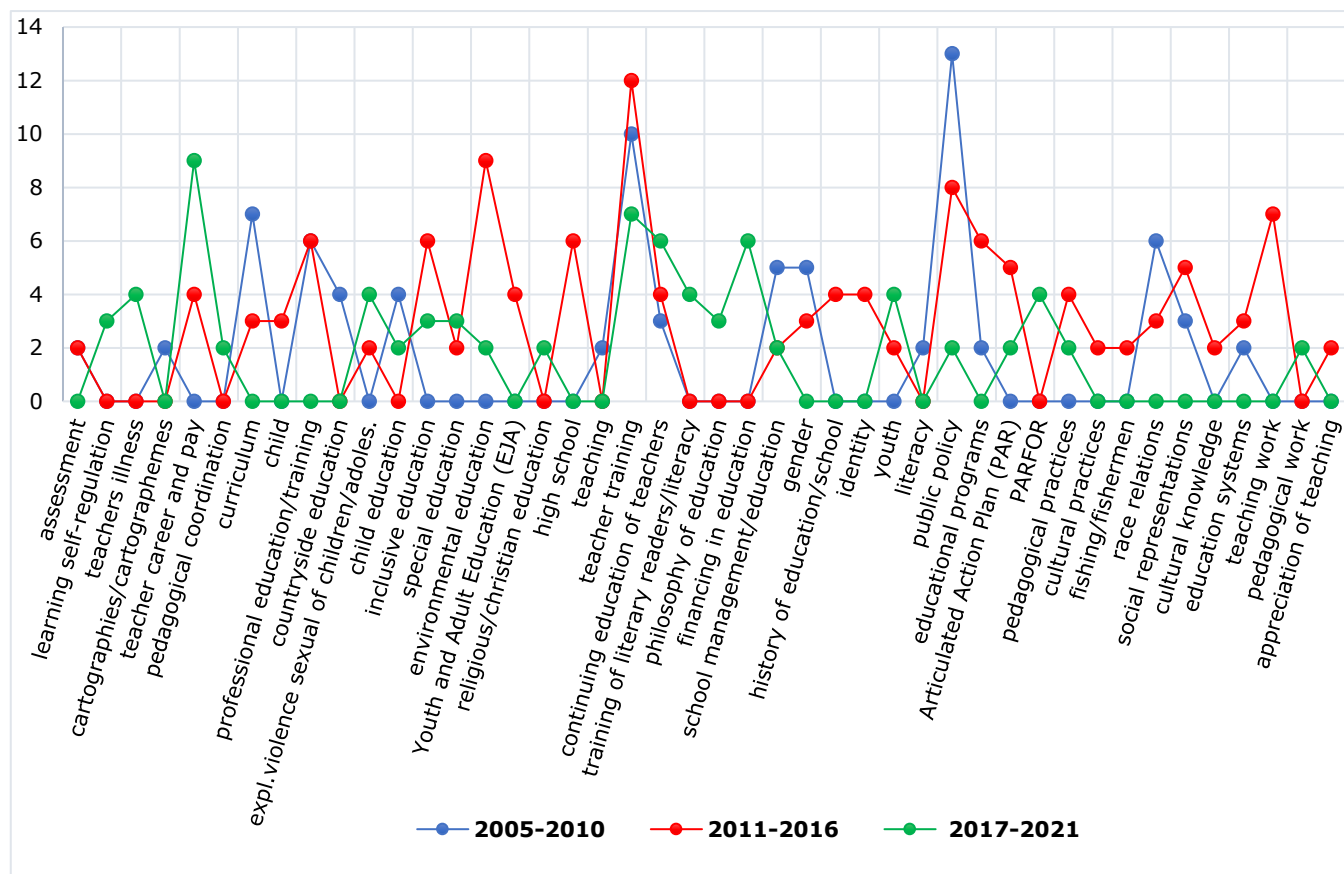
Table 3 - Three separate periods PPGED-UFPA, 2005 to 2021

Periods	Total of Dissertations	Total of thematic categories	Most frequent theme	Others (uncategorized)
2005-2010	106	17	Public Policies (13)	28
2011-2016	162	30	Teacher Training (12)	35
2017-2021	125	22	Career and remuneration of teachers/PCCR (9)	47

Source: Survey data.

Among the three isolated periods, only four (04) common categories were identified: Teacher Training, Continuing Teacher Training, School Management/Education and Public Policies. In the period from 2005-2010 to 2011-2016, eight categories were identified: evaluation, curriculum, Education/professional training, gender, educational programs, racial relations, social representations, Municipal Education System and SOME. In the period from 2011-2016 to 2017-2021, eight (08) categories also stand out: Career and remuneration of teachers/PCRR, Exploitation and Sexual and Intrafamily Violence of Children and Adolescents, Inclusive Education, Special Education, Environmental Education, Youth, Articulated Action Plan (PAR) and Pedagogical Practices. Finally, in the early 2005-2010 and late 2017-2021 periods, only the topic on Early Childhood Education prevailed. Figure 2:

Figure 2 - Graph of correlations of thematic categories between three different periods
PPGED-UFGA, 2005 to 2021



Source: Survey data.

These data reveal that research in Education from the PPGED-UFGA graduate program, although they have their lines of research concentration, their themes are strongly influenced by the context in which they were produced. This is in agreement with the authors Gatti (2001); André (2006); André and Gatti (2008); Bittar (2009); Serafim (2019), who claim that research in Education in Brazil follows a historical trend of each era, receiving influences of different orders, such as political, ideological, economic, among others.

A relevant factor to be highlighted in this research concerns the political context in which the productions were carried out. For example, from 2005 to 2010, Brazil was under a government whose goal was to reduce poverty and social inequalities. This was reflected in the predominance of research themes in "public policies", including social inclusion policies such as Bolsa Família, financial and technological management, teacher and professional training, and teachers' salaries, as found in this study, among others. It was a time when Brazil received incentives in the educational area, such as incentives to enhance careers and teacher training, with the implementation of various

programs such as the Programa Institucional de Bolsa de Iniciação à Docência (PIBID-diversidade) and the Programa Universidade Para Todos (PROUNI).

It is understood that it was a period of great transformations in the educational and social area, in which the political context, to some extent, came to influence the thematic research agenda, in addition to institutional factors (internal and external to the program), politics and the society itself. dynamics of research in education in Brazil involved.

In the years 2017 to 2021, there was a change in the government's logic, in addition to the context marked by the Covid-19 pandemic, which started in 2020. This resulted in major challenges in the educational area, in which professionals faced several difficulties. This situation boosted the demand for rights, especially the theme of "teaching career and remuneration/PCRR", which presented an expressive and practically exclusive number in this period, as observed in the dissertations of the studied program.

3.2.2 Graduate Program in Education PPGED – UEPA (2007-2021)

The PPGED-UFPA program, according to its official website, includes two lines of research: a) teacher training and pedagogical practices; and b) cultural knowledge and Education in the Amazon. Its teaching staff is composed of twenty (20) professors, all with titles in recognized and consolidated programs in Brazil for their scientific production, coming from several universities such as PUC/SP, UNICAMP, UNESP, UFRN, USP, UFC, UFPA, UFRJ, UGF, UNB, UFCG and UFSCAR. In addition, the program has 11 post-doctors who carried out post-doctoral internships at renowned universities, such as Coimbra, Lisbon, PUC-Rio and PUC-RS.

When analyzing the dissertations available in the program, which total 317 productions, thirty-seven (37) research themes were identified based on their frequency. Among the six (06) most predominant themes, in descending order, the following stand out: Mathematics Teaching, Cultural Knowledge, Training in Physical Education, Continuing Teacher Training, Social Representations and Inclusive Education.

This program also stands out for the discussion of various themes, with a slightly more regionalized tendency, incorporating many elements of the Amazonian context with a more anthropological look, approaching culture and knowledge (Indigenous, Quilombolas and Riverside population), in addition to teaching and rights of people with disabilities. Table 4:

Table 4 - Thematic categories of PPGED-UEPA master's research, 2007 to 2021 and absolute frequency

PPGED's thematic categories - UEPA 2007-2021	Frequência
Mathematics teaching (children's education; special education; counting; fractions; functions by activities; analytic geometry; matrix; potentiation; probability; ratio and proportion; radicals by activities; trigonometric relations; arithmetic; factoring algebra; affine and quadratic functions; exponential functions and Logarithmic; plane geometry; integers; First Degree; volume by solids)	27
Cultural knowledge and practices (saint food; carimbó masters; Afro-Brazilians; artisanal fishing; candomblé; youth and adults; círio de Nazaré, Amazonians; Marajoara; family farmers; teacher.)	25
Training in Physical Education	17
Continuing teacher training	16
Social representations (children; deaf-quilombolas; young dancers; school inclusion; PPP; school individual; deaf person; ACS; Nursery and school; Amazonian elderly; Specialized Educational Service.; child health)	15
Inclusive education	14
Cartographies (of knowledge; migrants; linguistics; MST; artistic-cultural; women; cassava fields; quilombola knowledge and artisanal fishing.	12
Teacher training	11
Youth and Adult Education (EJA)	10
Special education	9
Identity (cultural, teaching, black-quilombola, deaf)	9
Memory (elderly; old; island; Amazon)	9
Popular culture	8
Early Childhood Education	6
Amazon poetics	6
Child's play/toy library	5
Female Education	5
Educação do Campo	5
Field Education	5
Gender	5
Literacy (musical, mathematical and literary)	5
Literature (in the Amazon, Brazilian and children's)	5
Teachers' pedagogical practice	5
Knowledge and educational practices (politics; curators; prayers; riverside movements)	5
Educational practices in the Amazon	4
Teachers' illness	3
Religious Education (literacy; litany; women)	3
Teaching (philosophy, physics and reading)	3
Indigenous societies (Tembé and Tenetehara; Assurini Trocará; Children)	3
Educational technology	3
Educational evaluation	2
Teachers' affectivity	2
Hospital Education	2
Non-formal education (carnival; açaí)	2

Youth and High School	2
Brazilian Sign Language (Libras)	2
Afro-Brazilian religion and discrimination	2
Others	45
Total	317

Source: Survey data.

By correlating the thematic categories of the three analyzed historical periods, a total of thirty-four (34) categories were found, only three (03) less than the total analyzed set. However, when analyzing the periods separately, a total of fifty-eight (58) categories was obtained, greater than the total of the previously analyzed set. This is due to the historical trends of each era that influence research in Education. Table 5:

Table 5 - Three separate periods PPGED-UEPA, 2007-2021

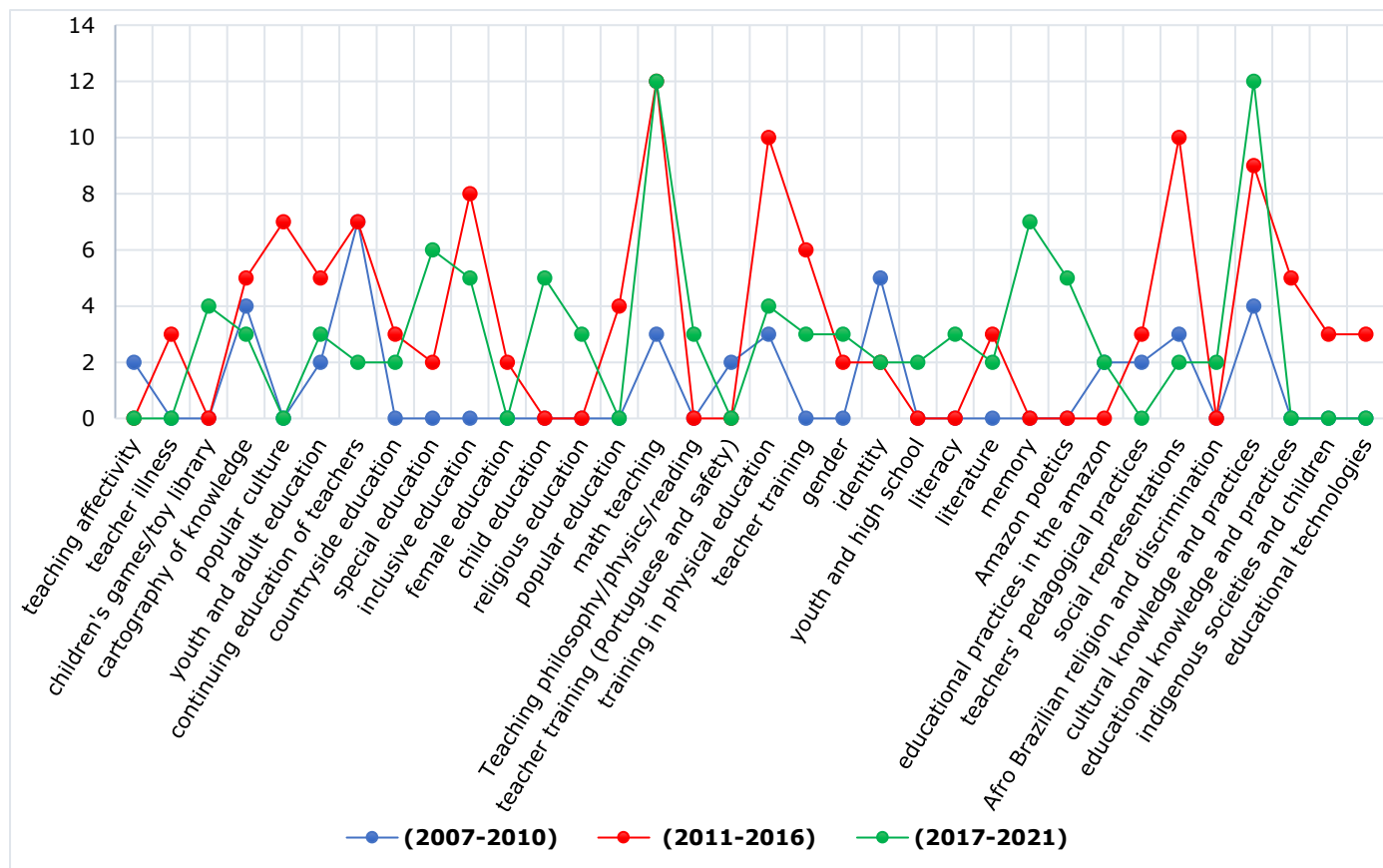
Periods	Total of Dissertations	Total of thematic categories	Most frequent theme	Others (uncategorized)
2007-2010	54	12	Continuing teacher education/training (7)	28
2011-2016	145	22	Mathematics Teaching (12)	35
2017-2021	118	24	Mathematics Teaching (12) Cultural Knowledge and Practices (12)	47

Source: Survey data.

Among the common thematic categories in the three isolated periods, eight (08) were obtained, namely: Cartography of knowledge; Youth and Adult Education/Literacy; Continuing education/training of teachers; Mathematics Teaching; Training in Physical Education; Identity; Social representations; Knowledge and Cultural Practices. This amount is higher compared to the previously analyzed program, which had only four (4) categories in common.

In the periods from (2007-2010) to (2011-2016), the themes in common were: Pedagogical Practice of Teachers. In the period from (2011-2016) to (2017-2021), they were: Rural Education; Special education; Inclusive education; Teacher training; Gender; Literature. Between the periods (2007-2010) and (2017-2021), the only common theme was Educational Practices in the Amazon. Figure 3:

Figure 3 - Graph of correlations of thematic categories between three different PPGED-UEPA periods distintos PPGED- UEPA

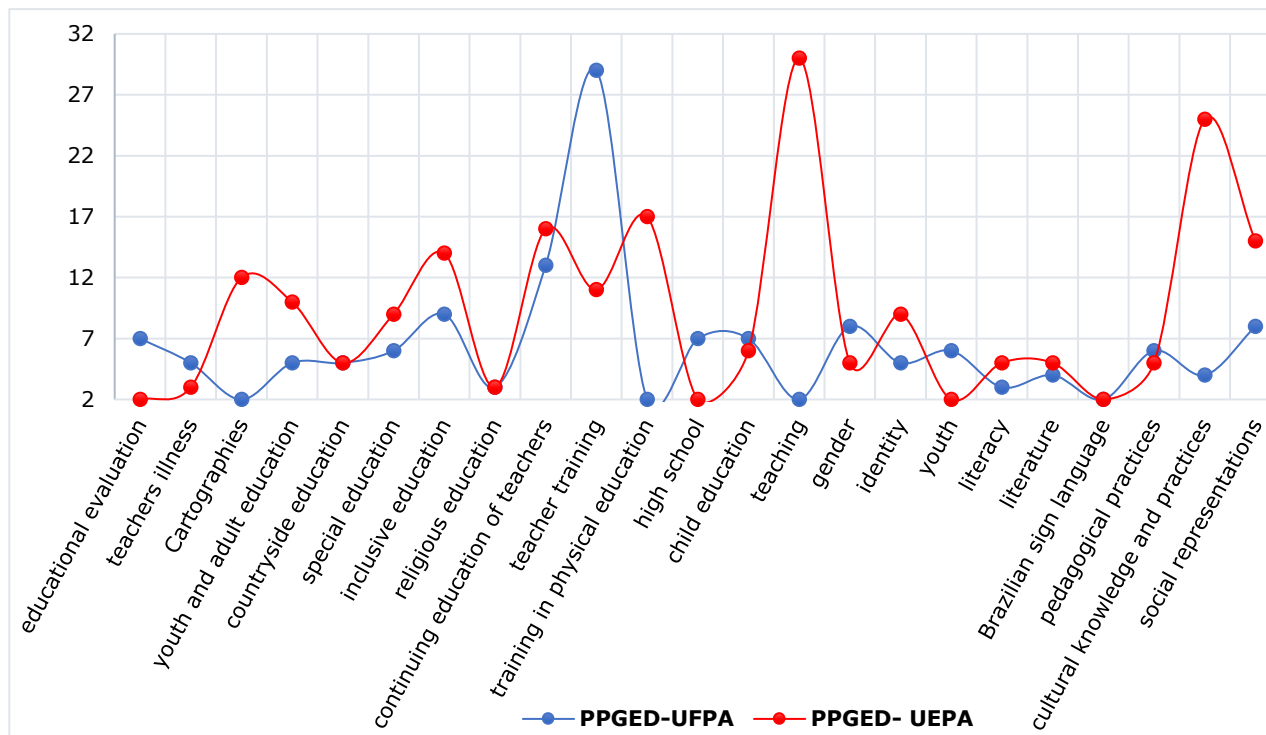


Fonte: Survey data.

During the analysis of the PPGED-UEPA program, it was found that although there is a discussion tendency crossing the different historical periods, it still presents a high diversity of research themes, as forty-five (45). However, it was not possible to categorize them, unlike the sixty-seven (67) of the previous program analyzed, since the keywords generated in the categorization were not repeated.

It is important to emphasize that, despite the particularities of each program analyzed, twenty-three (23) research themes were identified in common between them, totaling one hundred and forty-eight (148) PPGED-UFPA dissertations and two hundred and thirteen (213) UEPA thesis, with equal or very different frequencies over the years. Figure 4:

Figure 4 - Graph of thematic categories common to both programs: PPGED-UFPA and UEPA based on Frequency



Source: survey data

3.2.3 Graduate Program in Curriculum and Basic School Management PPEB – UFPA (2017-2021)

The official data of the most recent program in the PPEB-UFPA implementation point to the concentration of three (3) research lines: a) Basic Education Curriculum; b) Management and Organization of Pedagogical Work in Basic School; c) History of Basic Education. Its student body consists of thirty-three (33) permanent professors with degrees from the following institutions: PUC/SP, UFPA, UNEB, UFRN, UNICAMP, UFPE, USP, UERJ, UNIMEP, UNESP, UFMG - Brazil e New University of Lisbon (UNL) - Portugal.

By analyzing the consolidated and available dissertations of the aforementioned program, it was possible to identify a total of twenty-two (22) categories. The six (6) most frequent categories by the year 2021, in descending order, were: Curriculum, High School, Educational Assessment, Educational Programs, Public Policies and Full-time Education. Table 6:

Table 6 - Thematic categories of PPEB-UFPA master's research, 2017 to 2021 and absolute frequency

PPEB's thematic categories - UFPA 2017-2021	Frequência
Curriculum (craftsman; as cultural policy; Physical Education; High School-BNCC; Inclusive Education/TEA; Ethnic-racial relations; Nomadic; Interdisciplinary; Gender in the cultural scene; Geo)	14
High School (public-private partnership; MUNDIAR project; full-time; integrated into the world of work; young people, Modular System (SOME); Reform)	10
Educational evaluation	7
Educational Programs (Innovative High School; Novo Mais Educação; PDDE; PDE school; Health at school)	7
Public Policies (appreciation of teaching; full-time state; nucleation of rural schools; secondary professional education; for High School and Youth; Environmental of municipal management)	6
Full Time Education	5
Education History	4
Council (school; school feeding; municipal Education)	3
Special Education/Intellectual Disability	3
Inclusive Education / TEA	3
School management	3
Sexual violence against children and adolescents and the coping network	3
Educational/School Administration	2
BNCC	2
Early Childhood Education	2
Professional Education/PRONATEC	2
Prisional Education	2
Financing of Basic/Early Childhood Education	2
Teacher training	2
Gender	2
Social movements/LGBT	2
Education Plan/Municipal and state (goal 3 and 5)	2
Others	21
Total	109

Source: Survey data.

It was found that in that program there was a greater focus on issues related to renovation in the educational area, such as the curriculum/BNCC and the Full-time Education model. These themes envision substantial changes in the educational system, especially in high school, which has generated numerous concerns and questions about this new model of education, which is a scenario already foreseen by Goergen *et al.* (2019), who considered that:

Education issues are being treated based on managerialism and guided by the mercantilist logic that makes education a mere commodity. It is the implementation of a model of political, economic and human development based on the principles of human capital, referenced in the capitalist production/accumulation mode [...] In these terms, the educational reforms that have been and are being implemented show that the Brazilian educational model is being adjusted to the interests and requirements of a global market, to the detriment of both the national reality, with its economic and social prerogatives, and the pedagogical ideals of human formation. (GOERGEN *et. al.*; 2019, p. 1-2)

In this context, the theme of public policies became the stage for discussions, as well as the educational programs currently in effect, which stimulate questions about their execution and effectiveness in the face of the great changes and inequalities faced in Brazil. These issues are intensified by the crisis in several sectors, especially in Education, Health and Economy, and influence research in Education, as shown by this research data.

These data corroborate the studies developed by Araújo, Oliveira and Cêa (2015) on research themes in the North and Northeast between 2003 and 2012. These studies also pointed to research on educational policies, especially High School policies, as very present themes in these regions.

In the current context, the question is: what will the Higher Education scenario be like in 2030? In order to get to know the scenario of higher education, we need to prospect what the context in which it is inserted will be like, with regard to the social, technological, economic, political and environmental context (SERAFIGIM, 2019).

The studies developed by Amorim, Silva and Spers (2020) on the future of Higher Education in Brazil in 2030 indicated trends associated with internationalization, the use of technologies in higher education, the focus on better quality scientific productions and the need for more governmental investment.

Thus, it is possible to envisage new scenarios in the educational scope of the country. With regard to the political context, which began in 2023, under a government whose plan is a program for the reconstruction and transformation of Brazil, proposals and resumption of investments in higher education are already being seen. An example was the readjustment of scholarships for scientific incentives in undergraduate and graduate programs approved by PL nº 238/23, in addition to more investments in basic education. These incentives are of fundamental relevance and crucial to boost research in Education.

Conclusão

Throughout this research, it was possible to reveal several aspects related to research in Education in the North Region. In the historical analyzes of its emergence, it was found that there was a long journey to its effectiveness, with the involvement of several factors, actors and institutions. This research was influenced by the occupation process that took place in the Amazon, its consequent economic development and the promotion of professional qualification, which later culminated in an awareness of trained subjects and militancy in the field of research. The scientific-academic work took place mainly from the intellectual militancy of the research group leaders, who boosted the productions.

Data from scientific productions at the master's level of the three graduate programs in the state of Pará analyzed were crucial to understanding the dynamics of research evolution over the years, taking into account the quantitative and thematic approaches. These data revealed that, although the programs follow a line of research concentration, there is a high diversity of themes. In many cases, these themes were directly influenced by the historical, socio-political and economic context, as well as the militancy of the researchers when experiencing the situations present in the context and the issues faced by society. These themes are fundamental for other possible studies and reflections, as they indicate that certain aspects need special attention in the region, while others may be being neglected.

Therefore, it is expected that this study will boost research in Education in the region, benefiting society through researchers, programs, coordinators, faculty, CAPES and other stakeholders, contributing to overcoming the gaps and envisioning new looks and perspectives in education. It is essential to direct research and strengthen its activities.

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