

Methodological tendencies in research on pre-service teacher education courses: analysis of theses and dissertations

Tendências metodológicas nas pesquisas sobre as licenciaturas: análise em teses e dissertações

Tendencias metodológicas en la investigación de licenciaturas: análisis en tesis y disertaciones

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Highlights

The qualitative approach predominates as the research approach most present in theses and dissertations.

Documentary research, bibliographical research and case studies are the most common types of research in studies on undergraduate degrees.

The analysis also found that 47% of the dissertations and theses analyzed lacked methodological clarity.

Abstract

This text refers to a bibliographic survey that aimed to characterize the methodological trends in the research available in the Catalogue of Theses and Dissertations of the Coordination for the Improvement of Higher Education Personnel (CAPES) from 2015 to 2021. This study contributes to an understanding of how the production of knowledge about undergraduate courses has been developing in methodological terms. A total of 400 papers were analyzed. It highlights, among other aspects, that the qualitative approach stands out in the studies and that the most researched subjects are teachers and undergraduate students. It should be noted that, in many studies, it was not possible to characterize the methodology, which indicates a lack of methodological clarity on the part of the researchers.

[Resumo](#) | [Resumen](#)

Keywords

Degree courses. Teacher training. Education Research.

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| Introduction

As Ferreira (2021) points out, we have seen a significant increase in publications in recent decades in scientific journals that aim to inventory the production of knowledge on certain topics in the field of education. In the field of teacher training, the studies by Romanowski (2013) and Raimundo and Fagundes (2018) are examples of this. In different contexts, both sought to present a balance of the knowledge developed so far on teacher training in the country.

The study by Romanowski (2013) looked at the production of knowledge about teacher training in Brazil, considering the "state of the art" research that has made inventories on the subject. The second study, by Raimundo and Fagundes (2018), analyzed scientific articles on teacher training available from 2001 to 2015 on the journal portal of the Coordination for the Improvement of Higher Education Personnel (CAPES). The two studies showed different nuances of teacher training, presenting gaps and strengths in existing knowledge in the field of education research, helping us to think about teacher training today.

In this perspective, this study aimed to characterize, through a bibliographic survey, the methodological trends in research on undergraduate degrees in Brazil, accessing theses and dissertations produced between 2015 and 2021 that are available in the CAPES Catalogue of Theses and Dissertations. The research problem was: what methodological trends exist in research on undergraduate degrees in Brazil between 2015 and 2021? The study was carried out in the context of a larger research project, developed via Universal Call for Proposals No. 18/2021, Track "A", Emerging Groups, of the National Council for Scientific and Technological Development (CNPq), Ministry of Science, Technology and Innovation (MCTI) and the National Fund for Scientific and Technological Development (FNDCT).

The study was carried out between the months of March and December 2022, analyzing 400 theses and dissertations on the subject of "undergraduate degrees", which are available for consultation in the database mentioned in the previous paragraph. This text is an excerpt from a larger study of the doctoral and dissertation productions inventoried, focusing on the methodological tendencies of the research analyzed.

We understand, in agreement with Gatti (2002), that one of the challenges in the construction of postgraduate studies is the methodological dimension of the investigations. For novice researchers, mapping out methodological paths and procedures is a challenge to be experienced in the production of the study (Ghedini & Franco, 2015; Vasconcellos et al., 2023).

Furthermore, in the field of educational research, as Ferreira (2009) argues, there is a growing diversification in methodological terms, which goes hand in hand with the development of the field of education and the process of expanding postgraduate studies in Brazil. In these terms, it is necessary to develop research that pays

attention to the methodological dimension of doctoral and dissertation work, since we will be able to see how the production of educational knowledge has been shaping up in our context – particularly the production of knowledge about undergraduate courses.

When we looked at the methodological tendencies of the theses and dissertations inventoried, we studied the following aspects in the bibliographic survey carried out: i) methodological approaches used in the research; ii) types of research; iii) subjects/participants in the studies; and iv) data production techniques. These elements make up an important part of the methodological dimension of the investigations and allow us to reflect on how researchers who have dedicated themselves to studying undergraduate courses, in general, have moved through the construction of their scientific work.

After this introduction, we have organized the rest of the text into two more sections and the final considerations. In the first section, we detail the methodological aspects of the research, with the intention of clarifying the construction of this study. Subsequently, we will analyze the data produced from the theses and dissertations that were compiled. In the final considerations, we offer brief notes on the reality of the research.

| Methodology used to study

This study took into account some of the methodological procedures needed to produce and analyze the data, and the set of procedures sought to get closer to the main objective of the research, namely: to characterize, through a bibliographic survey, the methodological trends in research on undergraduate degrees in Brazil between 2015 and 2021. It also aimed to answer the following research problem: what methodological trends exist in research on undergraduate degrees in Brazil between 2015 and 2021? With these aspects in mind, we drew up the methodological sequence described below.

Firstly, we identified the database used to search for doctoral and dissertation studies. The CAPES Catalog of Theses and Dissertations is one of the main online repositories of the work carried out in Brazilian postgraduate studies (Nascimento et al., 2022; Vasconcellos et al., 2023). It was therefore chosen on this basis. Next, we defined the validated descriptor for selecting the productions. The term "Licenciaturas" was chosen because it is associated with what we proposed, in general, as the object of the research from which this study originates. The descriptor was used with quotation marks in order to reach, more precisely, the doctoral and dissertation productions that, in fact, contemplated the central motto of this investigation.

Also at the outset, we delimited the time frame for the research. In this sense, the period from 2015 to 2021 was selected based on the year of publication of a relevant legal device for undergraduate courses in Brazil, namely the Resolution of the National Education Council (CNE) and the Full Council (CP), No. 1, of July 15,

2015¹. This document established National Curriculum Guidelines for initial training at higher education level (degree courses, pedagogical training courses for graduates and second degree courses) and for continuing training (Brazil, 2015). In addition, we thought we would carry out the bibliographic survey with the most up-to-date production, which led us to understand the year 2015 (year of publication of the legal provision highlighted above) to the year 2021, which preceded the year in which we carried out the research (year 2022).

In the second stage, we searched and selected the papers using the time frame and descriptor chosen for the research. We found 400 theses and dissertations that defined undergraduate courses as their research object. At the same time, we produced the data based on the aspects defined for the study, including: i) the methodological approaches used in the research; ii) the types of investigation; iii) the subjects/participants in the studies; and iv) the techniques used to produce the data.

Of the 400 studies selected, 329 allowed the text to be downloaded. For the other works, we obtained the data from the presentation form available in the database itself (the catalog), which gives details of each thesis and dissertation, including the author's name, the title and the abstract of the work. These aspects led us to what we wanted to study.

We would like to inform you that, in the process of producing the data, we mainly stopped to read the titles and abstracts of the works inventoried. Standard 6028 of the Brazilian Association of Technical Standards (ABNT), of 2021, defined that the abstract of a scientific text needs to briefly present elements that are central to its overall understanding (such as the subject and objective of the study, the research methodology and the results obtained). Thus, the abstract can serve as a direct source for data production in bibliographic surveys, for example (Pereira, 2013; ABNT, 2021). In our research, the abstracts of doctoral and dissertation productions were a central device in the production of data.

Table 1 shows the number of papers analyzed per year. Let's see:

Table 1

Number of studies analyzed on undergraduate degrees per year (2015-2021)

| Years | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|--|------|------|------|------|------|------|------|-------|
| Number of theses and dissertations found | 57 | 51 | 66 | 64 | 61 | 49 | 52 | 400 |

Source: research data.

We would point out that the data was systematized in spreadsheets and discussed in a series of 16 meetings with the researchers and collaborators. Data production lasted from March to December 2022. During this period, we met every two weeks

¹ Normative text revoked by CNE/CP Resolution No. 1, of December 20, 2019, which defined other National Curriculum Guidelines for the Initial Training of Education Teachers and arbitrarily instituted the Common National Training Base (BNC-Formação) (Brazil, 2019).

to discuss the research data. We believe that the meetings enabled greater understanding of the data production process, since emerging doubts were constantly problematized and reflected upon.

The third stage involved organizing the data produced, in quantitative terms, into graphs and tables. As with the previous stage, we sometimes had to engage in collective dialogue in order to organize and interpret the data (we did this between January and April 2023). Finally, we carried out a qualitative analysis of the graphs and tables, focusing on the study's central objective. The analysis is textualized in the next section of the text.

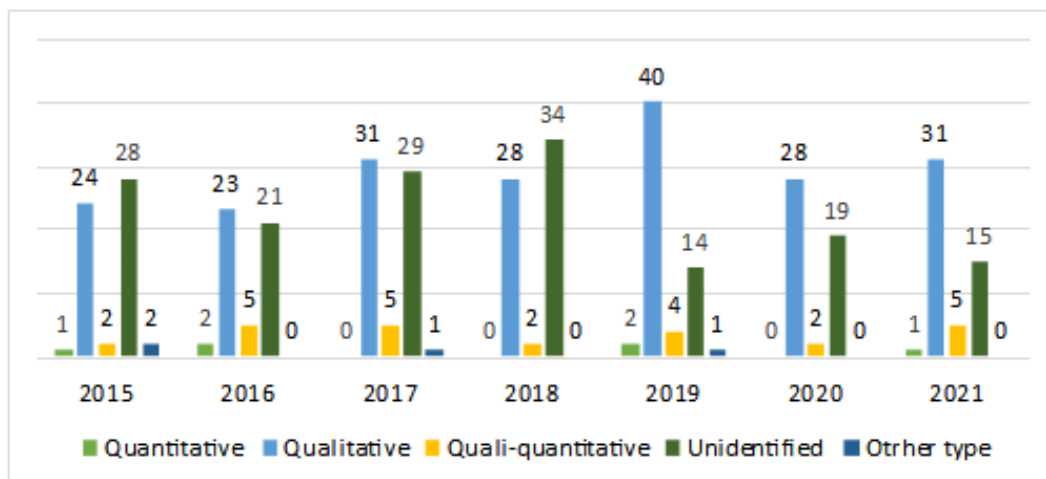
Methodological trends in theses and dissertations on bachelor's degrees – an analysis

As we have recorded, between 2015 and 2021, we found 400 studies on bachelor's degrees in Brazil in the CAPES Theses and Dissertations Catalog. Of this total, 289 are dissertations and 111 are theses. Before any further consideration, we can validate that the number of productions found is significant, if we consider the time frame set as the filter for selecting the studies. As the studies by Pimenta and Lisita (2004), André (2009) and Raimundo and Fagundes (2018) show, teacher training, especially initial training, is one of the topics that has received the most attention in the field of education research in the country over the course of our history.

The first aspect of the analysis is the methodological approaches of the research into undergraduate degrees. We summarize the data produced by the research in Graph 1.

Graph 1

Methodological approaches in theses and dissertations (2015-2021)



Source: research data.

Graph 1 shows that the qualitative approach predominates in the publications listed. Its presence is recorded verbatim in 205 studies. This is followed by theses and dissertations that did not provide information on the methodological approach. In

160 of them, the research approach was not directly recorded. Although we understand that most of these studies are close to the qualitative approach, since the verbs used in the objectives, the data production and analysis techniques, as well as the number of participants all point to this, we did not consider them, since the authors did not state this aspect in the abstracts.

Unfortunately, the reality found in this research has already been pointed out in other studies that also sought to analyze the methodological dimension of scientific papers. In the research by Silva et al. (2022), which sought to characterize the methodology developed in theses from a postgraduate program in the field of Education, it was found that, of the 57 scientific productions investigated, 34 did not present the type of approach used in the research in their abstracts. Similarly, Silva et al. (2013), when analyzing studies published in the "teacher training working group" section, present in the annals of the North and Northeast Educational Research Meeting (EPENN) from 2003 to 2011, pointed out gaps in the methodological aspects of the investigations. The authors report:

The treatment of the methodological aspects of the research is a weakness in the productions inventoried in the period under analysis [2003-2011], with either the omission of the methodology used or confusion in its identification. There are recurring records that confuse the type of research with the approach, the type of research with data collection procedures, research instruments with analysis techniques, which makes it difficult to understand the theoretical-methodological field that supported the study. (Silva et al., 2013, p. 22)

We believe that the authors' findings, together with the reality we found, show a methodological weakness in academic productions and/or in the writing of their abstracts. Although we understand, based on André (2009), that there is diversification in the methodological field of research in the human sciences, especially in the area of education, this diversification leads to divergent interpretations of how research is done.

The investigative approach, conceived in this text as the means of producing and analyzing the data, i.e. the way the researcher goes about constructing the data in the study and analyzing it (in a qualitative, quantitative or qualitative-quantitative – mixed – way), can be interpreted from other perspectives, falling back on data production techniques that commonly appear in the literature as synonymous with research instruments (Denzin & Lincoln, 2006; Ghedin & Franco, 2015). This scenario contributes to a certain methodological "confusion" in studies in the human sciences, especially in the area of Education.

All in all, we saw that 25 theses and dissertations reported using the qualitative-quantitative (mixed) approach, 6 studies demarcated the quantitative approach and 4 studies indicated another type of approach – less expressive numbers when compared to the number of investigations that reported using the qualitative approach.

In the four studies that reported "another type of approach", we saw signs of critical hermeneutics, multi-referentiality, phenomenology and the theory of social representations. From a conceptual point of view, we believe that what the four

researchers registered as the approach in the study actually corresponds to investigative approaches (or even theories, such as the theory of social representations) (Triviños, 1987; Minayo, 2001; Denzin & Lincoln, 2006).

According to Medeiros (2019), the research approach can be considered as a system of ideas that leads the researcher to make epistemological choices – which refer to the nature of the relationship between the researcher and what can be known – methodological choices – which involve the approach and type of research, the techniques for producing and analyzing data – and ontological choices – corresponding to the form and nature of reality. Among the most common approaches are positivism, phenomenology, hermeneutics, multi-referentiality, historical and dialectical materialism, scientific bricolage, among others (Bogdan & Biklen, 1999; Minayo, 2001; Denzin & Lincoln, 2006; Kincheloe & Berry, 2007). In our interpretation, the research that indicated these approaches actually used a qualitative approach. However, as the researchers did not declare its use, we did not validate this reference either.

As we have seen, the most widely used approach in research on undergraduate courses in Brazil is the qualitative approach. According to Minayo (2001), this can be justified because it focuses on the senses and meanings that human beings construct socially. In addition, the qualitative approach makes it possible to establish a more dialogical understanding of the object of study, an understanding that can go deep into what the researcher is investigating (Medeiros et al., 2017), which is close to the majority of research objects in the field of Education.

Continuing the analysis of the findings, we discussed the types of research present in the scientific productions inventoried. In the analysis of Table 2, we identified a plurality of study types. However, there is a predominance of three types of research: documentary research (142 theses and dissertations), bibliographical research (63 scientific productions) and case studies (48 doctoral and dissertation works). See table 2:

Table 2
Types of research in theses and dissertations on undergraduate degrees (2015-2021)

| Types of research | Quantity |
|--|-----------------|
| State of the Art/Knowledge | 4 |
| Comparative Study | 1 |
| Case Studies | 48 |
| Oral History | 1 |
| (Auto)biographical and life story method | 2 |
| Bibliographical research | 63 |
| Field research | 24 |
| Descriptive Research | 10 |
| Documentary Research | 142 |
| Empirical Research | 10 |
| Ethnographic Research | 2 |
| Experimental Research | 1 |
| Exploratory Research | 18 |
| Historical Research | 1 |

| | |
|----------------------------|-----|
| Interdisciplinary Research | 1 |
| Interpretivist Research | 1 |
| Narrative Research | 7 |
| Participatory Research | 2 |
| Action Research | 11 |
| Causal Inference Theory | 1 |
| Praxeological Research | 1 |
| Not Identified | 135 |

Source: research data.

We can immediately see that, although dissertations and doctoral studies focus on three types of research (documentary research, bibliographical research and case studies), which together account for more than half of the theses and dissertations, there is a diversification of study types. In addition to the three types of research, field research (24), exploratory research (18), action research (11) and descriptive research (10) also stood out. Narrative research (7), "State of the Art/State of Knowledge" research (4), ethnographic research (2), participant research (2), among others, appear less frequently, according to table 2.

In particular, we believe that the predominance of documentary research in theses and dissertations can be justified by the need to analyze normative and guiding documents for undergraduate courses, such as pedagogical course projects, national curricular guidelines for the initial training of basic education teachers, resolutions and specific opinions aimed at undergraduate courses (at local and national level) or the educational policy itself aimed at teacher training, among others. With regard to bibliographical research, we believe that the need to delve into theoretical issues in the field of teacher training may justify its predominance (André, 2009; Gatti et al., 2011; Raimundo & Fagundes, 2018).

As for the case study, as André (2013) argues, it is one of the most common types of investigation in educational research. This aspect was also highlighted in the study by Medeiros et al. (2017), who, when investigating the methodological dimension of 147 dissertations from a postgraduate program in Education at a public institution in the state of Ceará, assessed that it emerges as the type of investigation most present in scientific productions.

For André (2013, pp. 96-97):

Case studies have been used for a long time in different areas of knowledge, such as sociology, anthropology, medicine, psychology, social work, law, administration [...]. In education, case studies appear in research methodology manuals from the 1960s and 1970s, but in a very limited sense: a descriptive study of a unit, be it a school, a teacher, a group of students, a classroom [...]. However, this concept of 'descriptive study of a unit' [...] will remain in educational research, giving rise to a series of misconceptions and much criticism. In the 1980s, in the context of the qualitative approach, the case study reappeared in educational research with a broader meaning: to focus on a particular phenomenon, taking into account its context and multiple dimensions. The unitary aspect is valued, but the need for situated and in-depth analysis is emphasized.

The case study emerged in the research carried out with an emphasis on issues specific to initial teacher training courses. An example of this aspect is that it was textualized in research that focused mainly on curricular analysis, in the broadest sense, of undergraduate courses or specific themes that permeated a discipline in the course curriculum. The study of specific training experiences in undergraduate courses, such as the Institutional Teaching Initiation Scholarship Program (PIBID), also highlighted case studies as an investigative typology.

We also found a significant number of papers that did not indicate the type of research carried out in the dissertations or theses (135 papers). We believe that, as was the case with the lack of definition of the research approach in many scientific productions, this characteristic highlights the weakness of the textual summaries and/or the lack of clarity regarding the methodological dimension of the theses and dissertations.

Let's clarify that research can be classified/defined by a set of characteristics that are specific to it. Carrying out documentary research is not the same as carrying out a case study or narrative research. The theoretical-methodological procedures adopted for each typology mentioned above have their own peculiarities. Thus, in education studies, research can be typified in a variety of ways, according to the methodological needs of each investigation and the specific nature of the object of study.

We note that some papers also classified the study as more than one type of research, which explains why the total number of types of research is higher than the number of theses and dissertations found. For example, some papers classified the study as field and bibliographic research, or exploratory and documentary research. We therefore validated both types in the same study.

Roughly speaking, we reaffirm that the diversification found with regard to the type of research in the theses and dissertations analyzed certifies the methodological plurality that exists in educational research. With the introduction of the critical and post-critical theoretical-philosophical currents in the Brazilian educational context, which took place between the 1960s and 1980s, according to Ferreira (2009), the ways of thinking and doing research in education expanded significantly, which directly affected the methodological dimension of theses and dissertations.

As the next aspect of the analysis, we present the subjects/participants of the research found in the bibliographical survey on undergraduate courses, based on specific groups. To this end, we have organized the data in Table 3.

Table 3
Subjects/participants in undergraduate research (2015-2021)

| Subjects/ participants | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total number of theses and dissertations |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| Degree course coordinators | 6 | 2 | 4 | 7 | 7 | 5 | 5 | 36 |
| Educational | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 4 |

| | | | | | | | | |
|---|----|----|----|----|----|----|----|-----|
| coordinators | | | | | | | | |
| Undergraduate students | 11 | 11 | 12 | 12 | 15 | 8 | 2 | 71 |
| Students on scholarships | 2 | 1 | 0 | 0 | 2 | 0 | 1 | 6 |
| Students of basic education | 4 | 2 | 0 | 4 | 6 | 3 | 5 | 24 |
| Students in professional education | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 4 |
| Head of the department | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Undergraduate teacher trainers | 17 | 19 | 19 | 16 | 22 | 12 | 10 | 115 |
| Basic education teachers | 3 | 5 | 7 | 6 | 4 | 6 | 3 | 34 |
| Professional education teachers | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| School supervisors | 1 | 1 | 0 | 0 | 2 | 1 | 2 | 7 |
| School managers | 3 | 0 | 3 | 5 | 2 | 0 | 1 | 12 |
| Pro-Rectors | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Bachelors | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Graduates | 2 | 2 | 3 | 1 | 4 | 1 | 6 | 19 |
| Bachelor's degree students | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 3 |
| German immigrant descendants | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Baccalaureate teachers working in undergraduate programs | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 4 |
| Members of councils/course committees/ and the Structuring Teaching Nucleus | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 3 |
| Parents of undergraduate students | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Educational technicians | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 2 |
| Unidentified | 14 | 11 | 32 | 18 | 10 | 18 | 24 | 127 |

Source: research data.

We believe that the subjects/participants of dissertations and doctoral research are different. However, for the most part, the researchers studied undergraduate

courses from the point of view of the teachers (115 studies) or students (71 studies). In addition, the dissertations and doctoral studies often involved coordinators of degree courses (36), primary school teachers (34), primary school students (24), graduates (19) and school managers (12).

Less frequently, bachelor's degree teachers who work in teacher training, technicians in educational affairs in higher education, parents of bachelor's degree students, heads of departments, deans, members of collegiate/course councils and structuring teaching nuclei, school supervisors, descendants of German immigrants, bachelor's degree students, vocational course students, bachelor's degree students, among others, took part in the research on bachelor's degrees. Of these groups, there were no more than 10 surveys.

We would like to point out that in the studies whose subjects/participants were undergraduate teachers or undergraduate students, we saw an emphasis on teachers, on analyzing issues related to their professional identity, training processes and personal/professional trajectories. These studies were characterized as action research, participant research, research using the (auto)biographical and life story method, narrative research and ethnographic research, with a phenomenological and/or hermeneutic approach.

Since the 1980s (with greater emphasis in the 1990s), based on studies begun in Europe, especially in countries such as Portugal, Spain and England – with research and publications by António Nóvoa, Carlos Marcelo Garcia, Angel Pérez Gómez, Maria da Conceição Moita and Ivor Goodson – and in the United States – with research and publications by Donald Schön and Ken Zeichner – research into teacher training from the teacher's perspective has gained prominence (Cunha, 2013). Cunha (2013, p. 615), complementa:

The perspective of studying the teacher as a concrete subject of pedagogical action contributed to understanding them in their technical, personal and professional constitution. This development began to gain ground in studies relating education and [teacher] work, supported by sociological references [...]. In this context, the theoretical reflections and productions arising from research influenced the movements to discuss the teaching profession, both in the conditions of its daily exercise and its training.

Returning to the data presented in table 3, we can see that there is also a significant number of papers in which we did not identify participants. In 127 theses and dissertations, we found no mention of research subjects/participants. Of this total, we can clarify that many studies are documentary or bibliographical, which did not involve the collaboration of research subjects – which may justify the result observed.

In the same vein, we note that in 56 studies, we identified the participation of more than one group of subjects/participants in the same study. This aspect indicates, in our opinion, that the studies carried out different methodological movements to investigate undergraduate courses, exploring contexts from different perspectives.

As the analysis continues, in relation to the data production techniques used in the theses and dissertations, we note that three types of technique were most frequent, as can be seen in the following table.

Table 4

Data production techniques in undergraduate research (2015-2021)

| Techniques for producing data | Quantity |
|--|-----------------|
| Bibliographic analysis | 25 |
| Bibliometric analysis | 1 |
| Correspondence Analysis | 1 |
| Experience Analysis | 1 |
| Analysis of Historical Series | 1 |
| Survey analysis | 1 |
| Document analysis | 170 |
| Enunciative Analysis | 1 |
| Statistical Analysis | 1 |
| Interpretive Analysis | 1 |
| Prototypical analysis | 1 |
| Field notes | 1 |
| Auto biography | 1 |
| Diagnostic Assessments | 1 |
| Teaching Guidelines Booklet | 1 |
| Dialogue Circles | 1 |
| Formative Investigative Dialogue Circles | 1 |
| Protocol construction | 1 |
| Field diary | 5 |
| Itinerant Diary | 2 |
| Interviews | 162 |
| Multivariate Analysis Statistics | 1 |
| Participant Objectification Exercise | 1 |
| Recordings and interpretation sheets | 1 |
| Discussion Group | 2 |
| Focus Group | 9 |
| Inventory | 2 |
| Bibliographic survey | 17 |
| Field survey | 1 |
| Survey of the area to be covered | 1 |
| Mapping | 1 |
| Narratives | 1 |
| Observation | 20 |
| Thematic workshops | 1 |
| Intervention Workshops | 1 |
| Evolutionary Plans | 1 |
| Portfolio | 1 |
| Cursive Registration Protocol | 1 |
| Questionnaires | 106 |
| Archive records | 1 |
| Bibliographic review | 8 |
| Literature Review | 2 |

| | |
|---|----|
| Document review | 1 |
| Conversation circles | 3 |
| Reading Wheels | 1 |
| Teaching Sequence | 1 |
| Direct and Indirect Measurement Testing | 1 |
| Not identified | 80 |

Source: research data.

Documentary analysis appeared in most of the papers. This data production technique was used in 170 theses and dissertations. This was followed by interviews, totaling 162 investigations, and questionnaires, used in 106 studies.

Regarding documentary analysis, Lüdke and André (2013) pointed out that when this data production technique emerged in educational research, it was done as a secondary element for researchers, complementing analyses focused on the classroom, for example. Over time, its frequent use has been noted in various studies in the field of education, especially in the analysis of educational policy documents, curricular and normative texts, such as course pedagogical projects, lesson plans, meeting minutes, opinions and resolutions, among others. This characteristic may justify its use by researchers studying undergraduate courses.

With regard to interviews as a data production technique in the research, they were recorded in a variety of forms: semi-structured interviews, reflective interviews, comprehensive interviews, thematic interviews, in-depth interviews, narrative interviews, conventional interviews, life history interviews, structured interviews, informal interviews and episodic interviews. In this scenario, the semi-structured interview prevailed in all of the research inventories.

According to Gil (2008), part of the knowledge produced in the human sciences has come about as a result of researchers working with interviews. The variety that exists in relation to their typologies may be associated with the development of research in Education and, particularly, the context of postgraduate studies.

As for the questionnaire, present in 106 studies, its use, according to Gil (2008), may be associated with practicality in relation to the development of the research. During the pandemic caused by Covid-19, we saw, through our participation as evaluators of dissertations (especially), that it was one of the possibilities in the construction of research in Education, precisely because it does not require prolonged contact with those surveyed, and can even be developed through online forms. Of the 106 studies that used the questionnaire as a technique for producing data, 84 also used other techniques, such as interviews, bibliographic analysis, observation, document analysis, focus groups, thematic workshops, field diaries, etc.

An important feature to note is that 202 studies used more than one data production technique. In other words, the researchers carried out different procedures to construct the research, since the data production technique (also called data collection technique), according to Gil (2008), Medeiros and Amorim (2017) and Medeiros et al. (2017), refers to the resource that the researcher used to produce

the data in a study, and there is a great variety in education research, as shown in Table 4.

We consider the term "data production technique" because we understand that, in educational research, we don't collect data, but construct it through procedures aimed at producing educational knowledge. The term "data collection", in our opinion, comes from the positivist approach that has as its reference the production of knowledge developed by the experimental sciences.

Less frequently, however, bibliographical analysis (25 studies), observation (20 studies – also of different types) and bibliographical surveys (17 investigations) appeared.

In all all, we identified 47 techniques for producing data in doctoral and dissertation studies. However, in 80 bibliographic texts analyzed, they were not mentioned or we were unable to identify them. We should point out that, in some studies, the term "data production technique" (often used as a data collection technique) appeared as a synonym for research instrument. The instrument, however, refers to something material, such as the interview script, the observation script, the document with the set of questions that make up a questionnaire, for example. The technique, in turn, is the means the researcher uses to produce the data (Gil, 2008; Stake, 2013), such as the interview, the conversation circle, the field diary and document analysis, for example.

Finally, we would like to point out that this bibliographical survey has provided an overview of methodological trends in theses and dissertations on undergraduate courses. We hope that the analysis constructed in this text can, in some way, add to the different efforts already undertaken by other researchers who have investigated the production of knowledge in Education, more specifically in the field of undergraduate degrees or teacher training.

| Conclusions

This article presents a bibliographic survey that aimed to characterize the methodological trends in research on undergraduate degrees in Brazil, investigating theses and dissertations available in the CAPES Catalogue of Theses and Dissertations, between 2015 and 2021.

As we have seen, 400 doctoral and dissertation papers were analyzed based on the abstracts of each academic production. Among the main aspects analyzed, we saw that the qualitative approach was present in the majority of the studies. It was recorded in 205 studies. One aspect to note is that, in 160 studies, we did not identify the approach used verbatim. We also saw that, according to research by André (2009) and Medeiros et al. (2017), there was little quantitative research in education, if we consider the production of undergraduate courses analyzed in this text.

The most obvious types of research are documentary research, bibliographical research and case studies. These three types of research were referenced in more than half of the papers considered in this investigation. On the other hand, we found an upward trend in the diversification of study types. The theses and dissertations were classified into 21 types. In this set, we found field research, narrative research, action research, comparative studies, state of the art/state of knowledge, participant research, exploratory research, among others. We also found that 135 studies did not name the type of research.

The subjects/participants in the doctoral and dissertation research were also diverse. However, teachers and undergraduate students stood out. We would point out that in 56 studies, there was a predominance of more than one group of subjects/participants being researched. This reference shows that there are attempts to research undergraduate courses from different perspectives.

Document analysis, interviews of various types (with a predominance of semi-structured interviews) and questionnaires were among the most common data production techniques used in the research. In any case, we found 47 types of data production techniques in the research – whether they were intended to be used with a group of participants in mind, or to produce data individually.

We conclude this study with the understanding that the research on undergraduate degrees, considering the time frame from 2015 to 2021, presents a diverse design from a methodological point of view. Even though there was a predominance of studies that pointed to the qualitative approach, documentary research, bibliographical research, case studies, teacher educators and undergraduate students, as well as documentary analysis, interviews and questionnaires as the main elements of the methodological dimension in theses and dissertations, we can see that there is also a diversification in the methodology of theses and dissertations, if we consider the analysis carried out as a whole.

In many studies, more than one data production technique was combined or more than one group of subjects/participants was considered for the study of the object of investigation. This scenario goes hand in hand with the transformations and changes in the way education research is carried out, the conceptions of science, the diversification of research contexts and objects, among other reasons.

Finally, we note the limitations found in the research. We are concerned about the absences highlighted in the analysis, including the failure to demarcate the approach or type of research, the failure to define the research subjects and the techniques used to produce the data. This reality was evident in a significant number of theses and dissertations, as we have shown throughout this text. In our view, this aspect represents a methodological weakness in undergraduate research, or even a lack of discernment about the procedural dimension in educational research on the part of researchers – a condition that has been highlighted in previously published studies on the production of knowledge in education.

| References


- André, M. E. D. A. (2009). A produção acadêmica sobre formação de professores: um estudo comparativo das dissertações e teses defendidas nos anos 1990 e 2000. *Formação Docente – Revista Brasileira De Pesquisa Sobre Formação De Professores*, 1(1), 41–56.
<https://revformacaodocente.com.br/index.php/rbpf/article/view/4>
- André, M. E. D. A. (2013). O que é um estudo de caso qualitativo em educação? *Revista da FAEBA – Educação e Contemporaneidade*, 22(40), p. 95-103.
<https://doi.org/1021879/faeeba2358-0194.2013.v.22.n.40.p95-103>
- Associação Brasileira de Normas Técnicas (ABNT). (2021). *NBR 6028: Informação e documentação – resumo, resenha e recensão. Apresentação*.
<https://www.abntcatalogo.com.br/norma.aspx?ID=467697>
- Bogdan, R. C., & Biklen, S. K. (1999). *Investigação qualitativa em educação: uma introdução à teoria e aos métodos*. Tradução de Maria João Alvarez, Sara Bahia dos Santos e Telmo Mourinho Baptista. Porto Editora.
- Brasil. (2015). *Resolução CNE/CP nº 02, de 1 de julho de 2015*. Ministério da Educação. Conselho Nacional de Educação. Conselho Pleno.
<http://portal.mec.gov.br/docman/agosto-2017-pdf/70431-res-cne-cp-002-03072015-pdf/file>
- Brasil. (2019). *Resolução CNE/CP nº 02, de 20 de dezembro de 2019*. Ministério da Educação. Conselho Nacional de Educação. Conselho Pleno.
<http://portal.mec.gov.br/docman/dezembro-2019-pdf/135951-rcp002-19/file>
- Cunha, M. I. (2013). O tema da formação de professores: trajetórias e tendências do campo na pesquisa e na ação. *Educação e Pesquisa*, 39(3), p. 609-625.
<https://doi.org/10.1590/S1517-97022013005000014>
- Denzin, N. K., & Lincoln, Y. S. (2006). Introdução: a disciplina e a prática da pesquisa qualitativa. Em N. K. Denzin, & Y. S. Lincoln (org.). *O Planejamento da Pesquisa Qualitativa: teorias e abordagens* (pp. 15-42). Artmed.
- Ferreira, L. S. (2009). A pesquisa educacional no Brasil: tendências e perspectivas. *Contrapontos*, 09(01), 43-54. http://educa.fcc.org.br/scielo.php?script=sci_arttext&pid=S1984-71142009000100005&lng=pt&tlng=pt
- Ferreira, N. S. de A. (2021). Pesquisas intituladas estado da arte: em foco. *Revista Internacional de Pesquisa em Didática das Ciências e Matemática*, 2, e021014. <https://periodicoscientificos.itp.ifsp.edu.br/index.php/revin/article/view/52>
- Gatti, B. A. (2002). *A construção da pesquisa em educação no Brasil*. Plano Editora.
- Gatti, B. A., Barretto, E. S. S., & André, M. E. D. A. (2011). *Estado da arte das políticas docentes no Brasil*. Unesco.
- Ghedin, E., & Franco, M. A. S. (2015). *Questões de método na construção da pesquisa em Educação*. Cortez.
- Gil, A. C. (2008). *Métodos e técnicas de pesquisa social*. Atlas.
- Kincheloe, J. L., & Berry, K. S. (2007). *Pesquisa em educação: conceituando a bricolagem*. Artmed.
- Lüdke, M., & André, M. E. D. A. (2013). *Pesquisa em educação: abordagens qualitativas*. Editora Pedagógica e Universitária.
- Medeiros, E. A. de, & Amorim, G. C. C. (2017). Análise textual discursiva: dispositivo analítico de dados qualitativos para a pesquisa em educação. *Laplace em Revista*, 3 (3), 247-260. <https://doi.org/1024115/S2446-6220201733385p.247-260>
- Medeiros, E. A. de, Varela, S.B.L., & Nunes, J. B. C. (2017). Abordagem Qualitativa: estudo na pós-graduação em Educação da Universidade

- Estadual do Ceará (2004 – 2024). *Holos*, 2, 174-189.
<https://doi.org/10.15628/holos.2017.4457>
- Medeiros, E. A. de. (2019). *Formação Interdisciplinar de Professores: um estudo pedagógico-curricular sobre a Licenciatura em Educação do Campo da Universidade Federal Rural do Semi-Árido*. [Tese de Doutorado, Universidade Estadual do Ceará]. Repositório Institucional da UECE.
<https://siduece.uece.br/siduece/pesquisarItemPublico.jsf>
- Minayo, M. C. S. (Org.). (2001). *Pesquisa Social: teoria, método e criatividade*. Vozes.
- Nascimento, A. A. B. do, Medeiros, E. A. de, & Amorim, G. C. C. (2022). Formação de Professores Polivalentes: estudo bibliográfico sobre teses e dissertações (1999 – 2019). *Nuances – Estudos sobre Educação*, 33, e.022008.
<https://doi.org/10.32930/nuances.v33i00.9486>
- Pereira, M. G. (2013). O resumo de um artigo científico. *Epidemiologia e Serviços de Saúde*, 22(4), 707-708. <https://doi.org/10.5123/S1679-49742013000400017>
- Pimenta, S. G., & Lisita, V. M. S. D. S. (2004). Pesquisas sobre professores e sua formação: uma análise de pesquisas desenvolvidas no programa de Pós-Graduação da FEUSP– 1990 a 1998. *Educar em Revista*, (24), 87-109.
<https://doi.org/10.1590/0104-4060.351>
- Raimundo, J. A., & Fagundes, M. C. V. (2018). Estado da arte sobre a formação de professores entre 2001 e 2016: um olhar sobre a produção brasileira a partir do Portal de periódicos CAPES/MEC. *Roteiro*, 43(3), 891–918.
<https://doi.org/10.18593/r.v43i3.17298>
- Romanowski, J. P. (2013). Tendências da pesquisa em formação de professores. *Atos de pesquisa em educação*, 8(2), 479-499. <http://doi.org/10.7867/1809-0354.2013v8n2p479-499>
- Silva, D. C., Martins Júnior, F. R. F., Silva, T. M. R., & Nunes, J. B. C. (2022). Características de pesquisas qualitativas: estudo em teses de um programa de pós-graduação em educação. *Ed. rev.*, 38, e26895.
<https://doi.org/10.1590/0102-469826895>
- Silva, S. P., Nobrega-Therrien, S., & Farias, I. M. S. (2013). Produções sobre a formação de professores no EPENN: análise do período 2003 a 2011. Anais do XXI EPENN – Encontro de Pesquisa Educacional do Norte e Nordeste. Recife, Pernambuco, Brasil.
- Stake, R. E. (2013). *Pesquisa Qualitativa: estudando como as coisas funcionam*. Penso.
- Triviños, A. N. S. (1987). *Introdução à Pesquisa em Ciências Sociais: a Pesquisa Qualitativa em Educação – O Positivismo, A Fenomenologia, O Marxismo*. Atlas.
- Vasconcellos, M. F., Marques, C. C., & Mira, M. M. (2023). Paulo Freire e formação docente: uma pesquisa do tipo estado da arte. *Linhas Críticas*, 29, e47518.
<https://doi.org/10.26512/lc29202347518>

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Resumo

O texto em tela refere-se a um levantamento bibliográfico que teve como objetivo caracterizar as tendências metodológicas nas pesquisas disponíveis no Catálogo de Teses e Dissertações da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) no período de 2015 a 2021. Este estudo contribui para o entendimento acerca de como vem se desenvolvendo, em termos metodológicos, a produção do conhecimento acerca das licenciaturas. Foram analisados 400 trabalhos. Pontua-se, entre outros aspectos, que a abordagem qualitativa se sobressai nos estudos e os sujeitos mais pesquisados referem-se aos professores formadores e estudantes das licenciaturas. Frisa-se que, em muitas pesquisas, não foi possível caracterizar a metodologia, o que denota ausência de clareza metodológica pelos pesquisadores.

Palavras-chave: Licenciaturas. Formação de Professores. Pesquisa em Educação.

Resumen

El texto en pantalla hace referencia a un levantamiento bibliográfico que tuvo como objetivo caracterizar las tendencias metodológicas de las investigaciones disponibles en el Catálogo de Tesis y Disertaciones de la Coordinación de Perfeccionamiento del Personal de la Educación Superior (CAPES), de 2015 a 2021. Se analizaron 400 (cuatrocientas) obras. Se observa, entre otros aspectos, que en los estudios se destaca el enfoque cualitativo y los sujetos más investigados son docentes y estudiantes de pregrado. Además, cabe señalar que en muchos estudios no fue posible caracterizar la metodología, lo que denota falta de claridad metodológica por parte de los investigadores.

Palabras clave: Grados. Formación de profesores. Investigación en Educación.

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