

**QUANTITATIVE APPROACH IN EDUCATIONAL RESEARCH: PERSPECTIVES
IN THE GRADUATE PROGRAM IN EDUCATION AT THE FEDERAL
UNIVERSITY OF MINAS GERAIS (2017-2019)**

***ABORDAGEM QUANTITATIVA EM PESQUISAS EDUCACIONAIS: PERSPECTIVAS
NO PROGRAMA DE PÓS-GRADUAÇÃO EM EDUCAÇÃO DA UNIVERSIDADE
FEDERAL DE MINAS GERAIS (2017-2019)***

***ENFOQUE CUANTITATIVO EN LA INVESTIGACIÓN EDUCATIVA:
PERSPECTIVAS DEL PROGRAMA DE POSGRADO EN EDUCACIÓN DE LA
UNIVERSIDAD FEDERAL DE MINAS GERAIS (2017-2019)***

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ABSTRACT: The present article aims to present a documentary survey using the quantitative approach in the conclusion papers of the Postgraduate Program in Education at the Federal University of Minas Gerais (PPGE/UFGM), with a time frame of 2017 to 2019. The methodology employed was bibliographic and documental analysis. As a document, 140 theses were researched, 139 (99.3%) of which were qualitative works and only 01 (0.7%) with a quantitative approach, available in the CAPES Theses and Dissertations Bank and the PPGE/UFGM repository. For the construction of the article, we started, above all, with the references of Gatti (2004); Moreira (2014); Gouveia (1980); Di Dio (1974), and Johnson and Onwuegbuzie (2004) to perform the analysis, respecting the logic imbricated in each text. These paid attention to the research methods and their data collection instruments, the theoretical contributions, and the discussions concerning the study theme. As a result, it was possible to measure a panorama of the quantitative approach in educational research, specifically the PPGE/UFGM, to understand how the thesis analyzed structures its quantitative approach and to notice the inexpressiveness of productions with a quantitative approach.

KEYWORDS: Quantitative approach. Educational research. PPGE/UFGM.

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RESUMO: O presente artigo objetiva apresentar um levantamento documental concernente ao uso da abordagem quantitativa nos trabalhos de conclusão do Programa de Pós-Graduação em Educação da Universidade Federal de Minas Gerais (PPGE/UFMG), tendo como recorte temporal o período de 2017 a 2019. A metodologia empregada foi a análise bibliográfica e documental. Como documento, foram pesquisadas 140 teses, sendo 139 (99,3%) trabalhos qualitativos e apenas 01 (0,7%) de abordagem quantitativa, disponíveis no Banco de Teses e Dissertações da CAPES e do repositório do PPGE/UFMG. Partiu-se, para a construção do artigo, sobretudo, dos referenciais de Gatti (2004); Moreira (2014); Gouveia (1980); Di Dio (1974) e Johnson e Onwuegbuzie (2004) para a realização da análise, respeitando a lógica imbricada em cada texto. Nestas teses atentou-se para os métodos de investigação e de seus instrumentos de coleta de dados, os aportes teóricos, bem como as discussões concernentes ao tema de estudo. Como resultado, foi possível mensurar um panorama da abordagem quantitativa em pesquisas educacionais, em específico, o PPGE/UFMG, compreender como a tese analisada estrutura sua abordagem quantitativa e perceber a inexpressividade de produções de abordagem quantitativa.

PALAVRAS-CHAVE: Abordagem quantitativa. Pesquisa educacional. PPGE/UFMG.

RESUMEN: El presente artículo tiene como objetivo presentar un estudio documental sobre el uso del enfoque cuantitativo en los trabajos de conclusión del Programa de Posgrado en Educación de la Universidad Federal de Minas Gerais (PPGE/UFMG), con un marco temporal de 2017 a 2019. La metodología empleada fue el análisis bibliográfico y documental. Como documento, se investigaron 140 tesis, siendo 139 (99,3%) trabajos cualitativos y sólo 01 (0,7%) de abordaje cuantitativo, disponibles en el Banco de Tesis y Disertaciones de la CAPES y en el repositorio del PPGE/UFMG. Para la construcción del artículo, se basó, sobre todo, en las referencias de Gatti (2004); Moreira (2014); Gouveia (1980); Di Dio (1974) y Johnson y Onwuegbuzie (2004) para realizar el análisis, respetando la lógica imbricada en cada texto. En estas tesis, se prestó atención a los métodos de investigación y a sus instrumentos de recogida de datos, a las contribuciones teóricas, así como a las discusiones relativas al tema de estudio. Como resultado, fue posible medir un panorama del abordaje cuantitativo en la investigación educacional, específicamente, en el PPGE/UFMG, comprender cómo la tesis analizada estructura su abordaje cuantitativo y darse cuenta de la inexpressividad de las producciones de abordaje cuantitativo.

PALABRAS CLAVE: Enfoque cuantitativo. Investigación educativa. PPGE/UFMG.

Introduction

The present article aims to survey research that uses the quantitative research approach in its abstracts, methodologies, and theoretical framework.

To this end, bibliographic research with a qualitative approach was developed. As a thematic cutout, we used the doctoral theses defended between the last three years (2017-2019) with a quantitative approach. Will discuss the quantitative approach in educational research from a Graduate Program in Education evaluated as being of national relevance and subsidizes the distribution of resources so that those programs with higher grades receive more scholarships and funding. So, the grade 07 of the Coordination for the Improvement of Higher Education Personnel (Capes), taking as spatial cutout the Graduate Program in Education of the Federal University of Minas Gerais, henceforth (PPGE/UFMG) and as thematic-analytical cutout the Doctoral Theses defended between the last 02 years (2017-2019) with a quantitative approach (1 of 140 papers): the work of Pereira Junior (2017).

The Graduate Program in Education - Knowledge and Social Inclusion, the PPGE/UFMG, operates in teaching, research, and extension, producing knowledge in the field of Education and training masters and doctors, receiving students from all over Brazil and other countries and in articulation with several (inter)national research groups. It is the result of a history of construction since 1971, in which UFMG's professors, students, and administrative staff participated and committed to overcoming social and educational inequalities in Brazil.

As documents, we used the doctoral theses published in the CAPES Theses and Dissertations Database and in the repository of the program itself (PPGE/UFMG). Observed three aspects in the collection of documentary data: the presence of the quantitative research approach announced in the abstracts written at CAPES Portal, the description of the quantitative research approach in the Thesis Methodology topic, and the presence of data collection instruments and techniques that characterize the use of the quantitative research approach.

The research problem is translated into the following question: how do the doctoral theses of the PPGE-UFMG present the perspective of the quantitative approach through their research objectives and methodologies of data collection and analysis?

It considers that the type of investigation of bibliographical analysis via a bibliographical survey presents a thorough investigative work in search of knowledge and a fundamental basis for any research. Given that certain specific dynamics of knowledge production seek it, awaken the capacity for innovation inherent in this demand (PIZZANI *et al.* 2012). They also suggest that the multidimensional construction of knowledge elevates science

in its evolving and changeable character and makes research its basic instrument, and can be revisited, illuminating the contexts of the relevance of a specific type of scientific production (theses of quantitative approach).

As Noleto (2017) points out when stating that when thinking about a research theme, it is important to know those that have already been conducted on the subject, to verify the existing productions on the subject so that one can add the theories and results to the area studied (always being relational, in dialectic with peers) of a certain type of scientific logic of a certain space of knowledge production (the quantitative approach about other types of approach within the PPGE/UFMG).

To this end, we have as objectives for this article: to conduct an overview of the quantitative approach in educational research; to present the overview of the quantitative approach in a specific case: the doctoral theses of the PPGE/UFMG; and to understand how the analyzed theses structure their quantitative approach since they are quite reduced in number to the total amount of the program. To accomplish this purpose, this article was divided into three stages; in the 1st will problematize the quantitative approach theoretically and methodologically; in the 2nd, it will discuss the procedures and methodological paths in which this bibliographical analysis was carried out, explaining the criteria for choosing PPGE/UFMG and not other programs; In the third and most crucial step, analyzed the only work found in the research collection, and how it mobilizes the quantitative approach in its text and context; and finally, the Final Considerations, with the conclusions about the survey and the bibliographical analysis carried out.

Characterizing the quantitative approach in educational research

According to Rudio (1995), research is a set of oriented activities that aim at knowledge to deserve the qualitative scientific and should occur systematically, using specific methods and techniques. For Gil (1999), it represents a formal and systematic process of scientific development. Therefore, scientific research is the effort to acquire certain knowledge resulting from an investigation, which favors the solution of problems and doubts through scientific procedures. These procedures are called methods, the object of study of methodology. The method is, ultimately, the path taken in an investigation to reach knowledge (GIL, 1999).

It is common to find the statement that until the middle of the 20th-century quantitative research, baptized positivist or technicist, predominated in Brazil. However, as of the 1970s (GOUVEIA, 1980; DI DIO, 1974), they developed studies showing that research in Education

was very scarce until then and that, moreover, of the studies conducted by the authors above, 71% were not studies that used quantitative data and, among those that did, most employed only descriptive analysis of frequency tables, a few correlations, and very few studies employed multidimensional analysis.

Therefore, in Brazilian educational research, quantitative data use has never had a solid tradition or wider use. This has made it difficult to use these analytical tools consistently and to challenge to build a more grounded and critical perspective on what they can or cannot offer; it also makes it difficult to create a consistent perspective on the limits of these methods. These limits also exist in the so-called qualitative methodologies, which generally have not been considered. On the other hand, it hinders a critical and contextualized reading when quantitative data are brought to the discussion, whether in the academic or public sphere.

In Brazil, until the mid-twentieth century, it was said that there was a predominance of studies of a quantitative nature, called positivist or technicist; however, studies were published in the early 1970s. According to authors Di Dio (1970), and Gouveia (1980), the production of research in Education was minimal, if not irrelevant, and this production, most did not use quantitative methodology or, when they did, it was in the form of descriptive analysis of frequency tables.

In the 1980s, there was more emphasis on the study of processes. For example, researchers shifted their investigations away from factors outside the school and their effects on student performance, focusing more on the so-called intraschool factors, such as curriculum issues, social interactions at school, organization of pedagogical work, learning, personal relationships in the classroom, discipline, and evaluation.

Qualitative studies involving various perspectives, methods, and techniques gained strength by accompanying this expansion. If in the 60s and 70s, the major interest was about what happened in the classroom, based predominantly on studies of controlled situations, as if it were a laboratory, in the 80s and '90s shifted the emphasis more to daily school situations. This shift in focus led to a rethinking of the methodological assumptions used until then, bringing together experts from different areas of knowledge and generating conflicts of approaches and assumptions underlying the methodological processes and epistemological positions used. Throughout the 1990s, the conflicts started to be softened, providing a movement to grow in researchers, the domain of the different approaches used for research in Education (ANDRÉ, 2010, p. 03-04).

According to André (2008), the use of quantitative data in educational research in Brazil, by not being more extensive, has resulted in the consolidation of the difficulty of its use more

consistently, preventing. Therefore, the construction of a real perspective of the limits of this method, limits that are also present in the qualitative approach but that are generally not considered. This also makes it difficult for discussions about quantitative data in the academic or public sphere to lack a critical and contextualized view of the subject.

The quantitative approach, the focus of this essay, has its origin in the positivism paradigm, the main philosophical conception of the 19th century, later transformed into post-positivism, assuming a decisive role in scientific research, with a focus on the verification or falsification of hypotheses, being useful initially for mathematics and related areas (with quantitative propositions). These quantitative propositions became very useful and applicable to science, which adopted the goal of controlling natural phenomena for a long time.

In addition to positivism, the quantitative approach is based on empiricism, a philosophical current that believes that "scientific knowledge is in the facts, so scientific work should strive for the purification of the object, relegating what is not essential, so that the researcher can describe the general and reproducible facts" (FERREIRA, 2015, p. 115, our translation).

The researcher's objective stance is one of the most evident characteristics of the quantitative approach, which must exclude his subjectivity throughout the research process so that his beliefs and conceptions do not influence the results. Quantitative research will understand the reality external to the individual.

Johnson and Onwuegbuzie (2004) demonstrate some strengths of the quantitative approach in scientific research: testing and validation procedures build theories about the occurrence of phenomena; the practice of testing hypotheses before data collection contributes to the generalizability of findings; the possibility of replicating the results of a survey in different populations results in generalizations; it is useful when the data obtained allow quantitative projections; it is favorable for excluding the influence of confounding among many variables, facilitating greater credibility in cause-and-effect relationships; most quantitative methods of data collection are faster; the data obtained by this approach are precise, quantitative and numerical; data analysis can be less time consuming due to the use of software or other statistical resources; research results are independent of the researcher's action; it has credibility for people and entities with greater acquisition of representativeness (companies, politicians, administrators); it is pertinent in studies with large numbers of people.

Still, according to authors Johnson and Onwuegbuzie (2004), some weaknesses can be evidenced during the quantitative process, such as the impossibility of categories and theories adopted to reflect local and specific realities; the chance of the researcher to disregard certain

phenomena as a result of theories or hypothesis tests, not generating new hypotheses; production of abstract and general knowledge to be applied to individuals, places and more specific contexts.

It is common for educational research to employ a qualitative approach rather than a quantitative one, although the latter contributes with more concrete/operable analysis and data, enabling greater proposals for intervention. The scarce number of scientific researches with the dissemination of the use of the quantitative approach hinders its use, as can be seen:

The use of quantitative data in educational research in Brazil has never had a solid tradition or a broader use. This has hindered and still hinders, the use of these analytical tools in a more consistent way, as well as the construction of a more grounded and critical perspective on what they can or cannot offer us; it also hinders the construction of a consistent perspective on the limits of these methods, limits that also exist in the so-called qualitative methodologies which, in general, have not been considered. On the other hand, it hinders critical and contextualized reading when quantitative data are brought to the discussion, whether in academic or public spheres (GATTI, 2004, p. 14, our translation).

The difficulties presented above demonstrate the impossibility of the use, interpretation, and discussion of quantitative data in the educational field by educators themselves. According to Gatti (2004), the most "flexible" and "robust" research on the field of education using a quantitative approach is conducted by economists, statisticians, and sociologists, for example, and not by professionals in this field.

The domain of knowledge on the part of researchers should permeate the theoretical/epistemological assumptions of collecting and analyzing quantitative data, in addition to knowledge of the problems and context in which these data are produced. For example, for Gatti (2004), only by mastering the theories about the quantitative approach is it possible to use and interpret it, combine quantitative techniques with qualitative results, and identify misuses and distortions of both methods and analysis.

Methodological approach

The study developed here is inserted in a qualitative approach, which for Oliveira (2014), is designed in the treatment of the collected data and is characterized by the attempt to explain the results with more depth and meaning through the selected data collection instruments, appropriating a documentary survey of the theses produced and defended in the Postgraduate Program in Education at the Federal University of Minas Gerais in the period from

2017 to 2019. This search aims to identify research that uses the quantitative research approach in its abstracts, methodologies, and theoretical framework.

Having the objective to be reached, traced some steps until arriving at the data analysis. In the first instance, a search was made in the Capes (Coordination for the Improvement of Higher-Level Personnel) theses catalog and later in the theses repository of the Federal University of Minas Gerais.

Started the search in the Capes Repository; given the vast research found there, it was decided to filter the data pertinent to the study developed here through refinement to find the theses from the institution mentioned above. The refinement was based on the criteria described in the table below:

Table 1 – Criteria for refinement of CAPES repository

Refinement Criteria	Responses to Criteria
Type	Doctoral Theses
Years	2017; 2018; 2019
Major field of knowledge	Humanities
Subject area	Education
Area of concentration	Education
Evaluation area	Education
Program	Post-Graduate education
Institution	Federal University of Minas Gerais

Source: Prepared by the authors

After the above refinement, found the following results: in the year referring to 2017, 61 theses; in 2018, 40 theses; and in 2019, not a single result was found in this repository. Not obtaining positive results in 2019, a search was made in the repository of UFMG itself, following some search criteria such as type of work, program, and year of defense, which obtained a positive quantity of 39 theses.

However, at the end of the two searches, we had the following result, summarized in the table below:

Table 2 – Total theses found in Capes and UFMG repositories

Repository	Year	Quantity
CAPES Federal University of Minas Gerais	2017	61
	2018	40
	2019	39
Total		140

Source: Prepared by the authors

After searching the two repositories, the result obtained was 140 from 2017 to 2019. The second step was the analysis of each of these theses, aiming to select the papers that used the quantitative approach in their research. This analysis was done by reading three components of the theses, namely: the abstract, introduction, and methodology, considered the main components in which the research approach appears, considering that in some research, it was not possible to locate the approach in the components cited, so the reading was deepened in the theoretical framework.

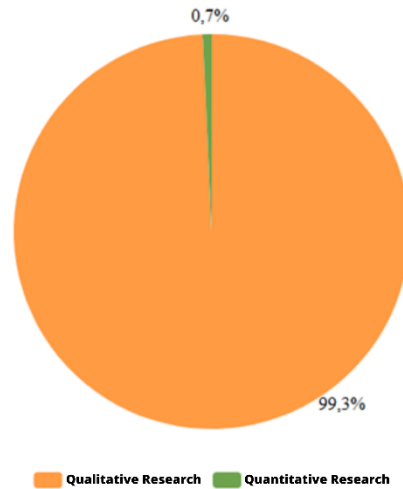
It is important to emphasize that some of the theses analyzed encountered difficulties in identifying their research approach, be it qualitative, mixed, or quantitative since the latter is the focus of this article.

Thus, after the analysis of the 140 theses found in the 2017-2019 triennium, only one research with a quantitative approach was found, defended in 2017, which will address in the following topic. However, the number found allows us to infer preliminarily that research with quantitative approaches is little used in the Graduate Program in Education at UFMG.

Results and discussions

As mentioned earlier, the search conducted in the Capes Repository and the Repository of the Federal University of Minas Gerais deals with research that used the quantitative approach in the triennium 2017-2019. However, 140 theses were found in general, and after the analysis under the aegis of some criteria to identify the theses that would have used the cited approach, found only on. Thus, we have the following graphic illustration:

Figure 1 – Graphic qualitative and quantitative research



Source: Collection of the authors

The Postgraduate Program Knowledge in Social Inclusion in Education at the Federal University of Minas Gerais currently has 12 lines of research, namely: 1) Curricula, Cultures, and Differences; 2) Teaching: Constitutive processes, teachers as sociocultural subjects, experiences, and practices; 3) Education and Sciences; 4) Education and Language; 5) Mathematics Education; 6) Education, Culture, Social Movements, and Collective Actions; 7) History of Education; 8) Childhood and Early Childhood Education; 9) Politics, Work and Human Formation; 10) Public Policies and Education; 11) Psychology, Psychoanalysis, and Education; 12) Sociology of Education: schooling and social inequalities.

It is worth mentioning that this graduate program is one of the largest and most respected in the country and that its wide area of knowledge, remarkable for the number of research lines, expresses its importance for contributing to the production of knowledge and research in Brazil.

The only thesis found that has a quantitative approach is entitled: "Conditions of Teacher Work in Basic Education Schools in Brazil: a quantitative analysis", authored by Edmilson Antônio Pereira Júnior, in which his research line is Public Education Policies - design, implementation, and evaluation, defended in 2017, under the guidance of Prof. Dr. Lívia Maria Fraga Vieira.

This thesis is structured as follows: introduction, three theoretical chapters, being named: chapter 1 - Basic Education in Brazil, chapter 2 - Teacher work in Basic Education, and chapter 3 - Teacher work conditions in Basic Education units. After the three chapters mentioned, the author discusses the methodological aspects that focused this analysis in the fourth chapter. Chapter 5 deals with the Results and Discussion, ending with the final considerations.

In the abstract, the author presents the main objective of the research, which is to investigate the working conditions of teachers in basic education schools. It emphasizes that to achieve the proposed objective, it will identify dimensions contemplated in comprehensive databases, verify the interrelationships among them and gauge their effects on teacher retention, sick leave, and job satisfaction analyzed as finalists' results (PEREIRA JÚNIOR, 2017).

It is noteworthy that the three theoretical chapters allowed the author a broad understanding of the topic under study, focusing his discussion on the conditions of the teaching work, explaining the various elements present in the daily lives of these professionals, as well as substantiating and contextualizing the Brazilian Basic Education at the expense of the teaching work with the analysis of 95 studies published between the years 1981-2015.

In this discussion regarding the literature review, the author highlights that:

In the literature, teachers' working conditions support the proper development of school teaching activities. For example, they can attract new professionals and retain teachers in educational establishments (PEREIRA JÚNIOR, 2017, p. 8, our translation).

In chapter four, the author discusses the methodology employed for the research development, which is called "Methodological aspects: data sources, measures, and analytical procedures". At first, the author states that the data analysis is supported by quantitative methods because, according to Richardson (2009, p. 71, our translation), "the researcher wishes to obtain a better understanding of the behavior of several factors and elements that influence a given phenomenon". It also highlights that the study follows the hypothetical-deductive logic, which for Lakatos; Marconi (2000, p. 80, our translation) starts from three aspects, namely: "a) formulation of hypotheses, from a fact-problem; b) inference of the predictive consequences, from the hypotheses; c) testing of the predictive consequences, through experimentation, to confirm or refute the hypotheses".

The study by Pereira Júnior (2017) used quantitative methodology, and the primary sources of data were the School Census, Prova Brasil (Brazil Exam), both developed by Inep/MEC, and the survey Teaching Work in Basic Education in Brazil (Gestrado/UFGM), conducted through sampling in seven states of the federation (Minas Gerais, Pará, Paraná, Goiás, Espírito Santo, Rio Grande do Norte and Santa Catarina).

Gatti (2004) states in his study that the quantitative approach is very important in educational research, but the researcher must know how to deal with the context of reflection, mastering them and not blindly submit to them, understanding that the treatment of these data

using indicators, inference tests, etc. offer indications about the issues addressed, not truths; that bring out similarities, proximities or plausibilities, not certainties.

Thus, it is necessary to understand that the approach used in a study is subjective to the researcher, according to its collection instruments and object, but brings to reflection from the data presented. For example, Klees (2017) states that qualitative studies are especially well suited to discovering causal relationships; they directly and longitudinally examine the local processes underlying a time series of events and states, showing how they led to specific outcomes and ruling out rival hypotheses.

Corroborating the presented, Nascimento *et al.* (2019) state that traditional quantitative methods are strong agents of the positivist research perspective, mainly due to the naive interpretation that numerical data represent the reality of facts. In the intention of moving away from this view, an advance was observed towards the development of the so-called mixed methods, mainly regarding quantitative interpretative analysis, which encourages a variety of analytical methods to understand the object of study better.

Based on the reflections presented, Gatti (2004) points out that currently, in educational research, excluding data analysis of school performance evaluations carried out in some educational systems in Brazil, only some studies employ quantitative methodologies. Thus, perhaps, the choice of the author of the thesis, Pereira Júnior (2017), is justified since the researcher points out findings of census data according to his objectives.

The author, Pereira Junior (2017), when analyzing the indicators separately and segmenting them according to the characteristics of schools (administrative dependency, exclusive stage of Basic Education, size, location), presents the data from the empirical research simultaneously, in which he develops the discussion. In this way, when referring to the measures of the sample research Trabalho Docente na Educação Básica, statistical tests (Analysis of Variance) are applied to verify the existence or not of significant differences between the values obtained in the subgroups. Next, two analytical models are developed to analyze the interconnections between the dimensions of working conditions for teachers in schools and other school context variables. In addition, it allows us to identify the influence of these measures on factors such as teacher retention, sick leave, and job satisfaction.

One of the gaps presented by the author of the thesis was the coverage of academic units in rural locations, especially small schools. The analytical model developed based on data from the School Census and the Prova Brasil (Brazil Exam) only included the schools included in both sources, which meant that schools with fewer than 20 students in the grades evaluated by Prova Brasil were not considered.

Thus, corroborating with the author above, Moreira (2014) presents the restrictions for using quantitative data and that these cannot constitute an obstacle to conducting studies. They may even represent a challenge for conducting studies; however, they should implement new methodologies of analysis, and the data are portraits of the everyday situation, which bring with them values and factors that will favor the collection instruments and what will be investigated.

Final considerations

The investigation of this article made it possible to perceive the attention to the use of the quantitative approach in research produced in theses at the Federal University of Minas Gerais (UFMG), with the period from 2017 to 2019 as the temporal framework. From the findings of the documental survey of the theses of the PPGE/UFMG, it can be seen that the number of Theses that present the use of the quantitative research approach in the chosen time frame is still insignificant. Of the 140 Theses found with the pre-selected search engines, only 01 presents the quantitative approach in the abstract, methodology, and data collection techniques. However, as exhibitions arise from the study, the difficulty of clarity is perceived as to the abstracts found in the research, making a relation as to the need to clarify to readers all the relevant information that should be in the abstracts of the studies of the academic works investigated.

When choosing the quantitative approach, the researcher should be aware that, despite the difficulties faced. The analysis made from quantified data, based on theoretical perspectives, provides concrete elements for the understanding of educational phenomena, requiring, from the researcher, sensitivity and focus, in addition to mastering the techniques used, bringing evidence to prove the conclusions obtained with the research.

The importance of this work contributes to thinking about the procedures adopted by the researchers, and the instruments adopted in data collection, pointing out the relevance of the theme proposed to the research. It is considered that from the research objective, where one wants to get to, the instruments are determined, as a possible glimpse of the results, not as definitive, thus choosing the most appropriate approach. The theorists who agree with the proposed theme and the line of research are necessary for recognizing the study and pointing out its divergent and convergent points.

Another relevant factor to the research is the predominance of works in the qualitative approach compared to the quantitative one. More than 99.3% of the works are qualitative. In

education, the criteria pointed out for choosing this approach are given by subjective relevance when doing the research.

In summary, the analyzed productions show that the quantitative approach has a smaller margin than the qualitative approach. What is also not underestimated is the choice defined by the authors since each research objective determines the appropriate procedures.

Finally, the reflections presented here will help us understand the investigated theme.

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How to refer to this article:

COSTA, M. A. A.; SOARES, S. L.; FLORÊNCIO, T. S. Quantitative approach in educational research: Perspectives in the Graduate Program in Education at the Federal University of Minas Gerais (2017-2019). **Doxa: Rev. Bras. Psico. e Educ.**, Araraquara, v. 23, n. 00, e022019, 2022. e-ISSN: 2594-8385. DOI: <https://doi.org/10.30715/doxa.v23i00.17833>

Submitted: 22/08/2022

Revisions required: 05/10/2022

Approved: 15/11/2022

Published: 30/12/2022

Processing and publication by the Editora Ibero-Americana de Educação.

Correction, formatting, standardization and translation.

