

# The Discipline of Special Didactics and the History of Mathematics Education: Supporting the Studies on the Mathematics Teachers Training at the College of Philosophy of Minas Gerais (Belo Horizonte, 1941-1954)<sup>1</sup>

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## ABSTRACT

The aim of this paper is to discuss the contributions of the Special Didactics study, particularly of the Special Didactics of Mathematics subject, to research in the History of Mathematics Education that focus on the training of teachers from Philosophy, Science and Language University in the first half of the 20th century. The considerations presented derive from an investigation of the Philosophy course, of a university of Minas Gerais, in Brazil, between the years of 1941 and 1954. The study of “Special Didactics of Mathematics” subject offered by the Didactics course of this same institution, allowed the highlight of the role designed by this subject in the affirmation or differentiation of teacher training models in that period and its relations with the emergence of a subjective position in the Brazilian scientific-academic field, creating professionals dedicated to thinking, discussing and producing knowledge about the relationship among teaching, education and mathematics in order to prepare mathematics teachers for secondary education.

**Keywords:** Special Didactics; Mathematics Teachers Training; History of Mathematics Education; Teaching to teach. Professionalization.

## Didática Especial e História da Educação Matemática: Contribuições de um Estudo sobre a Formação de Professores de Matemática na Faculdade de Filosofia de Minas Gerais (Belo Horizonte, 1941-1954)

## RESUMO

O objetivo deste trabalho é discutir contribuições do estudo da Didática Especial, particularmente da disciplina Didática Especial de Matemática, para pesquisas em História da Educação Matemática que tenham como foco a formação e atuação de professores nas Faculdades

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de Filosofia, Ciências e Letras na primeira metade do século XX. As considerações apresentadas decorrem de uma investigação sobre a Faculdade de Filosofia de Minas Gerais entre 1941 e 1954. O estudo da disciplina Didática Especial de Matemática, oferecida pelo curso de Didática dessa instituição, permitiu destacar o papel desenhado pela disciplina na afirmação ou diferenciação de modelos de formação de professores vigentes no período e as relações da disciplina com a emergência de uma posição subjetiva no espaço científico-acadêmico brasileiro, profissionais dedicados a pensar, a discutir e a produzir conhecimento em torno das relações entre o ensino, a educação e a matemática visando à formação de professores de matemática para o ensino secundário e para o curso normal.

**Palavras-chave:** Didática Especial. Ensinar a ensinar. Formação de Professores de Matemática. História da Educação Matemática. Profissionalização.

## INTRODUCTION

This paper has as objective to discuss contributions of the study of the Special Didactic discipline for the research in History of Mathematical Education in Brazil, especially for the studies on the formation and the performance of mathematics teachers in the first half of the century XX. The considerations presented here are derived from the research project *The scientific-academic position of Mathematical Education in Brazil: representations, institutions and policies*,<sup>2</sup> in development at the Federal University of Minas Gerais (UFMG).

In order to celebrate the 90th anniversary of UFMG, in 2017, we chose to study the University's Mathematics course in a historical perspective, seeking to outline a course of the course and to understand the spaces and times dedicated to thinking, discussing and producing knowledge about the relationships between teaching, education and mathematics aimed at the training of mathematics teachers. In this sense, the interest arose to study the first years of functioning of the Mathematics and Didactic courses, created at the Faculty of Philosophy of Minas Gerais and that would make, years later, the course of Mathematics UFMG.

In this text, we present a discussion about the formation of Mathematics teachers at the Faculty of Philosophy of Minas Gerais between 1941, the first year of the Mathematics course, and 1954, year of publication of the Yearbook of the Faculty of Philosophy of Minas Gerais (Anuário, 1954), document that brings important information about the initial years of operation of the Faculty of Philosophy and that guided the look to the other researched sources.

In order to promote such a discussion, we focus on the Special Didactics of Mathematics, a course in Didactics that indicates a work involving teaching methodologies for the qualification of mathematics teachers and that promotes the emergence of a subjective and institutional position authorized to “teach teaching math”.

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## THEORETICAL-METHODOLOGICAL ORIENTATIONS

“One day, with a better historical perspective, which naturally dies to us today, someone will do the justice due to the spent and brave masters who created it” (Anuário..., 1954, p.17).

The above passage is present in the Yearbook of the Faculty of Philosophy of Minas Gerais, in an introductory text that deals with the first years of operation of the institution. It seems that the conflicting movement of establishment of the Faculty of Philosophy and the difficulties of organization and functioning faced in the first years motivated the authors of the text to demand of time and of making historical the reparation of certain injustices of the past, recognizing, for example, the efforts undertaken by the founders of the Faculty of Philosophy of Minas Gerais.

Although our research is interested in the first years of operation of the institution, it does not seek with it to “do justice”, as if it were the purpose of historiographic work to repair the past. The historical perspective with which we (Foucault, 2002; Fernandes & Morais, 2017) it does not intend to judge the past; it does not seek to ask for an origin or for causal and teleological relations. It is not yet a matter of showing by what means certain social configurations, positions of subjects and objects, powers or forms of knowledge were manifested and / or modified in different times and spaces. In contrast, what is sought is to arrive at these elements through practices that allowed it to emerge as a historical concern, with visibility and readability; search for a node that articulates events and establishes a soil in which certain social configurations, positions of subjects and objects, powers and forms of knowledge can be constructed, circulated and produce effects. Like this,

When we value the study and the discussions about the trajectory of the initial formation of teachers of Mathematics in the country, we recognize the contributions of historical thought, averse to the acceptance of information and ideas that are oblivious to the consideration of the scenarios in which they appeared, the focus on the potentialities and limits of the knowledge that circulated in the different moments of the trajectory of the initial formation of teachers of Mathematics in the country. (Gomes, 2016, p.425)

Based on these guidelines, written sources were consulted – such as curricular projects, syllabuses and syllabi, minutes and others – present in the archive of the Faculty of Philosophy and Human Sciences (FAFICH) of UFMG. Although the state of preservation and organization of archival documents was very precarious, and despite the efforts of the official responsible, the richness of the documents and the meeting with the Yearbook of the Faculty of Philosophy of Minas Gerais (Anuário ..., 1954) indicated new directions to the search.

One of these directions was the need for a temporal cut that had as starting point the year of beginning the activities of the Mathematics course in 1941, and as a final mark the

year of 1954, publication period of the Yearbook of the Faculty of Philosophy of Minas Gerais. During this period, we were interested in understanding how the establishment and functioning of the Special Mathematics Didactics was established, since, as we will detail later, a syllabus of the discipline appears in the Yearbook and allows relationships with the formation and performance of teachers of mathematics in the first half of the XX.

### **THE FACULTY OF PHILOSOPHY OF MINAS GERAIS AND THE COURSES OF MATHEMATICS AND DIDACTICS: BRIEF CONSIDERATIONS**

The Faculty of Philosophy of Minas Gerais arose from the interest of intellectuals who militated in the cultural and political life of the capital of Minas Gerais and divided their time between newsrooms and classrooms of the main colleges of Belo Horizonte (MG). It had as one of its pillars the so-called “disinterested knowledge”, the development of a scientific knowledge that was not strictly linked to professional training.

According to Haddad (2015), these intellectuals criticized the higher education taught by traditional schools, in which the “basic sciences” were worked according to the interests and objectives of a certain professional formation, being “Mathematics and Physics taught according to practical needs of the engineer, Chemistry according to the demand of the pharmacist or doctor, and so on” (p.55). Therefore, the commitment of these intellectuals was by a different formation from the one that happened in the professional schools, a formation in which “the intellectual restlessness stimulated the creation, cultivating the knowledge by itself, without immediate preoccupations” (p.55).

On November 5, 1940, by Decree-Law 6.486, the Faculty of Philosophy was authorized to organize and operate the courses of Philosophy, Mathematics, Geography and History, Social Sciences, neo-Latin Languages, and Classical Languages, begun in 1941 and recognized on March 26, 1946, by Decree No. 20,825. Other courses – Physics, Chemistry, Natural History, Anglo-Germanic Letters, Pedagogy – began in 1942 (in a precarious situation despite their efforts), but were only recognized by Decree No. 23,841 of October 14, 1947.<sup>3</sup> The Didactics course started in 1944, when the first graduates graduated.

In the Yearbook of the Faculty of Philosophy of Minas Gerais (*Anuário ...*, 1954) we find records of the organization of the Faculty of Philosophy of Minas Gerais, similar to that adopted by the National Faculty of Philosophy (FNFi), founded in 1939. This similarity, as we shall see, reinforces the understandings that indicate that the FNFi as

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<sup>3</sup> In this text, we do not intend to detail events related to the founding of the Faculty of Philosophy of Minas Gerais. However, we point out that this discussion is presented in the works of Haddad (2015), Faria, Souza and Fonseca (2016) and others.

a model for Colleges and Institutes assimilated at the time. According to Ferreira and Passos (2013, pp.4-5):

The organization of the FNFi courses started from the conception that teacher training juxtaposed to the baccalaureate through pedagogical disciplines, since the FNFi was organized in different sections, a fact that prevented an integration between the different areas of knowledge. Prevalence of the conception of baccalaureate culture, in which the mastery of scientific contents was sufficient for the formation of a good teacher. Teacher training took place through a pedagogical complementation, disarticulating the complexities and specificities that involved teacher education (PASSOS, 2005). Candidates for the secondary teaching profession should take the Didactic Course<sup>4</sup>, which lasts 1 year, after the completion of the baccalaureate course. This teaching structure became known as the “3 + 1 scheme”, and the concept of a licensee arose: the bachelors who attended the course group of Didactics, obtained a license to secondary teaching and graduated from the Faculties of Philosophy, Sciences and Literature. (Castro, 1973)

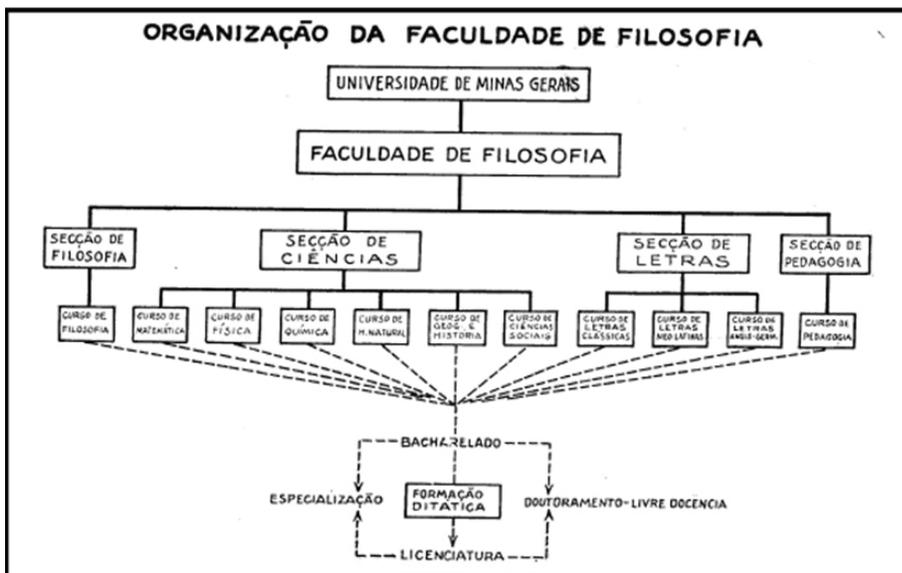


Figure 1. Organization of the Faculty of Philosophy of Minas Gerais (Anuário..., 1954, p.28).

As can be seen, the different Sections of the Faculty of Philosophy of Minas Gerais (Philosophy, Sciences, Literature and Pedagogy) housed the baccalaureate courses associated with them. Only upon completion of the Bachelor’s Degree could the student join, having an interest in the Didactics course, obtaining with this training the Degree.

The Science Section was responsible for the Mathematics course, organized in three years. Analysing the disciplines and programs of this course, also present in the Yearbook (1954), we realized that the focus is on mathematical knowledge, without explicitly discussing teaching or education. On this, Gomes (2016, p.429) points out that several authors who deal with the subject “observe that the main function of the course was the preparation of mathematicians, being in the background, subordinated to the formation of the scientist, the goal of professional training of teachers”.

The Didactics Section was, in turn, responsible for the Didactics course, organized in one year. It seems that the training of teachers in different areas differed in the course of Didactics only by the specificity promoted by the set of disciplines that make up the Special Didactics, since the Yearbook brings different programs for this set of disciplines – the “Special Didactics of...”, which associates the contents of the subject with the areas of training determined by the Bachelor – and identical programs for the other subjects of the didactics course.

**1. Curso de Matemática**  
**1ª Série:**  
 Análise Matemática — Geometria Analítica e Projetiva — Física Geral e Experimental  
**2ª Série**  
 Análise Matemática — Geometria Descritiva e Complementos de Geometria — Mecânica Racional — Física Geral e Experimental  
**3.ª Série:**  
 Análise Superior — Geometria Superior — Física Matemática — Mecânica Celeste

**Curso de Didática**  
 Didática Geral — Didática Especial — Psicologia Educacional — Administração Escolar — Fundamentos Biológicos da Educação — Fundamentos Sociológicos da Educação

Figures 2 and 3. Curricula of Mathematics and Didactics courses (Anuário..., 1954, p.29/32).

For Moreira (2012), conceptions associated with school teaching may have functioned as the foundations on which such structure emerged – what we now identify as the “3 + 1 model”. The author emphasizes that, at that time, “Teaching was seen, essentially, as transmitting the knowledge of the teacher to the student. And to learn was basically to receive this transmission without much noise” (1138). Thus, in a general way, the student learned in the first three years the mathematical content (Mathematics course) and, at a later stage, he learned to transmit it (Didactics course).

Thus, in disciplinary terms, the predicted curriculum for the training of mathematics teachers in the Didactics course was different from that employed in the training of teachers in other areas only by the presence of the Special Didactics of Mathematics discipline. This motivated our interest in the study of this discipline, since it presents indications of being the main institutional space dedicated to questions and discussions on the relationship between teaching, education and mathematics aimed at teacher training.

## **THE SPECIAL DIDACTICS OF MATHEMATICS AND THE TRAINING OF MATHEMATICS TEACHERS AT THE FACULTY OF PHILOSOPHY OF MINAS GERAIS**

As punctuated, we were interested in the modes of organization and operation of the Special Mathematics Didactic course offered by the didactics course. The need for a more careful look at this type of course – the “Special Didactics of ...” – had already been indicated by Melo and Araújo (2016) who, when discussing the formation of teachers in the Faculty of Philosophy of Minas Gerais between 1939 and 1948, write:

The Yearbook of the Faculty of Philosophy (Anuário, 1954) [...] details the Special Didactics in: Special Didactics (DE) of Philosophy, DE of Mathematics, DE of Physics, DE of Chemistry, DE of Natural History, DE of Geography and History and Social Sciences, DE of Social Sciences [sic], DE of Portuguese and Literature, DE of neo-Latin Languages, DE of Pedagogy. **A good question would be how were Special Didactics organized from 1944, in the early years of the course?** [Emphasis added] (Melo & Araújo, 2016, p.55)

As observed by the authors, the program of these disciplines appears in the Yearbook of the Faculty of Philosophy of the University of Minas Gerais, and the Special Didactics of Mathematics program is presented below:

<b>DIDÁTICA ESPECIAL DE MATEMÁTICA</b>	
1	— <b>As ciências matemáticas. Seu objeto, caracteres e processo.</b>
2	— <b>A definição matemática.</b>
3	— <b>Os axiomas e os postulados.</b>
4	— <b>Matemáticas modernas e geometrias não euclidianas.</b>
5	— <b>A Demonstração. Sua natureza, espécie e regras.</b>
6	— <b>História da Matemática e história do ensino da Matemática.</b>
7	— <b>Os objetivos do ensino da Matemática.</b>
8	— <b>Métodos de ensino da Matemática.</b>
9	— <b>Princípios psicológicos, lógicos e pedagógicos que fundamentam o ensino da Matemática.</b>
10	— <b>Escolha, seleção e organização da matéria.</b>
11	— <b>A motivação no ensino da Matemática.</b>
12	— <b>Os livros de texto. A verificação do aprendizado.</b>

Figure 4. Specialized Mathematics Didactics Program (Anuário..., 1954, p.219).

Topics 1 through 5 of the syllabus suggest a conception of mathematics close to what the student had contact in the baccalaureate, based on “mathematical science”, “definition”, “axioms”, “postulates”, “demonstrations”. Topics 7 to 12, on the other hand, indicate a work that relates teaching, education and mathematics, including discussions related to the performance of the teacher, such as “objectives of teaching mathematics”, “teaching methods”, the “psychological, logical and pedagogical principles that underlie the teaching of mathematics”, etc. This order of presentation of the topics (the first ones related to mathematics and the last associated to education or education) seems to reinforce the conception of teacher training that operated more intensely in the Faculties of Philosophy, Sciences and Letters of the country, which argued that the “mathematical training ‘should precede’ pedagogical training”. In the program, there is no mention of teaching methods or even a suggestion of bibliography.

In this sense, we believe that the study of the Special Didactics of Mathematics allows us to elaborate understandings about the conceptions of mathematics teacher training in the Faculties of Philosophy, Sciences and Letters in the first half of the century XX. In our study, the program indicates the discipline as a space that reinforced the idea that to be a professor of mathematics it would be necessary to carry out a thorough study of scientific mathematics that, in the encounter with the educational concerns promoted by the didactics course, would become mathematical knowledge taught at school. In addition, the same program seems to indicate the very intentions of the Faculties of Philosophy, Sciences and Letters in Brazil, which, on the one hand, had the purpose of developing a scientific knowledge that was not related to professional training (“disinterested knowledge”) and, on the other hand, they fulfilled the role of institutions responsible for preparing teachers for teaching in secondary education, which was expanding in the period. This double function, as Sucupira (1969, 261) points out, was justified by the “tradition of professional higher education [in Brazil] where the idea prevailed that every professional higher school should always correspond to a technical specialty objectifiable in terms of liberal profession, “and thus” premature creation of a faculty solely for pure scientific research”.

Due to the difficulty in finding in the file of the FAFICH material related to the modes of organization and functioning of the Special Mathematics Didactics course, the discussion about the topics covered in the course was restricted to the present program in the Anuário... (1954). However, we believe that the continuity of the research, based on different sources and collections, would allow other elaborations on the conceptions of training and performance of mathematics teachers in the period or on the role played by the discipline in affirming or differentiating these conceptions. Our discussion only seeks to highlight the potential of mobilizing the Special Didactics of Mathematics to discuss historical aspects related to the formation and performance of mathematics teachers in Brazil at the beginning of the century XX.

## **THE SPECIAL DIDACTICS OF MATHEMATICS AND THE EMERGENCE OF NEW SUBJECTIVE POSITIONS IN THE BRAZILIAN SCIENTIFIC-ACADEMIC SPACE**

As we pointed out, the Yearbook of the Faculty of Philosophy of Minas Gerais brings the programs of the “Special Didactics of ...” subjects offered by the Didactics course. However, in the consultation with the FAFICH archive we observed that, during the analysed period, it was not possible to offer a specific Special Didactics for each training area. Two documents from the collection accentuated this understanding: a schedule of Didactics course, in which the General Didactics and Special Didactics courses were offered the same day by the same teacher – Filocelina da Costa Matos de Almeida, Professor of General Didactics and Special – and at consecutive times; and a list with the contents worked in the Special Didactics course, in which we observed only subjects related to the teaching of Portuguese Language and Geography.

The absence of a specific Special Didactics for each area of training led us to think about the ways in which the Special Didactic Mathematics course was organized and functioning, which did not appear in the documents analysed either – we had only the program presented in the Yearbook, as shown in the previous section. From this came the need to address the professional qualification of teachers of the Faculty of Philosophy of Minas Gerais, since in other documents the Special Didactic discipline under the responsibility of Professor Filocelina da Costa Matos de Almeida, professor of General Didactics and Special Didactics, now under the responsibility of teachers who seemed not to have, at least through the descriptions presented, specific training for this work.

In discussing the professional qualification of the Faculty of Philosophy professors, Haddad (2015) points out that in the first years of operation there was a great evasion of university professors caused mainly by an institutional security crisis.

Professors, liberal professionals, had other priority occupations in the doctor’s office, in the construction company, in the law firm, where they received greater benefits. But the question is more complex and its base is the lack of professionalism of the magisterium, particularly in the Faculty of Philosophy, which did not present the minimum conditions for its exercise. The lack of criteria to define the prerequisites for training for teachers, the dispersion of content in various schools, especially in the area of Human Sciences, improvisation, symbolic remuneration and the poor material and pedagogical base of the school favoured a situation in which that virtues and feelings such as dedication, understanding, detachment, availability were often more important than competence. (Haddad, 2015, p.93)

The occupation of professors by liberal professionals, however, seems to be not only linked to the possibility of reconciling teaching with their professions, minimizing the consequences of the precarious working conditions pointed out by Haddad (2015), but also to the lack of teachers trained for to work the contents provided in the programs

of the subjects of the Faculty of Philosophy. It is worth emphasizing that in previous periods to the founding of the Faculties of Philosophy, Sciences and Letters prevailed in Brazil a superior education committed exclusively with the professional formation, in courses like Medicine, Engineering, Law and Agronomy. Thus, the proposal of higher education aimed at “disinterested knowledge”, from a theoretical and scientific perspective, appeared as deficient in that the professionals who worked as teachers were trained in professional schools of applied knowledge, from a practical-functional perspective.

If this lack was evident in the subjects of the Mathematics course<sup>4</sup> – even with demands teachers are being supplied, often by engineers (Ferreira, 2012) –, in the Special Didactics of Mathematics discipline it appeared more markedly. This is because in the first half of the twentieth century there were still little expressive spaces in Brazil dedicated to thinking, discussing and producing knowledge about the relationship between teaching, education and mathematics in order to train mathematics teachers.

The lack of qualified teachers, especially for the work with Special Didactics, should not be associated, however, with a lack of development of the region where the Faculty of Philosophy was located or with a “lack of interest” of the subjects for that qualification. Belo Horizonte, during the period, had prominence in the artistic, cultural and educational scenario of the country, and Minas Gerais personalities occupied important positions and representations in political-governmental institutions. It is understood with this research that the lack of these professionals is mainly due, but not exclusively, to the novelty of the proposal of the Faculty of Philosophy, focused on “disinterested knowledge”, and the construction of a discourse – today, apparently naturalized – the need to train “professional teachers” for Secondary Education and for the Normal Course. For this, the Faculty of Philosophy was assigned the task of preparing the teacher for the exercise of his profession, requiring, among other things: 1) the proposal of a professional formation that surpasses the autodidactic culture of the predominant teachers in the country; 2) the creation of an identity of formation, expressed by the similarity between the structure and the modes of organization and operation of the courses; and 3) the production of a set of procedures aimed at standardizing training, applying a series of regulations that would enable the maintenance of these courses and the circulation of new professionals. Thus, the novelty of the higher education proposal of the Faculty of Philosophy and the construction of a professional, identity and normative discourse on teacher education seem to inaugurate the need for qualified professionals to “teach teaching”.

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<sup>4</sup> We will not enter here in a discussion about the lack of qualified professionals to work in the Mathematics course. However, in the course of the Mathematics course of the National Faculty of Philosophy, Fávero (2003) comments that, beginning in the 1950s, the course entered a period of stagnation motivated by factors such as the crisis in the university system of time, the impossibility of offering working conditions similar to other institutions of the period and the difficulty of finding qualified teachers. These factors, still local, show difficulties of personnel present in the Faculties of Philosophy, Sciences and Letters of the period.

In investigating the history of General Didactics at the National Faculty of Philosophy between 1939 and 1968, Fonseca (2015, p.224) points out that:

[...] although in the 1920s and 1930s the preoccupation with the organization of a specific and specialized training process for the exercise of teaching was evident, there was not yet a “didactic discourse” or the use of this term to designate a knowledge, a specific area of knowledge or discipline. That is, the idea of a discipline so named was not present in the different legal systems that organized the training of teachers for the Brazilian educational system that was constituted for the first time.

Thus, the fact that Didactics – and, we add, the Special Didactics – was not treated in the period as a specific area of knowledge or a discipline, indicates that there was little or no availability of qualified professionals to teach their subjects. In fact, Garcia (1994 apud Ferreira, 2011) says that this lack often meant that teachers of Special Didactics were recruited among the outstanding students of the Didactics course.

According to Fonseca (2015), discussions about the centrality of learning, the scientificity of education and university teacher education, present in the pedagogical discourse of the 1920s and 1930s, enabled the emergence of Didactics as a necessary knowledge for the teacher. Consequently, we understand that the construction of this knowledge promoted the need for qualified professionals to “teach teaching”, requiring not only a new knowledge in the scientific-academic space, but also the constitution of a subjective position in higher education that, in a professional perspective, would be allowed to “teach teaching mathematics”. The proposal of professionals dedicated to thinking, discussing and producing knowledge about the relationship between teaching, education and mathematics, aiming at the training of teachers of mathematics for Secondary Education and for the Normal Course, emerges.

Recently, the Mathematical Education History Research Group in Brazil (GHEMAT) began the project Mathematics in teacher training and teaching: processes and dynamics of production of professional knowledge, 1890-1990, which focuses on the objective knowledge, elaborated in historical processes and articulated dynamics between the formation of teachers and the teaching of mathematics. This project has allowed the group to guide and conceptually elaborate the so-called knowledges to teach, “which maintains links with scientific university disciplines, with specific fields of knowledge produced outside of the school and are the object of teacher’s work”, and knowledge to teach, fruit of historical elaboration of the teaching profession, tool used to better carry out the task of teaching the knowledge that society attributes to the school as its institutional function” (Valente, 2017, p.214).

The cited project and the problematic of this text come closer to the extent to which they seek to understand how a set of ideas, knowledge, circumstances and subjects are directed to the task of “teaching to teach mathematics”, particularly in the historical

conditions of formation of teachers and mathematics teaching at the beginning of the century XX. Perhaps, what differentiates these actions, even if they do not distance them, is the most intense concern of this research with the processes of subjectivation that, amid the dynamics of knowledge and powers of the scientific-academic space originated by the creation of the Faculty of Philosophy of Mines General, promote the emergence of subjective positions that come to claim such knowledges and powers, acting as agents and effects of their production and maintenance. Here, interest rests in the power-know-subject triad; I understand them as inseparable and interchangeable.

It is in a sense that we understand that the constitution and consolidation of Mathematics Education in the scientific-academic space have a historical dimension to be faced. The study of this dimension passes, inevitably, by movements that tell of the processes by which certain objects and subjects are given as natural and necessary. It is a question of showing that the generation of knowledge and that the emergence of disciplinary fields does not only pass through the appearance of new objects, concepts, techniques, methodologies, in the sense of an “epistemological” history, but also gives birth to new forms of subject. (Fernandes & Morais, 2017, p.249)

Our research suggests, then, that the Special Didactics of Mathematics discipline establishes relations with the construction and promotion of a professional, identity and normative discourse about the formation of teachers in the first half of the twentieth century; a discourse that demanded of his time the emergence of a subjective and institutional position that claimed a knowledge about “teaching to teach mathematics” and that maintains important ties with pedagogical practices and ideas that circulated in the period.

The processes that involve the emergence of these professionals – who assume a subjective and institutional position that authorizes them to produce, divulge and legitimize ways of “teaching to teach mathematics” – help to understand, even locally, how they happen to be gestated in the scientific scenario –academic spaces that systematically address the knowledge arising from the need to relate teaching, education and mathematics to the training of mathematics teachers.

## **FINAL CONSIDERATIONS**

With this work, we learned the potential of the study of the Special Didactics of Mathematics to understand the formation of mathematics teachers in the Faculties of Philosophy, Sciences and Letters in the first half of the twentieth century, which may contribute with different research fronts in History of Mathematics Mathematical Education.

As we have tried to show, the novelty of the proposal of higher education of the Faculty of Philosophy of Minas Gerais, which maintained the dual function of developing a scientific knowledge that was not related to professional training (“disinterested knowledge”) and, at the same time, professionals for teaching in secondary education and in the normal course, together with the construction of a professional, identity and normative discourse on teacher training, seems to stimulate ways of organizing and functioning the Special Didactics of Mathematics course, inaugurating, at the limit, the need of qualified professionals to “teach teaching mathematics”.

## AUTHORS' CONTRIBUTIONS STATEMENTS

F.S.F. oversaw the project. P.H.S.A. and L.H.C.A.C. carried out the field activities and survey of sources. All authors analyzed the data, discussed the results and contributed to the final version of the manuscript.

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