



**Stories of Life and Education of Teachers who teach
Mathematics: Aspects of the education in the Magisterium level in
the interior of São Paulo**

**Histórias de Vida e Formação de Professores que Ensinam Matemática:
aspectos da formação em nível de Magistério no interior de São Paulo**

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ABSTRACT

The text deals with aspects of the life histories of teachers who have completed Normal Courses and/or Specific Teaching Qualifications (HEM), more specifically in the region of São José do Rio Preto/SP. The discussions are the result of a master's research, whose objective was to constitute a historical narrative about teacher education at secondary level. The research methodology used was the Oral History, which allowed us to understand the aspects of family education, childhood, high school education of these teachers, as well as their teaching practices. In addition, the narratives reiterated that HEM misread the proposal of the Normal Course, due to its new structure associated with the 2nd degree. Regarding the subjects related to Mathematics Teaching Didactics, it is evident that this formation also lost the character of discussion about teaching materials, methods and practices in supervised internships over the course years.

KEYWORDS: Normal Course, Specific Habilitation for the Magisterium, History of Mathematics Education, Oral History, Region of São José do Rio Preto/SP.

RESUMO

O texto versa sobre aspectos das histórias de vida de professores que concluíram Cursos Normais e/ou as Habilitações Específicas para o Magistério (HEM), mais especificamente na região de São José do Rio Preto/SP. As discussões são resultantes de uma pesquisa de mestrado, cujo objetivo foi constituir uma narrativa histórica sobre a formação de professores em nível secundário. A metodologia de pesquisa utilizada foi a História Oral, que permitiu tecer compreensões sobre aspectos da formação familiar, infância, formação em nível médio desses

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professores, bem como suas práticas docentes. Além disso, as narrativas reiteraram que as HEM descaracterizaram a proposta do Curso Normal, em função de sua nova estrutura associada ao 2º grau. No que tange às disciplinas relativas à Didática do Ensino de Matemática, evidencia-se que esta formação também perdeu o caráter de discussão sobre materiais, métodos e práticas de ensino em estágios supervisionados ao longo dos anos do curso.

PALAVRAS-CHAVE: Curso Normal, Habilitação Específica para o Magistério, História da Educação Matemática, História Oral, Região de São José do Rio Preto/SP.

Introduction

The article presented here discusses some results of the master's research (SILVA, 2015) on secondary level teacher training courses in the 1980s and 1990s, more specifically in different cities of the São José do Rio Preto region/SP³. In its development we use the methodological contributions of Oral History to conduct and treat interviews with eleven teachers, whose qualifications were obtained from secondary level courses. In addition to the interviews, we also use written sources found in the region during the production of data⁴, in order to constitute a story about teacher education in that context and period.

The research collaborators were composed by teachers, students and coordinators who graduated in one of the following secondary level courses in São Paulo: Normal Courses, Specific Teaching Qualifications (HEM), Specific Training and Improvement Centers for the Magisterium (CEFAM). In this text, we will discuss how to characterize aspects of teacher education in the Normal Course and in HEM, from the meanings attributed by the interviewees in the high school courses, their practices and the ways of operating in education in São Paulo.

Although Oral History is based on some procedures, such as the composition of a script or thematic sheets, the elaboration, transcription and textualization of the interview, and the legitimation of the production of the source by the collaborators through the assignment letter of We always understand it as a methodological process unique to each research. We refer to the way the method is being reframed from the works already developed in the Research Group

³ Most of the teachers participating in the research mentioned here took the teacher training course (Normal, HEM, or CEFAM) in cities in the São José do Rio Preto Region, but not all. Of those mentioned in this article, two teachers took their courses in Lins/SP, a city that is not located in the São José do Rio Preto region. Therefore, in some moments, we refer to these courses as being from the state of São Paulo and not exactly from the region of São José do Rio Preto/SP.

⁴ During the period of data production for the research, documents that helped in understanding the research theme, were found in the Teaching Board of Fernandópolis and São José do Rio Preto, in the Municipal Library of São José do Rio Preto, such as teaching proposal of the Specific Center for Training and Improvement for Teaching (CEFAM) course, researches on this course, materials from teachers, newspapers of the time, curriculum, among others.

Oral History and Mathematical Education (GHOEM) and during the research itself. Therefore, we understand that we do not use a method in our research but create our own methodological inputs necessary for the understanding of our objects of study. Another relevant aspect to highlight about the work with oral sources is “the unfinished nature of a work in progress”, since there are always new questions to be asked about the sources produced, regarding the meanings attributed by the interviewees to the lived experience. (PORTELLI, 1997, p. 36).

This study corroborates the interests of GHOEM, which for 20 years investigates the History of Brazilian Mathematical Education, having as qualitative methodology, the Oral History. Part of the historiographical studies studied and developed in the research group belong to the Mapping Project of Teacher Education and Teaching that teaches/taught Mathematics in Brazil⁵. teacher training that teaches mathematics and, by studying the meanings attributed by the interviewees to their education, teaching practice and their cultures in general.

A brief description of the research scenario

For the master's research ten interviews were conducted with eleven⁶ collaborators. All respondents were initially trained at the secondary level and, due to the demands of curricular guidelines, legislation and teaching experiences (including the LDB. 9,394 / 96), all have a Higher Education, being their diverse formation: Psychology, Mathematics, History, Geography, Letters, Higher Normal and Pedagogy.

The narratives produced from the interviews bring elements about the processes of teacher education at the secondary level comprising the decades from 1960 to 2000, a period in which, in the state of São Paulo, teacher education at this level was still in force. Given the time frame of the research, in Silva (2015) it was possible to analyze and discuss the transience of the Normal Course, the Specific Qualification for Teaching (HEM), and, above all, the last

⁵ More information about the Project in: GARNICA (2014) and GARNICA (2018).

⁶ Satiko Aramagui, Elaine Cristina Magri da Silva, Maria Aparecida de Souza Roderio, Irma Aparecida Milani Guarnieri, Ayrton Luís Arnoni, Ednéia Otávia de Souza Costa, Adriana Cristina Pinheiro Félix, Dora Ivana Bergamo do Rálio and Mirtes Abdelnur. Collaborators Renata Cidrão dos Santos Rodrigues and Simone Caldeira da Silva were interviewed together, as they were part of the management (principal and deputy principal) of a school in the Fernandópolis municipal network. The interviews were conducted in the cities of Catanduva, Fernandópolis, Jales, Sao Jose do Rio Preto and Votuporanga, both belonging to the mesoregion of Sao Jose do Rio Preto/SP.

educational policy of São Paulo at secondary level – CEFAM⁷, implemented in 1988 and extinguished in 2003, with the conclusion of the classes in 2005 throughout the state of São Paulo.

For the purposes of this text, some elements of the narratives of five of the interviewees will be presented and discussed, namely: Ayrton Luís Arnoni, Irma Aparecida Milani Guarnieri, Maria Aparecida de Souza Rodero, Mirtes Abdelnur and Satiko Aramagui. acted in the Normal Course and HEM.

From the interviews conducted and their treatment, we were able to understand movements that occurred in the lives of our employees, especially those that occurred in the education scenario, because, on the one hand, they are themes that populate our works and objects of research in Education (Mathematics) and, on the other, are distant scenarios from the walls of universities. Oral History allows, in this sense, an approximation of the academy with educational realities, it is a means to know, to stranger them, to denaturalize them.

As much as we know about the Normal Course or HEM through relevant literature and legislation, the set of narratives allows an approximation with stories of education and (dis)continuities that have occurred over time, which we do not follow. Through narratives we can also discuss aspects highlighted by these teachers who lived daily those formative processes. Thus, from this complexity of stories, we will understand how our collaborators attribute meanings to their practices and the ways of making meanings to education in those circumstances and today.

The Normal Courses were responsible for the formation of teachers throughout history in Brazil⁸, being marked⁹ by changes in its structure, culminating with the transformation of the Normal Course in the Specific Teaching Qualifications through the Law of Guidelines and Bases No. 5.692 of 1971, “This qualification, which, in the spirit of general and compulsory professionalization, has been dispersed among other qualifications, and its specific training has decreased due to this new structure of the 2nd degree” (GATTI, 1997, p. 42). The following are

⁷ More information about the implementation of CEFAM in the state of São Paulo in: SILVA (2015).

⁸ The first Normal School was created in Brazil in 1830 in the city of Niterói/RJ, being the first in Latin America, and also a pioneer in public education worldwide, since those in the United States were private schools. These schools were later created in other Brazilian states, and in 1949, they made a total of 540 scattered throughout Brazil (ROMANELLI, 2010).

⁹ See, for example, the studies by Romanelli (2010) and Tanuri (2000) that discuss the changes occurring in the Organic Laws (Decree Laws 8.529 and 8.530) of 1946.

some perspectives of the interviewees in the research conducted about their experiences in these courses, but these are told in the midst of their life trajectories.

Lives and conjunctures in teacher education at secondary level in São Paulo

Unlike the written text, the oral narrative is renewed with each count as it passes through the speaker's body and mind. So even as singers and storytellers strive to repeat the story and the song 'the way I heard', 'the way it was told' - and they believe they do - oral performance is a constant experience. change, located in time and space, shaped by both the listener's reaction and the performer's mental state. Therefore, even in the most repeated history, there is always a degree of improvisation and reinvention (PORTELLI, 2016, p. 98).

Professor Ayrton Luís Arnoni, one of the interviewees, worked for over 45 years in the state school system and, at the time of the interview, he was in Teaching Supervision in the Teaching Board of Jales/SP. Arnoni entered in 1959 at the State Institute of Education "9 de Julho" in the city of Taquaritinga/SP, where he made the gym and completed, in 1966, the Normal Course lasting three years¹⁰. According to him, the internships were held in the primary school of the School Group, attached to the Institute of Education, whose practical classes conducted during the internships were evaluated by the teacher responsible for the class group and the teacher of the Normal Course. Students were evaluated for performance and when they did not teach, they attended the lectures of the class's conducting teacher. Teacher training classes took place in the mornings, and in the afternoon, students returned to the internships. Our collaborator reported some episodes in relation to the teaching of mathematics during his schooling:

I have a disapproval in my life in 5th grade, which today is 6th grade, in the Mathematics component. I needed the final test of grade 4.2 and got 4.0, so for two tenths I was forced to do grade 5 again. The problem was the math worked with me in the early years. It was a mathematics that the student was not led to understand the problem situation, there was no use of reasoning and this was a constant in the early grades. When it came to the 5th grade, it was the Mathematics of the sets and started working very early with theorems, theses, hypotheses, for me the happiest time was the CQD - (As We Wanted to Demonstrate), all memorized. These were things we didn't understand, you memorized. I began to have a better understanding of

¹⁰ "According to art. 8th of Decree-Law 8,530, of 2/1/1946, was as follows the curriculum of the Normal Course of 2nd cycle: Portuguese (1a), Mathematics (1a), Physics and Chemistry (1a), Human Anatomy and Physiology (1a), Music and Choral Singing (1a, 2a, 3a), Drawing and Applied Arts (1a, 2a, 3a), Physical Education, Recreation and Games (1a, 2a, 3a), Educational Biology (2a), Educational Psychology (2a, 3a), Hygiene and Health Education (2a), Hygiene and Childcare (3a), Primary School Methodology (2a, 3a), Educational Sociology (3a), History and Philosophy of Education (3a), Teaching Practice (3a)". (TANURI, 2000, p. 76).

mathematics in teacher training, which had a line of understanding, reasoning. (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 99).

For Arnoni, in the School Group and Gymnasium began the work of demonstrating theorems, which required students to memorize a lot without understanding the subject¹¹. Our collaborator pointed out that the Mathematics discipline worked in the Normal Course was aimed at Primary School students and, from the Didactic classes, noticed the change of perspective in relation to the teaching of Mathematics, which helped him in the comprehension and knowledge of the contents, besides the making of teaching materials. These practices, according to him, was the easiest way to make the mathematics classes offered in the Normal Course “more understandable”.

In 1968, Arnoni was already qualified, but could not teach because there was no room to work in the Taquaritinga region. So, in 1969, he decided to move to the Jales region, where at the time there were no qualified teachers. The collaborator began his teaching career in a 3rd year at the Men’s School of Bairro da Máquina, being his main concern teaching and learning mathematics, trying to prevent his students from suffering the same trauma experienced in their schooling. Trying to “make the most of the content” and working in the countryside, he used various resources in the field, such as rocks, tree leaves, corn and beans, dividing fences, and worked out mathematical problems aimed at contextualizing his students. “At that time, the teacher had to be very creative, because what was least available was teaching material¹²”. According to him, mathematics was centered on the multiplication table, and when there was a visit from the teaching inspector “responsible for supervising and evaluating the progress of school activities¹³”, his first function in school was to take the multiplication table of students. Therefore, “every day at the end of the period, we played with the multiplication table¹⁴”.

Ayrton Luís Arnoni is a native of Jurupema District, Taquaritinga/SP, where he lived until the conclusion of the Normal Course. His parents were farmers, and, he said, his family upbringing was strict, as his mother was the daughter of Germans and the father was the son of an Italian with an Indian. “My childhood routine was at São Salvador Farm owned by my

¹¹ With indignation Arnoni said, “Imagine an eleven-year-old child studying Latin, French and English were subjects that made up the curriculum. We also studied the declines of the Portuguese language [...] It was all decoration. We studied the syntactic function, the teacher worked with Latin literary texts in the indirect order passed to the direct order. It was a military requirement, a massacre”. (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 99).

¹² (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 102).

¹³ (SOUZA, 2014, p. 222).

¹⁴ (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 102).

grandfather, Salvador Arnoni, who arrived from Italy at the age of 14 on May 15, 1888. I had a very good childhood¹⁵”. He studied the first grades at the Vila Negri Rural School Group - Taquaritinga district, which bordered his grandfather's farm. “This school had something peculiar, because teachers, in the 1950s, to be able to teach in it, had to take technical orientation courses at the ‘Luiz de Queiroz’ (ESALQ) School of Agriculture in Piracicaba¹⁶”.

My grandfather, when he came from Italy, at the age of fourteen, was in the 7th grade in the European education system, so he was a very educated, literate person and his passion was reading, so he had a private library. My father inherited his taste for reading. On the farm, when I was little, my house at night was a meeting place. At that time there were twelve settler houses, my father had those radios with huge batteries and the settlers went to my house every night to listen to the reporter Esso, aired daily by the National Broadcasting of Rio de Janeiro and to listen to soap opera in the same broadcaster. After turning off the radio, my father commented on the news and read literary works to the settlers. The inseparable companion of my father and grandfather was the book. My father passed away at almost 92 years old and read every day the newspaper and everything that fell into his hands. The stimulating environment that I lived made me interested in the course of Letters. My father spoke of Brazilian writers and works he had read [...] This was part of my background and my experience and, within the career of the Magisterium, this helped me a lot. This view of literacy readings helped me so much that since the early 1990s I have been invited to work with the Secretariat of Education and to work at CENP. (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 98-99).

Arnoni associates his family background with his career choice. He worked in all stages of schooling, going through the vice-director, taught teacher training courses with the State Department of Education in partnership with the Coordination of Studies and Pedagogical Standards (CENP) and worked in the Ipê Project¹⁷. From 1991 to 1992, he was supervisor of the Specific Center for Teacher Training and Improvement (CEFAM) and participated in the Implementation Group of this Project. “With all this, I can even say that I was the fruit of a historical period - the lag and decline of public education”. Our contributor explains about the decline in public education in the early 1970s and the expansion of the state network. For him, the news (at that time) brought by the Law of Guidelines and Bases (5.692/71), referred to the creation of the Short and Full Degree and the right of all to education.

At this time, the popular classes obtained the right to enter public school. Thus, the MEC was forced to open Higher Education in various locations, where it was not thought to have, in order to be able to train teachers. I arrived in the Jales region in

¹⁵ (Narrative by Ayrton Luís Arnoni; In: SILVA, 2015, p. 98).

¹⁶ (Ibid.).

¹⁷ Project for Updating and Improvement of Teachers and Education Experts of Multimedia - due to the implementation of the Basic Cycle by the State Department of Education. It happened between 1984 and 1990.

1969 and there was only teacher training at IBILCE / Rio Preto for Letters; in Catanduva, Padre Albino College, which started in 1967 and in Votuporanga in 1969. With the need for teacher training, MEC authorized courses in other locations. In 1970, Jales¹⁸ obtained a college degree in Short Degree for teacher training, because there was a need for light training to meet the demand that reached the schools. (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 100).

Another interviewee who graduated from the Normal Course was Satiko Aramagui, who worked at all levels of education through school supervision, supervision and was the first coordinator of CEFAM in the city of Jales, responsible for the implementation of the Project in this locality. Our collaborator has a degree in Science and Mathematics and worked in the private school system and retired from the state system and, at the time of the interview was temporarily hired by the Faculty of Technology of the Paula e Souza Foundation (FATEC) in the city of Jales.

Satiko's parents were Japanese immigrants who arrived in Brazil in the 1930s. They came because of Japan's economic situation between the two Great Wars and thought, like every immigrant, that they would "make America" and after some time return to the country. The interviewee pondered that they failed to realize this dream, and as in the vast majority of cases, such a dream became a utopia. His parents liked the region of Cafelândia/SP and went to work in the countryside, since they were already farmers in Japan. Satiko is the youngest of six children and reports about his happy childhood in the countryside. "The freedom of choice we had was very important for our education, even during meals they talked about the importance of studies¹⁹".

Our collaborator told us about the difficulties to study in the surroundings of the 1960s. She took the Normal Course at the "Institute of State Education Twenty-one April" in the city of Lins/SP. "I studied in the morning and the first year was the basic subjects, including Psychology and Sociology. In the second year, we studied the methodologies, didactic and general training, all the subjects of the professional area and began to do the internships²⁰". The internships were in the elementary schools attached to the institutes, and according to her, these

¹⁸ Arnoni reports about the movement of authorization and implementation of the courses: "Jales, at the time, had a floating city living with the rooted population, because people from Minas Gerais, Mato Grosso and the whole region came to go to college. There were rooms with 150 students for teacher training. He started with the courses of Letters, Sciences, Pedagogy and Social Studies. It was a monstrous thing and the people wanted it because they just knew they had a field of work at the end of the course". (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 101).

¹⁹ (Narrative by Satiko Aramagui; In: SILVA, 2015, p. 43).

²⁰ (Narrative by Satiko Aramagui; In: SILVA, 2015, p. 45).

schools offered the best teaching of the time. Satiko explains that the students performed the internships as observers and rapporteurs, and from the third year onwards, they were assigned to practical classes, under the observation of the conducting teacher of the classroom and the internship teacher of the Normal Course. The practical classes were composed of all the subjects that made up the teaching of the time and involved the literacy and the teachings of Mathematics, Social Studies and Sciences.

According to our collaborators, teachers were charged for the internship classes to be properly prepared. Satiko also stressed that the internships were also held in other schools in the city and in the countryside, and the student was required to fulfill all the workload. Classes took place in the morning and supervised internship in the afternoon. Speaking of her training²¹ during the course, she argued that one of the differentials was her Didactics teacher (Maria Luiza), who discussed texts with different methodologies, indicated films, being the innovative literacy method for the time.

The main focus of the course was Portuguese Language Literacy, while Mathematics focused on teaching the multiplication tables and problem solving involving the four main operations, focused on everyday situations. In the late 1960s, there was the introduction of Set Theory and Number Fields, there were some extension courses and the material used was from the authors Ruy Madsen Barbosa and Osvaldo Sangiorgi. (Narrative by Satiko Aramagui; In: SILVA, 2015, p. 45).

The teaching of Mathematics in the Normal Course, according to the collaborator, was very traditional and, throughout her career, she realized that the method with which she worked was outdated. Thus, she sought new mechanisms for teaching and participated in all the training that the Secretariat of Education offered to teachers.

Arnoni and Satiko reported that the main focus of training in the Normal Course was literacy. “The didactic-pedagogical proposal of the school groups, centered on the writing-reading-counting triad [...], if we sought a thematic emphasis, it would certainly fall into the domain of reading and writing so that such competences could support the emergence of a civic spirit and civility²²”. The textbooks used in the school group brought contents related to hygiene, behavior in society, aimed at family education. Reading from this point of view was

²¹ According to Satiko, “At that time, there was the Premium Chair. The Department of Education rewarded first-graders, and she immediately put them in school without having to take a contest. Many classmates aimed at this Chair because it was an incentive for students to pursue their studies. I was offered a position by the school where I had the Teacher Training Course, I didn’t get this Chair, but it was a differential at that time”. (Narrative by Satiko Aramagui; In: SILVA, 2015, p. 46).

²² (GARNICA, 2010, p. 78).

taken as a way of trying to solve the public health problems of the time. “In this scenario, mathematics will not reveal itself in a remarkable or different way. Mathematical literacy would be equivalent to teaching the elementary models of counting and operating arithmetically²³”.

Mirtes Abdelnur teacher interviewed in the master’s research, has a degree in Mathematics, Pedagogy and a master’s degree in Mathematical Education from Unesp/Rio Claro. She worked in the state school system for over forty years as a math teacher, school principal and for three years in the São José do Rio Preto Regional Teaching Division preparing teaching materials. Mirtes also served at Catanduva City Hall as a school principal and at private colleges in Rio Preto and the region. In addition, she was a math teacher in the first class of CEFAM in São José do Rio Preto.

Our collaborator was born and raised in the city of São José do Rio Preto, her father was a Lebanese immigrant and her mother, a housewife, was the granddaughter of Italian immigrants.

We were created from the perspective that study would be the great gateway to our intellectual development. [...] The reading of newspapers, magazines and literature has always been present in our home. [...] One of the priorities was that we had a vocational training to achieve our financial independence as soon as possible. So, the three of us: Miriam, Marta, and I graduated as 'primary teachers' in the Normal Course that already qualified us for teaching after three years of study. (Narrative by Mirtes Abdelnur; In: SILVA, 2015, p. 188).

Mirtes took the Normal Course at the “Monsenhor Gonçalves” State Institute of Education in the city of São José do Rio Preto and reports that this type of course in the mid-1960s was the common trajectory of girls from different social classes. She also points out that this training was called “Waiting Husband”, as it trained the students, in detained young people and “specialists” in housework, as well as providing them with the necessary and indispensable knowledge for teaching and raising children. For these reasons, according to Mirtes, normalists were the wives desired by judges, engineers, doctors, and lawyers. She stated that, in addition to household gifts, the Normal Course curriculum consisted of general and other specific training subjects, such as the “Teaching Methodologies”, which among other sciences emphasized the teaching of mathematics.

Specifically, in relation to mathematics, the emphasis was on teaching methodology. Introduction to the teaching of arithmetic, operations with natural numbers,

²³ (*Ibid*).

multiplication tables and the making of materials specific to the teaching of different topics. Geometry also had its emphasis on the classification of polygons and the calculation of their areas. I remember making posters with the polygons and constructing the relationships of area calculations by comparing, overlapping, and dividing their surfaces. (Narrative by Mirtes Abdelnur; In: SILVA, 2015, p. 189).

Mirtes stated that the subject he most enjoyed during the teacher training course was Sociology, and so it was divided with the continuity of studies between this and mathematics. She opted for the Mathematics course that was implemented²⁴ in 1968 at UNESP in Sao Jose do Rio Preto, which facilitated her studies, since her family had no financial resources to keep her in another city. Our collaborator stated that prior to the implementation of this campus, there was no course in this area in public colleges in the region, an aspect that favored the students who were not yet graduates, to enter the public teaching career of São Paulo. “That in itself was the guarantee of financial independence faster²⁵”.

Upon entering the Gymnasium (Institute of Education), Arnoni reported that in order to get a place, the student had to take the Entrance Exam²⁶ course for one year. This course was held by him in 1958 and “was taught so that those interested in getting a place in the state network take an exam as if it were today to enter college²⁷”. According to him, the students took this course and, at the end of the year, a test was taken, if the student obtained approval, enrolled in high school and, if the student failed, he would do it again for another year, or there was still the option to study at the private school, “which, at the time, had a pejorative meaning, because the good school was the state school²⁸”.

In relation to the implementation of the Admission Examination, carried out by collaborators Arnoni and Satiko, the Organic Primary Education Law No. 8,529, promulgated on January 2, 1946 “organized primary education in a four-year course complemented by another year that should be preparatory to the entrance exam to the gym²⁹”. The only change envisaged in this law was that the Examination be held twice a year, “the first being in

²⁴ More information on the implementation of courses in the state of São Paulo in the 1960s, see in: Martins-Salandim (2012).

²⁵ (Narrative by Mirtes Abdelnur; In: SILVA, 2015, p. 190).

²⁶ It was created by Decree No. 19.890/31 which proposed changes in the organization of secondary education by observing the form of entry into the first grade of this education through the entrance examination. This examination was for many years a form of public school elitism, where less-able students could not pursue their studies. It went extinct in the early 1970s, and for four decades was used as a justification for no schools at all. (MORAIS, 2012).

²⁷ (Narrative by Ayrton Arnoni; In: SILVA, 2015, p. 99).

²⁸ (*Ibid*).

²⁹ (GHIRALDELLI JÚNIOR, 1992, p. 85).

December and the second in February. They could take the second-grade entrance exam those who had lost the exam or had not passed the first exam. In addition to the Normal Course³⁰, teachers who graduated in the 1960s reported that the Institute of Education offered two more types of courses: Scientific and Classic. According to Satiko and Mirtes, the undergraduate course in the Scientific course covered the Engineering and Medical courses, while the Classic comprised the Language and Law courses.

Irma Aparecida Milani Guarnieri, born in Cedral/SP, was another of the interviewees to have completed the Normal Course. Her parents were farmers and when she was six they moved to the city of Fernandópolis, where the deponent did all her schooling. She has a background in History and Pedagogy and at the time of the interview was a Teaching Supervisor at the Teaching Board (DE) of Fernandópolis, where the interview was held. In the state network, she served as director, history teacher and coordinator of CEFAM.

Our collaborator took the Normal Course at the “Líbero de Almeida Silveiras” Institute of Education in the city of Fernandópolis and stated that her formation in the 1970s was a more technical trend, such as “follow the model”. From the experiences in the educational context, Irma discusses the different pedagogical currents with which she worked, and “technicism was not focused on a teaching that favored the student’s thinking. In this conception, the student had only to execute the exposed by the teacher, because it was a mechanical teaching, marked by the work-oriented manpower³¹”. The teacher pointed out that the changes that occurred in society in the 1980s reached the schools, which received more humane pedagogical proposals. In this sense, according to her, these proposals were difficult to incorporate into the teachers’ practices, precisely due to the training marked by their technicality.

Arnoni pointed out that with the approval of the LDB in 1971, the Teaching Qualifications were implemented in different cities in the region³². Maria Aparecida de Souza Rodero was one of the interviewees to have attended HEM, as she did so based on the new legislation. Born in Marília/SP, has a background in Psychology and Pedagogy, his father was

³⁰ (MORAIS, 2012, p. 219).

³¹ (Narrative of Irma Aparecida Milani Guarnieri, In: SILVA, 2015, p. 92).

³² In 1951 there were 546 (first and second cycles), of which 258 schools were concentrated in the states of São Paulo and Minas Gerais, while the states of Maranhão, Sergipe and Rio Grande do Norte had only two schools in each state. In the state of Sao Paulo there were 125 schools in 1951, rising to 272 in 1956, 147 private and 17 municipals. As for enrollment across the country, a total of 27,148 in 1945 and 347,873 in 1970 were recorded (TANURI, 2000).

a politician and his mother teacher of Primary Education. She joined, in 1971, the “Twenty-one April” Institute of Education in the city of Lins and pointed out that this place was the only one that parents entrusted to their children’s education at the time. Maria Aparecida stated that in the 1970s, which corresponded to High School, it gave a three-year qualification, and last year there was the possibility for the student to choose between Humanities, Exact or Magisterium courses, and thus opted for the Human Science Area, because he knew that he would study Psychology. In 1973, our interviewee joined HEM during the day and at night attending Psychology at a private college.

In the teacher training course, Maria Aparecida reported that the most difficult subject was Mathematics, because her teacher was authoritarian and there was no affective relationship with the students. She pointed out that she always had difficulty relating to people of this profile, and consequently, mathematics was the discipline that was least pleased to study. Maria Aparecida said she believed and bet on the teacher-student relationship during the teaching and learning process.

Mathematics needs a different look because it is dazzling and things fit together. When I learned to use the abacus, I understood that mathematics is everything, I think that in my time at school I would not have suffered so much. The cool thing is learning happily at the same time, because “I learned” suffering, was something I could not understand and did not have the tune of the teacher. (Narrative by Maria Aparecida Roderio; In: SILVA, 2015, p. 85).

Regarding the formation in the Magisterium, she pointed out that, considering that it was an educational proposal offered at that time, the course was viable, as it made it possible to know and understand the functioning of the classroom, the posture of a teacher and that the internships provided the experience of the teacher. teaching work in the classroom.

In HEM there was a reduction in the pedagogical disciplines, specific for the training of teachers who worked in the 1st grade. There was a rapid deployment of content marked by the disarticulation of the curriculum and the inadequate uses of educational problems in the country. Allied to these issues, the lack of concern with the learning of children and, especially, with specific areas of teaching such as Literacy, initiation to Mathematics, Social Studies and child development issues: “Teaching Qualification is a course with rarefied content, and training

idem. What it has done, in general, is to fill the deficiencies of formation of 1st degree. It offers neither general training nor the basis for sound vocational training³³”.

Satiko briefly worked at HEM with the General Didactics discipline and reported on decreasing workload and internships in relation to her training in the Normal Course³⁴. For her, the evening teacher training course was not characterized by teacher training, since most students worked all day and did not have time to complete the internships. In the same direction, Arnoni reports that most HEM were offered at night courses at some point and, according to him, does not compare with a daytime course as was his training in the Normal Course. He ponders that there was a time when teacher education was very precarious, but nowadays this fact expands to the other courses, specifically by the entry of the student at higher level. Thus, the student does not obtain a solid formation in Basic Education and goes to college with serious disabilities, not being able to follow the discussions in the classroom.

It is worth noting that teacher education at the secondary level had the responsibility of the schools where it took place by completing the diverse part of the curriculum. Therefore, “there was a dispersion of subjects at the taste of the teacher available at school, and not according to a training plan, which contributed to an even greater dispersion in the training of young teachers³⁵”. Another impasse in this direction was the possibility for students of other high school qualifications to enroll in the last grade of the Magisterium qualification. With this possibility the student did, in just one year, all the course content. This aspect evidenced “the easing of this teaching, because, at this time, it is practically impossible to give these students a minimum necessary mastery of the important contents for the exercise of the teaching function at the 1st to 4th grade level³⁶”.

Satiko argued that the HEM lost its specificity that was to train teachers, because the teacher who worked from 5th to 8th grade and in high school was the same who worked in

³³ CANDAU, V. M. Revitalization of the Normal Course. In: Annals of the IV Brazilian Conference of Education, Goiânia, n.1, p. 502-508, 1986b. In: Pepper (2012, p. 69).

³⁴ Another critical point of this course was the internships, because their control was precarious, based on observation of classes only, there was no supervision of a supervisor in most schools, i.e., this practice was mainly focused on bimonthly reports or semiannual. “The internship problem, an integrative activity par excellence, is not recent. Their successful fulfillment seems to have been problematic since its inception”. This situation was intensified precisely by the growing number of implementation of mid-level teaching courses with operation at night. (GATTI, 1997, p. 42-44).

³⁵ (GATTI, 1997, p. 44-45).

³⁶ (*Ibid*).

HEM and had no specific training to teach methodology subjects, because he had no experience in Primary Education. In this way,

[...] Teaching Qualification misread the identity of the Normal Course of training primary teachers. Their students and teachers are not clear that this is a vocational teaching for early grades teaching. The organization and functioning of the license also reflects this lack of clarity. (Canada, 1986) In: (PEPPER, 2012, p. 69).

Thus, by ignoring the problems of teacher education, the Law reaffirmed the movement that outlined the resumption of the specificity of Normal education, in the sense of a new Primary Education that excelled in its extension due to the ambiguity of its demand. It also reaped the movement that initiated a charge of the University as a teacher training institution for the teaching of 1st and 2nd grades. The movement of creation and expansion of private and isolated colleges favored the offer of teacher training courses but did not give rise to a relationship with the reality of the teaching under discussion. These “were, in fact, poorly functioning diplomas³⁷”.

Therefore, “Law no. 5.692/71 caused a profound damage to the formation of primary teachers - just disassembled a teaching that came precarious and did not signal any possibility of real improvement³⁸”. However, when such questions are considered, the responsibility for “the damage itself” is not imputed to the law, since it was elaborated in a given historical period of society, represented by the dominant interests. “Thus, it is important to emphasize that the educational legislation does not determine by itself a new vision of education, nor a new educational posture. First and foremost, it represents the record of thinking in force at a given historical moment, even though it is not effective in the classroom³⁹”.

Law change⁴⁰ moves from a liberal to a technical line, targeting the interests served by the MEC-USAID⁴¹ agreements, isolating education from social and political contexts to focus on rationality, effectiveness, and productivity⁴². Thus, to garner the country’s development,

³⁷ (PIMENTA, 2012, p. 66).

³⁸ (*Idem*).

³⁹ (CAVALCANTE, 1994, p. 50).

⁴⁰ 4.024/61 para 5.540/68 e 5.692/71.

⁴¹ “In the Brazilian case, the support came through agreements signed between the Ministry of Education and Culture and the US Agency for International Development (USAID). Between 1964 and 1968, 12 MEC-USAID agreements were signed to diagnose and solve problems of Brazilian education in line with international development based on “human capital”. USAID advisers acted in an obvious entrepreneurial mindset, which, combined with military exception measures, marked the educational policy of the period: developmentalism, productivity, efficiency, control and repression”. (HILSDORF, 2011, p. 124 - emphasis added). More information in: ROMANELLI (2010) and GHIRALDELLI JÚNIOR (1992).

⁴² (HILSDORF, 2011).

education turned to the “spirit of development, reversed the role of public education by placing the school under the direct designs of the labor market. Hence the emphasis on the proliferation of a school capable of forming a mid-level technical workforce, leaving the university to those with an ‘intellectual vocation’⁴³”.

With all these nuances, controversies, and discussions about teacher education at the middle level, brought about by the professionalization of the course with the 1971 LDB, some movements emerged in search of renewing proposals for teacher education⁴⁴. These factors linked two major movements: the revitalization of Normal education and the reformulation of the Pedagogy course. These movements were incorporated in 1990 in the National Association for the Training of Education Professionals (ANFOPE). The first movement, in particular, gained strength, especially in the expression channels, through the MEC and the Education Secretariats. “There was even the legal possibility of making changes to the structure of the Teaching Qualification with Law no. 7,044/82⁴⁵”.

Accordingly, “The advent of Law No. 7,044/82, ending the obligation of professionalization, did not change the existing framework, and the same scenario persists for teacher training courses for the teaching of the initial grades of the first grade⁴⁶”. This law has replaced “work qualification” for “work preparation”.

Some considerations

The historiography made from oral sources is composed by a multiplicity of points of view where the collaborator’s bias produces his speeches. Oral History in Mathematical Education is a powerful research methodology for understanding the aspects for the production of historical knowledge and from the narratives of our deponents we can understand the ways in which they attribute meanings to their life histories, how they give meaning to teacher training and their practices, producing possible scenarios for understanding the Brazilian mathematical education cultures. In this sense, his narratives are (historiographic) sources that can compose a history of mathematical education and that aspects of family formation and

⁴³ (GHIRALDELLI JÚNIOR, 1992, p. 131).

⁴⁴ (PIMENTA, 2012).

⁴⁵ (PIMENTA, 2012, p. 68).

⁴⁶ (CAVALCANTE, 1994, p. 49).

childhood tell us a lot about the ways in which these collaborators compose education in their narratives.

The narratives of our interviewees reiterated that HEM misread the proposal of the Normal Course to train primary teachers, due to its new structure associated with high school and the growth of courses offered in state schools at night. Regarding the subjects related to the Teaching of Mathematics Teaching, it is evident that this formation also lost the character of discussion about materials, methods and practices of teaching in supervised stages throughout the course years, characteristics of the Normal Course, when it passed to be of a more general professional character, discussed together with other subjects, and in the final year of the course at HEM.

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