



## Oral History and Mathematical Education: research practices

### História Oral e Educação Matemática: práticas de pesquisas

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#### ABSTRACT

Oral History has been increasingly frequent in research in Mathematical Education, bringing together researchers from various Brazilian groups and states around this theoretical-methodological perspective. In 2016, a Thematic Symposium on “Oral History and Mathematical Education” was held, already held in two editions of the National Meeting of Oral History, of the Brazilian Association of Oral History (ABHO). From these scientific meetings we decided to produce a dossier bringing some works that were presented, after further deepening the debates held there or from the articulation between participants. There is a text that brings a discussion about the TS itself and the texts presented there, more broadly, and we present seven other articles that associate research in Mathematical Education with Oral History: in historiographical exercises; in contemporary analyzes in Education; in practices aimed at the formation of mathematics teachers; and in exercises of theoretical and methodological reflection.

**KEYWORDS:** History of Mathematical Education, Narratives, Teacher Education, Research Methodology.

#### RESUMO

A História Oral vem sendo cada vez mais frequente nas pesquisas em Educação Matemática, agregando pesquisadores de vários grupos e estados brasileiros em torno dessa perspectiva teórico-metodológica. Em 2016 foi constituído um Simpósio Temático “História Oral e Educação Matemática”, realizado já em duas edições do Encontro Nacional de História Oral, da Associação Brasileira de História Oral (ABHO). A partir dessas reuniões científicas decidimos pela produção de um dossiê trazendo alguns trabalhos que foram apresentados, após um aprofundamento posterior aos debates lá realizados ou a partir da articulação entre participantes. Há um texto que traz uma discussão sobre o próprio ST e os textos lá apresentados, de maneira mais ampla, além de apresentarmos outros sete artigos que associam pesquisas em Educação Matemática à História Oral: em exercícios

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historiográficos; em análises contemporâneas em Educação; em práticas voltadas à formação de professores de matemática; e em exercícios de reflexão teórico-metodológica.

**PALAVRAS-CHAVE:** História da Educação Matemática, Narrativas, Formação de Professores, Metodologia de Pesquisa.

### Presenting a dossier

In Mathematical Education, researchers generally use qualitative approach methodologies to compose the scenario of their investigative work and many of them are supported by orality. Through interviews, orality generates narratives that enable the elaboration of understandings and attribution of meanings to the different aspects of the object that we focus on, in a historiographical operation or not. (GARNICA, 2010).

In the early 2000s, the mobilization of Oral History as one of these methodologies, as pointed out, was little effective in Mathematical Education and it emerged as a possibility to organize the search for traces of historical scenarios related to teacher education and practices, as well as for the understanding of factors and meanings of the constitutive plots of current practices, characteristic objectives of the researches located in the trend that was still configured as “History of Mathematical Education”.

Almost two decades have passed and many other researches have been developed mobilizing Oral History within Mathematical Education and, specifically, in the consolidated area of research which is the History of Mathematical Education. However, we must emphasize that not all works that mobilize oral history fall within the scope of the history of mathematical education, nor do all mobilize it to investigate in the latter. Still, Garnica (2015) warns us that Oral History is one of the possible ways to record narratives, as well as

Those who link oral history only to the elaboration of narratives aimed at a historiographical operation are also mistaken. Oral History is a set of procedures and principles that result in narratives that, obviously, are historiographical sources for potentially telling - for the present and for the future - a situation in which narrator and memorialist find themselves. Constituting and making historiographical sources available, however, does not mean effectively mobilizing such sources in sequence with the intention of creating “historiographical narratives” in the strict sense. (GARNICA, 2015, p. 184)

Aware of these possibilities pointed out above, immersed in research, either as authors or as advisors, the authors of this article, mobilizing Oral History to develop historiographical

narratives or not, were faced with the possibility of working together questions about this methodology in Mathematical Education.

Thus, the construction of the proposal of this dossier, Oral History and Mathematical Education, is justified and shown as a result of some dialogues that have been held between researchers from various Brazilian groups and states, since 2016, when we decided to constitute a Thematic Symposium (ST) specific for Mathematical Education at the XIII National Meeting of Oral History, which took place in Porto Alegre, in May of that year. This is an important Brazilian event organized by the Brazilian Association of Oral History (ABHO) and which brings together researchers whose research practices are linked to Oral History.

In that year's edition, the event's theme was "Oral History, Educational Practices and Interdisciplinarity", which seemed to us to be very much identified with the way that most of us, mathematical educators, have established a link with Oral History in our practices. of research.

We made a call to colleagues in the area who have been working with the methodology, proposing that it would be an interesting occasion to talk about our work, to make approximations with researchers from other areas and even to give visibility to the not so recent intertwining between research in mathematics education and oral history.

As a result, we had 28 approved works that brought not only historiographical but also pedagogical approaches to Oral History, highlighting the multiplicity of uses that has been proper in the field of Mathematical Education and which dialogued well with the objective intended by ABHO and disclosed in event website: "gather a large number of participants, coming from different disciplines in which Oral History is practiced, as well as linked to different fields of activity (schools, memory centers, academia, museums and archives etc.)". The discussions and interactions were very productive, as procedures, theoretical foundations, research constitutions were constantly tensioned, allowing for perspectives of reformulations and debates within the research groups from which the participants came. Importantly, the participants went beyond our circle of invitations, as stated earlier.

At the event, as a whole, we, the mathematical educators, were able to approach themes approached by other areas that also use Oral History, as a research methodology or as a tool for teaching work. Discussion of interview procedures, treatment of non-oral sources, use of archives, production of interactive oral records, approach to thorny subjects in the classroom,

made up a circle of ideas that was quite fruitful and inspiring to discuss. and deepened in future research in Mathematics Education.

Taking into account the event itself and what Larrosa (2014) states about the experience being

[...] something that happens to us that sometimes quakes or vibrates, something that makes us think, something that makes us suffer, something that makes us suffer or enjoy, something that fights for expression, and sometimes when it falls into the hands of someone capable of shaping this tremor, then only then does it become a chant. And this song runs through time and space. And it resonates in other experiences and other tremors and in other corners (LARROSA, 2014, p.10),

We left that first TS committed to propose again the symposium in the next edition of the National Meeting of Oral History.

At the 14th ENHO, whose theme was “Oral History and the Expansion of the Audiovisual Record”, which took place at Unicamp in 2018, it was once again possible to make exchanges between us and a new foray into Oral History as a multidisciplinary field. Particularly, the theme of that year posed emerging and very important questions for all of us: how to practice Oral History exploring, in the best possible way, the technological expansion in dialogue with tensions pertinent to the debate about ethics in research with human beings, so fashionable in the country. We have the presentation of 18 works.

From the second edition of the symposium we are committed to presenting to Brazilian mathematical educators a result of these exchanges and the maturation of some of the works presented there. We can say that the dossier is connected with that first call of the XIII ENHO, Oral History in its established relations with educational and multidisciplinary practices.

Thus, this dossier consists of eight articles, seven of which could be classified into four categories associated with Oral History: in historiographic exercises; in contemporary analyzes in Education; in practices aimed at the formation of mathematics teachers and, finally, in exercises of theoretical and methodological reflection. It must be said that such categorization does not circumscribe the articles as to their approach, so that some of them could be considered in more than one of them. Such classification lends itself to demonstrate how much this dossier and the editions of the TS express a multiplicity of mobilizations that Mathematical Education has made of Oral History.

The first category, say, is a more traditional practice with Oral History, the production of historiographical analyzes. As an example of this, we have the articles, *Oral History for the production of narratives about a São Paulo public educational proposal in the 1960s*, *A History of Teacher Training (in Mathematics) in Cuiabá and Barra do Garças - MT* and *Stories of Life and Teacher Teaching Mathematics: aspects of teacher-level education in the interior of São Paulo* that, in their own way, are concerned with analyzing educational experiences of the twentieth century, with oral sources as triggers of the historiographic operation, compared with others. sources.

In the first article, by Maria Eliza Furquim Pereira Nakamura, the author presents a synthesis of her two communications at the events, providing an overview of what was the focus of her study, the Vocational Gymnasium, an alternative project that introduced changes in the São Paulo educational scenario. in the 1960s (NAKAMURA, 2017). It also discusses the theoretical and methodological assumptions of the research that gave rise to this writing experience, Oral History.

The text of Bruna Camila Both, Eliete Grasiela Both and Ivete Maria Baraldi is the result of three works presented in both editions of the event. The previously presented communications were based on research by Both (2014), Both and Both (2016) and the second author's Ph.D. They articulate these works with the intention of showing the stories of teacher education (in Mathematics) in Cuiabá and Barra do Garças, in the state of Mato Grosso, marked by the sign of lack, in the period preceding and beginning higher education for teachers at these locations through the relevant presence of the Federal University of Mato Grosso (UFMT). They outlined the theoretical and methodological assumptions for the constitution of historical sources through interviews and, subsequently, for their comparison with written sources for the composition of the stories, by mobilizing Oral History as a research methodology.

Already in the last article of the category, Marinéia dos Santos Silva and Heloisa da Silva bring some results of a master's research on teacher training courses at secondary level in the neighborhoods of the 1980s and 1990s, more specifically in different cities of the region. São José do Rio Preto/SP, timely presented in the editions of the symposium. (SILVA, 2015). Considering Oral History as a powerful research methodology for studies in Mathematics Education, through 11 narratives, we could understand the ways in which their deponents

(teachers, students and coordinators who graduated from secondary school teaching courses) attributed meanings to their life stories and make sense of teacher education and practices

The second category, also quite consolidated in the area, represented by an article that mobilizes Oral History to analyze an important contemporary theme in Education, the Mathematical Education of the deaf. In the article *What do Libras Interpreters Translators say about the relationship with Mathematics teachers*, the authors, Nádia dos Santos Gonçalves de Porto and Diogo Franco Rios, discuss the teaching of mathematics from the perspective of Libras Interpreters Translators - TILS who work in higher education. Previously presented was expanded from the completion of the Porto research (2019). This is a work resulting from the effort to produce analyzes on Mathematical Education, based on Oral History, which has been conducted in the Graduate Program in Mathematical Education at the Federal University of Pelotas. In this text, the authors point out that the TILS narratives offer perspectives not yet contemplated by mathematical educators, due to their place in the pedagogical process of deaf students.

The third category demonstrates a somewhat more recent exercise in the area, which is the use of Oral History practices as a source of questions for the training of mathematics teachers, expressed here by the text: *Life Story Readings of Mathematics Teachers in Pibid*, in which the authors, Mirian Maria Andrade and Lingulya Sachs, present an interesting discussion arising from a mathematics teacher training experience linked to the Institutional Teaching Initiation Scholarship Program - PIBID, in a Mathematics Undergraduate Course from Paraná. Inspired by the research by Rolkouski (2006), they developed activities in the PIBID formation space to present answers to the question “How do you become the math teacher you are?”. In an Oral History exercise, the teachers in formation in addition to writing their life stories interviewed their supervising teachers of the project, performing the necessary procedures for the constitution of oral sources.

The fourth category brings two articles that discuss making Oral History as a research methodology: *The conducting of narration is the ear: mobilization of Oral History in Mathematical Education and Narrative Production and Work with Oral History*. These articles raise interesting questions about the use of oral history by mathematical educators.

In the first one, by Maria Ednéia Martins-Salandim and Karina da Silva, the authors elaborated the text based on their discussions and research practices with Oral History and from

two publications and debates at the Oral History Thematic Seminar. and Mathematical Education within the XIII and XIV National Meeting of Oral History that took place in 2016 and 2018, respectively, which were based on the works of Martins (2003, 2007, 2012) de Silva (2019) - which was still under preparation. They highlight the importance of listening from the choice of respondents to the analysis of and from the narratives resulting from the interviews. They also bring reflections on sensitization in research and attention to a research methodology enhancing the theme and research question.

In the other article by Endrika Leal Soares, Vivian Nantes Muniz Franco and Luzia Aparecida de Souza, the authors discuss different research exercises that mobilize Oral History as a methodology, such as the research by Franco (2019) and Soares (2019). In one of them, interviews were conducted with illiterate adults, initially aiming at understanding daily mathematical strategies and, in the other, a dialogue was established with children, 4 and 5 years old, who attend kindergarten, seeking to look at notions about school and mathematics. constituted by them. They make an uneasy reflection, showing that operating with Oral History as a methodology requires an inviting movement for self-knowledge.

Finally, a text that has a peculiarity: a discussion about the editions of the ST “Oral History and Mathematical Education” and the texts presented there. An important contribution made to the dossier and in defense of the very initiative of dialogue of Oral History practices made by mathematical educators with researchers from other areas. The article *A reading: the studies of the Thematic Symposium “Oral History and Mathematical Education”* of the National Meeting of Oral History explains the role of Antonio Vicente Marafioti Garnica's interlocutor in the constitution of ST. Since our initial provocation, he has been a strong supporter of the proposal, with whom we exchanged some ideas about it and relied on several of its provocations.

With Larrosa (2014) again, we want these articles presented here to move us, providing us with interesting experiences.

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