

Teoria da Aprendizagem Desenvolvidora (TAD): diálogo com Manoel Oriosvaldo de Moura¹

Developmental Learning Theory (DLT):
an interview with Manoel Oriosvaldo de Moura²

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RESUMO

Manoel Oriosvaldo de Moura, professor aposentado Sênior da Faculdade de Educação da Universidade de São Paulo/BR, é responsável pela criação do Laboratório de Matemática; do projeto de Matemática; bem como do Grupo de Estudos e Pesquisas sobre a Atividade Pedagógica (GEPAPe). O Prof. Ori é autor que marca seu compromisso com a produção e popularização do conhecimento científico por meio de ações de ensino, extensão e publicização. Sua trajetória foi marcada por uma humanidade indescritível, com uma posição política, ideológica e pedagógica sempre comprometida com a luta pela igualdade e desalienação; o que o levou a defender uma perspectiva de educação marxista, pautada por processos de humanização. Sem nunca ter abandonado suas raízes piauienses, construiu sua vida profissional e acadêmica em São Paulo/SP, onde desenvolveu (de forma colaborativa) uma proposta metodológica denominada Atividade Orientadora de Ensino, pautada nos pressupostos da Teoria da Atividade leontiviana.

Palavras-chave: Manoel Oriovaldo de Moura. Ori. Teoria da Atividade. Atividade Orientadora de Ensino. Brasil.

ABSTRACT

Manoel Oriosvaldo de Moura, Retired Senior Professor at the Faculty of Education at the University of São Paulo/BR, is responsible for creating the Mathematics Laboratory, the Mathematics Club project, as well as the Study and Research Group on Pedagogical Activity (GEPAPe). The Prof. Ori is the author with a legacy that marks his commitment to the production and popularization of scientific knowledge through teaching, extension and publicity actions. His trajectory was marked by an indescribable humanity, with a political, ideological and pedagogical position always committed to the struggle for equality and overcoming the alienation, which led him to defend a perspective of Marxist education, guided by processes of humanization. Without ever having abandoned his roots in Piauí, he built his professional and academic life in São Paulo / SP, where he developed (in a collaborative way) a methodological proposal called Teaching Guiding Activity, based on the assumptions of the Leontivian Activity Theory

Keywords: Manoel Oriosvaldo de Moura. Ori. Activity Theory. Teaching Guidance Activity. Brazil.

1 Introduction

This interview is part of the **first international cycle of interviews with prominent figures in Developmental Learning Theory**. This series aims to connect Brazilian researchers with foreign intellectuals and scientists who have been instrumental in developing Learning and Study Activity theories from 1960 to 2019. These individuals have contributed to the establishment of various alternative developmental psychological and didactic systems, particularly the Elkonin-Davidov-Repkin system, from different countries and cities.

Contact will be facilitated through interviews that explore these theorists' work, the impact of their ideas on consolidating systems and theories, the context in which their work was produced, and the specifics of each theoretical position. The interviews

will also explore the reflections generated by this work after many years.

To cover the long period of development of the systems and the concept of Developmental Learning produced by them, the Interview Cycle will include representatives of diverse proposals that meet the following criteria: (a) be linked to distinct moments, stages, or phases in the history of alternative developmental, psychological, and didactic systems (Puentes & Longarezi, 2020); (b) be linked to different groups and variants within the systems; (c) be linked to diverse objects and fields within the theory, such as developmental psychology, educational psychology, didactics, learning methodologies, etc.; (d) be linked to important representatives of the systems; (e) be linked to different geographical regions, such as cities, republics, and countries; (f) be linked to current movements of renewal and continuity of theory within groups, institutions, cities, republics, and/or countries where they live and/or work; and (g) be an intellectual and researcher with high recognition in Brazilian and foreign academic circles, evident in their broad scientific production and solid insertion in groups, networks, and associations. centers, etc., of recognized national and international prestige.

Bilingual publications of the interviews (in their original language and in Portuguese) will be produced where possible. This initiative aims to intensify and consolidate knowledge about Developmental Learning Theory in Brazil and Latin America. The Study and Research Group on Developmental Didactics and Teacher Professionalization (Gepedi) has played a leading role in this process. At the same time, the initiative seeks to strengthen collaborative ties with internationally renowned groups and researchers.

This interview, the fourth in the series, was conducted with Brazilian professor and researcher Manoel Oriosvaldo de Moura. Born on December 24, 1948, in Teresina, Piauí, our interviewee recounts the legend that boys born on this date who are not named Manoel are destined to die by drowning. Manoel Oriosvaldo de Moura was thus registered without ever having learned to swim.

Figure 1: Participation of Manoel Oriosvaldo de Moura in the IV International Colloquium on Developmental Teaching: Elkonin-Davidov System, promoted by the Faculty of Education of the Federal University of Uberlândia.



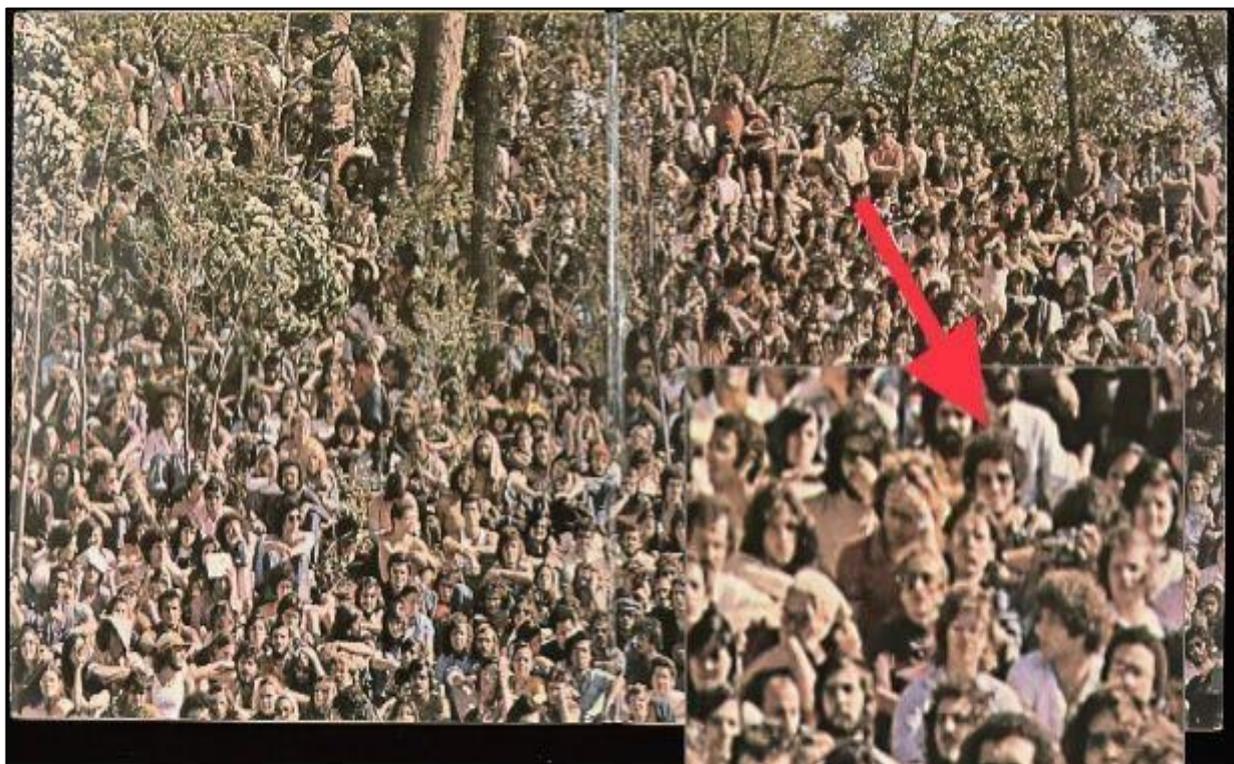
Source: Archive of the Study and Research Group on Developmental Didactics and Teacher Professionalization (Gepedi).

He is the son of Dona Cota, who is now 98 years old, and Mr. Manoel. He is the brother of Maria José and Chagas. He spent much of his childhood in Água Branca, Piauí, where he sold cashew nuts to people on passing buses. He studied in Teresina, Piauí. He loves cajuína, a typical drink from northeastern Brazil, and he believes that his mother, Dona Cota, makes the best. He moved to the southeast in the 1970s, where he married Anna Regina from Rio Grande do Sul. They had three children: Otávio, Marcos, and Marina. They also have three granddaughters: Nina, Lia, and Irene.

Affectionately known as Prof. Ori, an indescribable humanity marks his career. His political, ideological, and pedagogical stance has always been committed to the struggle for equality and disalienation. This has led him to defend a Marxist perspective on education guided by processes of humanization.

This has made him known as a person of "the highest quality"—a phrase peculiar to him. Without ever abandoning his roots in Piauí, he established a professional and academic life in São Paulo, where he relocated in 1971. During a period of cultural effervescence, the University of São Paulo hosted many artistic events, including musical performances by Chico Buarque, Gilberto Gil, Milton Nascimento, Taiguara, and other artists who expressed critical views on political and ideological issues.

Figure 2: Back cover of Milton Nascimento's album "Geraes," recorded in 1976. In the image, Ori is among the audience watching Milton Nascimento's concert at USP/SP in the early 1970s.



Source: <https://www.levyleiloeiro.com.br/peca.asp?ID=345852>

He completed his Bachelor of Science in Mathematics in 1976 at the Institute of Mathematics and Statistics (IME) of the Universidade de São Paulo (USP). He earned his Master of Science in Science and Mathematics Education from the Universidade Estadual de Campinas (UNICAMP) in 1983 and his Doctor of Education from the Faculdade de Educação da Universidade de São Paulo (FEUSP) in 1992. He then became a lecturer at FEUSP.

From 1976 to 1985, he taught at private and public elementary schools in São Paulo. During this period, he taught at the Dr. Edmundo de Carvalho State School, also known as the Lapa Experimental School.

In 1985, he began his higher education career at FEUSP, joining the Department of Teaching Methodology and Comparative Education. He taught the course "Mathematics Teaching Methodology" and created the course "Mathematics Education," which was added to the list of electives in the Mathematics and Pedagogy programs. As a graduate professor, he also proposed the course "Knowledge in the Classroom: The Organization of Teaching."

He served as the head of the Teaching Methodology and Comparative Education Department and as the chair of the Undergraduate Committee for two terms in both cases. Since 2016, he has been a retired senior professor at FEUSP. During his nearly 40-year career at USP, he played an important professional role. He participated in creating the Laboratory of Toys and Teaching Materials, the Mathematics Laboratory, and the Mathematics Club project. He also created and coordinated the Study and Research Group on Pedagogical Activity (Grupo de Estudos e Pesquisas sobre a Atividade Pedagógica - GEPAPe).

Prof. Ori is a renowned researcher in Brazilian academia and the author of numerous scientific articles, book chapters, and complete works. His legacy marks his commitment to producing and popularizing scientific knowledge through teaching, extension, and publicity activities. He has advised several scientific initiatives, master's theses, and doctoral theses, contributing significantly to the training of human resources. His area of expertise is mathematics education, with an emphasis on teaching methodology, teacher training, and activity theory. One of his main contributions was creating and developing the Teaching Guidance Activity methodological proposal in collaboration with others. This proposal is based on the assumptions of Leontiev's Activity Theory.

2 Interview with Manoel Oriosvaldo de Moura

Andréa M. Longarezi (AML) and Roberto V. Puentes (RVP): Esteemed Manoel Oriosvaldo de Moura, to enable our readers to get to know you better and learn more about your educational background — including the process that led to the emergence of the Teaching Guidance Activity (Atividade Orientadora de Ensino - AOE) approach and its link to Developmental Didactics — we would like you to begin by presenting your educational, professional, and academic background.

Figure 3: Manoel Oriosvaldo de Moura at a conference at the IV International Colloquium on Developmental Teaching: Elkonin-Davidov System, promoted by the Faculty of Education of the Universidade Federal de Uberlândia.



Source: Archive of the Study and Research Group on Developmental Didactics and Teacher Professionalization (Gepedi).

Manoel Oriosvaldo de Moura (MOM): First, thank you for the invitation. I am honored to be included among the prominent authors who have greatly

contributed to our understanding of education, particularly school education. Before presenting my career path, I would like to outline the guiding principles for the reader. I believe this will be relevant to understanding how I became whom I am, given the dynamic socio-historical circumstances that shaped me. One striking fact about my life is that I migrated from the Northeast (Piauí) to the Southeast (São Paulo). This migration was the first central element of my education and decisive in determining my professional path. My status as a migrant and my lack of financial resources to study agronomy, my vocation, led me to attend a college that offered night classes. Thus, I decided to become a teacher. For the entrance exam in 1971, I chose mathematics. I earned my degree in mathematics at the Institute of Mathematics and Statistics at USP (IME-USP). Graduating in the early 1970s had a profound impact on my education. I emphasize that a substantial part of my education came from my involvement in the student movement and participation in the Center for Physics and Mathematics Studies (Centro de Estudos de Física e Matemática - Cefisma). I learned many lessons that made me aware of the economic, political, and social issues we were experiencing at that time. I will not dwell on them, but as I warned the reader, I want to emphasize what is relevant as an inflection point in my educational journey.

I would like to highlight my first encounter with the writings of Bento de Jesus Caraça, a Portuguese mathematician from the early 20th century who is widely recognized for resisting the Salazar dictatorship. During my first year at Cefisma, I met Caraça through his magazine, *O Cientista* (The Scientist), and he became a significant theoretical influence for me. In his book *Fundamental Concepts of Mathematics* (CARAÇA, 1989), I noticed a way of presenting the development of mathematical concepts that made the interdependencies between socio-historical conditions and mathematical development evident. This perspective led me, in my second year of college, to pursue a deeper understanding of education. I chose to take *Sociology of Education* as an elective outside my field because I wanted a more comprehensive understanding of mathematics and how the humanities contribute

to teaching and learning processes. I also wanted to understand how these contributions should be added to the methodology and didactic contributions of mathematics as a teacher. The knowledge I gained during my initial training at the Universidade de São Paulo (USP) School of Education (FE-USP) was also decisive in my decision to pursue an in-depth study, which I deemed necessary for my work as a teacher. During this period, teacher training was popularly known as 3+1. This meant that teacher training consisted of subjects in a specific area plus one year of pedagogical subjects. These were separate training environments. Throughout the history of education, there are many critical references to the way teacher training was carried out. The reasons are clear, but it is important to acknowledge this period of teacher training to understand the nuances of the concept.

However, our struggles, based on the production of knowledge about school education, clearly reveal the interdependence between the subject of knowledge and the pedagogical activity necessary for its acquisition. I take another leap in the history of my education. It is a leap, but it is part of the continuous movement of searching for a stronger foundation for my chosen profession. After graduating and starting work as a primary school teacher, I searched for a course that could answer my questions about education in my field. At that time, there was only one master's degree program in teaching specific subjects. Professor Ubiratan D'Ambrósio created the master's degree at Unicamp through an agreement between MEC and PADCT. It was the first master's degree focused on the teaching of science and mathematics in the late 1970s. The course aimed to educate state education department teachers and university professors from federal universities in Brazil and Latin American countries. In my class, there were 20 Brazilians and 12 Latin Americans. The course focused on general training with authors considered most relevant to an overview of education at the time (Dewey, Brunner, Killpatrick, Popper, among others). The subjects, called "sensitizers," were intended to present issues in school education and serve as a reference for the production of projects to be developed by course participants. It was truly a revolutionary vision by

Ubiratan D'Ambrósio for that time. The interaction of students to discuss education projects, focused on the reality of their states and countries, provided an opportunity to broaden our knowledge about the multiple and determining variables to be considered in school education. Above all, it was very relevant for the training of a generation that, as was the objective of the course, formed important leaders in the field of teaching science and mathematics. I apologize to the reader for a long and somewhat detailed response, but this choice is intentional, as it is guided by my conception of the activities that shape our consciousness and determine our professional paths, components of the life we continue to lead and not be led. The other milestones in my history that guided me to other levels of my academic career—doctorate, associate professor, and full professor—will be discussed later as part of my ongoing training and work in the field of school education and, particularly, mathematics education.

AML and RVP

The 1960s, 1970s, and early 1980s in Brazil were marked by persecution, and the education system was subject to surveillance and control. How did educational leaders respond, and what strategies did they employ to foster resistance? What role did universities and research centers play in this process?

MOM: The decades you refer to are notable for the formation of small study groups that read classics of philosophy, mainly of a Marxist and Leninist orientation. This was most evident in the university environment. The fall of the Spanish and Portuguese dictatorships was very relevant to us because it introduced us to the work of groups that produced work on education during the period of repression. The combination of academic work requiring a degree with the political moment inside and outside the country constituted a fertile breeding ground for the emergence of research groups and associations of teachers and researchers in various fields.

Training the first doctors with a strong foundation in constructivist perspectives enabled the emergence of new study and research groups guided

by an awareness of the need to respond to the political impositions of the time. The student movement contributed significantly to the democratic transition, the struggle for amnesty, and the fight for direct and free elections. This required strengthening academic centers in universities and expanding small group discussions into large meetings, such as the Brazilian Education Conferences (Conferências Brasileira de Educação - CBE), National Meetings on Mathematics Education and Physics Teaching, and so on. In the late 1980s, the Brazilian Society of Mathematics Education (Sociedade Brasileira de Educação Matemática - SBEM), the Brazilian Society of Physics Teaching (Sociedade Brasileira de Ensino Física - SBF), and the National Meetings on Didactics and Teaching Practice (Endipe) emerged as a result of the Brazilian Conferences on Education (CBEs), Anfop, Udime, and many other associations focused on producing knowledge about school education. The theoretical impetus made possible by exchanges between Brazilian researchers and those from other countries, mainly Spain and Portugal, contributed to the formation of research groups in education, focusing on the training of reflective teachers, interdisciplinarity, and problem solving.

These were signs of qualitative changes in university production processes that would determine how universities organized themselves. Global competition for dominance in new markets, including knowledge production, required the establishment of agencies to promote and regulate this production. Agencies such as the National Council for Scientific and Technological Development (Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq), the Coordination for the Improvement of Higher Education Personnel (Capes), the Directory of Research Groups, and the Lattes Curriculum were created. I would argue that these regulatory mechanisms contributed to teaching and research groups being gradually guided by a productivist perspective, despite having initially been created with strong political/ideological motivations. Along with the ranking of universities came the desire to be identified as a research university, creating

a hierarchy of knowledge production centers. Degrees were created outside of universities, and research was separated from teaching and extension.

AML and RVP: How would you characterize school education in general and the teaching methods used at that time? Given the repressive and regulatory environment during the military regime, what theoretical and teaching approaches prevailed?

MOM: The teaching methods learned in university teacher training programs had little impact on elementary schools. Access to school education grew from the 1960s onwards. The expansion of the job market at that time generated the expectation that university education would facilitate social advancement, leading to a rush for pre-university entrance exam courses. Pressured by competition, these courses sought to improve strategies that would help the largest number of their students enter the most prestigious universities. Under pressure from competition, they sought to improve strategies that would enable the largest number of their students to enter the most prestigious universities. These “cram schools” imposed the need to review all high school material in one year. What teaching approach could be used to ensure that the maximum amount of content could be mastered? We know: training to demonstrate how much content the student was able to store, which served as a filter for admission to universities, as these continued to be insufficient for the size of the demand. Thus, content and form guided the teaching processes. I say teaching and not school education. Teaching was therefore based on training. It was carried out using the work of teachers from these “cram schools,” who transformed the training handouts into books, compiled by gathering the work of various colleagues from different disciplines. At that time, we began to have specialists in parts of the content. In addition, this, for example in the case of mathematics, results in fragmented teaching, without the necessary conceptual links that allow for an understanding of the historical and logical processes of its development. This period also saw the proliferation of so-called self-

instructional and consumable books. These were books that left spaces to be filled in by students and which, and therefore, had to be discarded at the end of the year. The methodological perspective was clearly conductivist. Constructivism, which was the most advanced approach at the time, was found in university research groups and very little in schools.

AML and RVP: What is your assessment of the research conducted in the field of education during that same period, particularly in the field of teaching? What epistemological bases guided this research, in your view? What theoretical references and methods were used? To what extent did this research help maintain the status quo or create spaces of resistance to hegemonic models?

MOM: A publication by the Faculty of Education at USP in the early 1980s, *A Didática em Questão* (Didactics in Question), is suggestive of what could be called a crisis in didactics at the time. It was necessary to pay attention to the profound changes taking place on the world stage, particularly in peripheral countries. Education geared toward training labor for industrialization and services was called into question. A global crisis was looming due to radical changes in modes of production caused by technological developments. These developments were already responsible for a decline in the industrial workforce. Added to this was the implementation of minimal state policies following neoliberal ideology. In the 1970s, few people had PhDs. Doctorates, mainly in the so-called exact sciences, were mostly obtained outside the country. Even universities in the Southeast could not fill their staff with Ph.D. holders. Large universities only began requiring this at the beginning of this century. The few doctors at USP, for example, obtained their degrees through in-depth, individual studies in their respective fields. In the case of science and mathematics, the rationale was almost entirely influenced by Piaget. I would argue that J. Piaget's most significant contributions to teaching are his insights into children's learning processes.

Initially, educational research was more limited to Piagetian tests. In the

1980s, people began considering how to organize teaching so that children would learn better if they learned as constructivist assumptions claimed. Thus, teaching needed a new direction. Assumptions centered on humanistic principles of the right to education gained new significance. The epistemological aspect became extremely relevant. Consequently, the crisis in general teaching took on another dimension. Specific teaching methods emerged. These methods were informed by the dissemination of Piagetian test results in various disciplines, leading to the development of new literacy approaches and science and mathematics teaching groups (Gruema, Gempa, among others). The hegemony of traditional teaching—whose basic characteristic Paulo Freire aptly called "banking education"—was in crisis once again due to research showing the processes of concept appropriation. In the West, these processes are based on constructivist perspectives. However, other dimensions of the crisis must also be considered, such as political and economic ones. Despite the existing level of repression, groups formed to discuss teaching research began to develop didactic approaches. Reflections on the role of the history of science and mathematics, as well as the history of concepts in general, led to questioning the insipid form of content presentation that "cursinhos" (prep courses) had been insisting on. During this period, references to mathematicians and their contributions to the formulation of certain concepts began appearing, primarily in mathematics textbooks. Thus, the history of mathematicians was presented rather than the socio-historical development of mathematics (Panossián, Moretti, & Souza, 2017).

AML and RVP: What about the relationship between universities and Brazilian public schools? What was the dialogue like between education research centers in Brazil and classrooms? How did research, teaching, and outreach interact? Was there a different global configuration?

MOM: The relationship between universities and elementary schools has always been weak and almost nonexistent. Education departments have played a more

controlling role than an educational one. Teachers were essentially at the mercy of textbooks. The most effective action taken by education departments was selecting textbooks through the National Textbook Plan (Plano Nacional do Livro Didático - PNLD). Once the books were chosen, it was up to the teacher to develop the curriculum. Research on teaching had little impact on schools except for sporadic involvement by research groups investigating the subject. Starting in the 1990s, research groups began organizing to expand their relationships with elementary schools based on funding opportunities created by central government agencies, such as CNPq and Capes. Another relevant factor is the formation of teaching societies, such as the Brazilian Society of Mathematics Education (Sociedade Brasileira de Educação Matemática - SBEM) and the Brazilian Society of Physics Education (- SBF). These societies led to the formation of national associations in nearly all school subject areas in the 1990s. These societies began holding national meetings for researchers, university students, and elementary school teachers. This enabled the rapid development of relationships between universities and schools.

This also led to a dramatic increase in postgraduate courses in various school subjects. At the end of the last century, we saw a significant increase in teacher training courses as the country's poor population gained greater access to schooling. They were motivated by the hope of advancing through education. During this period, the training of masters and doctors gained momentum, driven by closer ties between teaching groups in universities. These groups began to shift the emphasis in teacher training, which, until then, had predominantly focused on bachelor's degrees. I emphasize that university degree courses were not highly valued until the beginning of this century. This began to change with the establishment of teaching associations and the promotion of teacher training by central government agencies, as I have already mentioned. A relevant fact is the São Paulo Research Foundation's (Fundação de Amparo à Pesquisa de São Paulo - FAPESP) creation of the first line of research funding to promote research involving São Paulo's public universities and public schools.

This was essential for fostering a relationship between teaching, research, and extension. Some results of this FAPESP initiative can be found in the book "Educação Continuada" (Marin, 2000). This funding enabled effective research in teacher training, including both in-service and initial training, involving undergraduates through scientific initiation and producing data for master's and doctoral research. I was part of the first wave of project proponents in this funding program and witnessed a paradigm shift in teacher training. We began to realize that we don't just train teachers; rather, we train alongside them. This shift was an undeniable demonstration of the contributions of Historical-Cultural Theory (HCT), particularly Activity Theory.

AML and RVP: The 1990s were a turning point for the introduction of Historical-Cultural Theory in Brazil, particularly through the works of L. S. Vigotski and A. N. Leontiev. How did you encounter the thinking of these authors, and how did it impact the emergence of the Study and Research Group on Pedagogical Activity (GEPAPe) and the conceptual development of pedagogical activity, a topic dear to the research group?

MOM: I had access to HCT through its main authors at the beginning of my doctorate: L. S. Vigotsky, A. N. Leontiev, and A. R. Luria. Professor Marta Kohl de Oliveira's contribution through her course in the graduate program at the Faculdade de Educação da USP (FEUSP) in the late 1980s was fundamental. We had to read and discuss a newly translated book of texts by those authors. The book was *Language, Development, and Learning* (1988), of which she is one of the editors. This book was of the utmost importance to me because, at that time, my research problem did not align with the constructivist perspective of my advisor's group. Constructivist contributions are also present in my doctoral work because that was how we were trained and what was identified as the most advanced at the time. Learning about learning processes observed from a clinical methodology was critical for us. However, I was interested in learning about learning processes in motion. I wanted to know how they happened in the

classroom. Piagetian research did not address these aspects much.

Encountering Historical-Cultural Theory enabled me to synthesize my concerns as a primary school teacher. When I joined USP as a professor of teaching methodology, this theory provided the sociological, political, psychological, and epistemological foundations that allowed me to give meaning to the pedagogical actions I advocated with my students, who were future teachers. The history of mathematics from a dialectical perspective, which I encountered in B. J. Caraça, as well as the humanistic contributions I accessed during my undergraduate and master's studies, made sense with a systemic formulation based on the assumptions of dialectical materialism. I studied and developed these assumptions together with colleagues in adult education at a workers' school. Reading L. S. Vigotsky guided my principles of pedagogical activity. I realized that concepts could promote human development through pedagogical activity. The concepts of language and its development in line with human activities became fundamental to my teaching. Leontiev, on the other hand, provided the fundamental synthesis for teaching. The concept of activity was what I was looking for to give meaning to pedagogical activity. Suddenly, what I had read about the human way of becoming human made sense.

The concept of work in Karl Marx and the concept of activity in A. N. Leontiev (2021) converged to form the frame of reference for my understanding of pedagogical activity. To explain this further, consider the following statement by Leontiev (2021, p. 177): "A person's activity constitutes the substance of their consciousness." This assertion reflects what Marx told us about how humans make themselves by making their objects. Finally, L. S. Vigotsky provides the necessary synthesis for interpreting how work allows people to constitute themselves socially. By generalizing the concept of the instrument given by Marx and recognizing the role of the sign in the historical development of higher psychological functions, Vigotsky explains the role of language as an instrument affecting human nature. Thus, we are led to consider that, as a human activity, pedagogical activity occurs as a process of signifying the

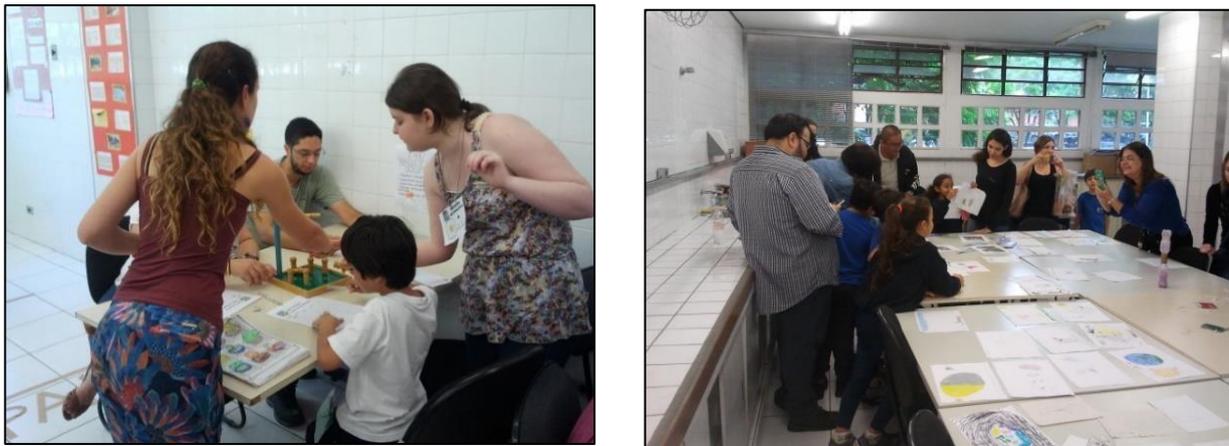
concepts it seeks to objectify. This necessitates investigating how pedagogical activity is carried out in a way that considers the macrostructure of human activity that produces the human in man. This underscores the importance of our research on pedagogical activity as a synthesis of teaching and student learning activities.

AML and RVP: To help readers understand the scope of your career and that of GEPAPe, could you please tell us about the historical process of the emergence of Teaching Guidance Activity? It is a Brazilian proposition based on historical and cultural principles produced in the Soviet context.

MOM: Leontiev's conception of human development processes through activity has certainly had the greatest impact on my work as a teacher and the research I have conducted over the last 30 years of my academic career. Reflecting on my career, I see a consistent theme in my activities, shaped by emerging motives formed through the development of actions that take on new meanings when carried out in accordance with their realization's objective conditions. As a primary school teacher motivated by the role of play in teaching, I sought to give meaning to what was being taught. Thus, we created the first Math Club. It was an experimental school (Ginásio Experimental Dr. Edmundo de Carvalho, São Paulo, Brazil). The school's pedagogical structure included an educational advisor, a pedagogical coordinator, and area coordinators. It was the ideal environment for continuous learning about teaching. We held pedagogical meetings where we discussed the activities we developed collectively. Professionals with a systemic view of school education advised us through a pedagogical project. When I became a professor of mathematics teaching methodology at USP, we met with teachers developing a project to create a laboratory of toys and pedagogical materials. Of course, the inspiration was Piagetian, as was everything else at the time. However, the specifics of my teaching methodology, the activities in the workers' school, the contributions of the history of mathematics, and the organization of the mathematics laboratory

guided me in creating the mathematics laboratory as a space for developing teaching activities focused on learning processes. It was in this space that we established the **FEUSP Mathematics Club** in the late 1990s. The club acquired a new characteristic as it was aimed at training teachers who took the Teaching Methodology course, to which the internship was linked.

Figure 4: Feusp Mathematics Club.



Source: Author's personal archive.

At that time, teacher training was strongly influenced by training concepts that drew on the contributions of authors such as D. Schön, Zeichner, Nóvoa, and Sacristán. These authors introduced reflective teacher training to Brazil. In my experience, reflection was integral to how we developed and evaluated teaching activities collectively. During this time, Capes began funding teacher training research and short courses (30 hours) through partnerships between universities and state and municipal education departments. During this period, USP received funding from the Inter-American Development Bank (IDB) to strengthen "teaching groups" within the institutes (Biology, Chemistry, Physics, and Mathematics), as well as methodologies in the Faculty of Education. These projects brought the university closer to elementary schools (USP/IDB Project: Training of Science Teachers, 1990–1993). I participated in this project, which resulted in the publication *The University and School*

Science Learning. The political effervescence in the country, fueled by the Amnesty Law and the Constituent Assembly, created an ideal climate for establishing teaching groups, as I mentioned earlier. In São Paulo, Luiza Erundina took office as mayor from 1988 to 1992. I was invited to advise on teacher training, which led to the creation of the Pedagogical Mathematics Workshop (OPM). The training methodology was already in place. This was in the 1990s, by which time I had already been influenced by Vigotskian and Leontievian concepts. We could more clearly see how to favor training processes by carrying out pedagogical activities in a collaborative manner. The centrality of the activity in the development of those who perform it strongly impacted the concept of training, which argues that teachers are made by doing their main job: teaching.

While taking a course taught by Professor Daniel Gil Pérez at the University of São Paulo (USP), I was inspired to add a new dimension to what he called the guiding teaching activity. I realized that the meaning of the activity and its objectives are subject to the experiences of those who carry it out. Therefore, we have no control over the personal meaning that participants attribute to the pedagogical activity. This gave rise to the Guiding Teaching Activity. This way of considering teaching is forged in one's personal history and professional experience and is shaped by one's interactions with others. The new motives, as I have tried to make clear, are responsible for new activities and ways of carrying them out.

AML and RVP: Taking a closer look at this conceptual field, how would you describe the configuration of Guided Teaching Activity? Is it a theory, a didactic perspective, a teaching methodology, or something else entirely? Could you elaborate on the main ideas that constitute guided teaching activity and its implications for Brazilian education?

MOM: That's a very challenging question. I don't have a conclusive answer. In the context of our conversation, however, I believe the reader can grasp how a theoretical-methodological conception is formed throughout a professional life,

the multitude of factors that determine professional consciousness, and our dependence on those with whom we live and work. Since the first Mathematics Club, I have shared the activities we carried out as teachers in elementary school and the research activities that shaped our doctorates with my life partner, Anna Regina Lanner de Moura, a professor at FE-UNICAMP. Much of our conception of mathematics education came from our joint practices, which culminated in the production of the book *Educar com a Matemática* (Lanner de Moura et al., 2016). However, the concept of teaching guidance activities predominantly came from my experience at FEUSP, as I mentioned earlier. Regarding the identification of the Guiding Teaching Activity (GTA) as a theory, a didactic perspective, or a teaching methodology (MOURA et al., 2017; MOURA; ARAÚJO; SERRÃO, 2018), I can say that, as with any concept, it developed through multiple pedagogical practices. I believe that, as we establish guidelines for our activities based on their underlying theoretical principles, the intended meaning becomes shared by those in the community that engages in those activities.

This is the path of creating meaning and, consequently, of any scientific production. It is constituted as a process of signification. As I said before, Vygotsky's theoretical syntheses provide direction for understanding the formation of scientific concepts, the development of dialectical materialist consciousness, and the macrostructure of human activity as conceived by Leontiev (1978, 1988, and 2021). They also provide an ideological perspective on the role of knowledge in human development and the way collectives should appropriate what humanity produces. This contrasts with the individualistic view of the ultimate synthesis of the mode of production defended by neoliberalism. These syntheses lead us to develop a conception of pedagogical activity that aims to foster a collectivist consciousness of the production and appropriation of human culture. This approach maximizes the potential of those who produce it. The indefinite article in the previous statement is intentional. Thus, a theory is a synthesis of the conceptual links that constitute

it. It is a totality within other totalities. Its individuation depends on what it needs to substantiate logically to give meaning to actions directed toward an end, resulting from the conscious activity of those who perform them. In this way, the Guiding Teaching Activity constitutes a theoretical methodological basis that has sustained research activities on the processes of appropriating concepts, whether they concern teaching or learning. This research also challenges us to consider how we position ourselves in the world as conscious individuals who lead our lives and strive for a just and egalitarian society.

AML and RVP: This proposal for a Guiding Teaching Activity includes a set of guiding concepts (triggering situation, virtual history of the concept, etc.) that are important for its development. To give substance to the Guiding Teaching Activity, it is important to explain what each of these concepts consists of and how they relate to each other.

MOM: There is a basic principle about the development of knowledge. Everything we produce serves to satisfy some need, whether objective or subjective. The process of carrying out the motivated activity takes place in the direction of objectification, guided by an ideal project, as an activity organized on the ideal plane that requires implementation. In school education, we have identified that the object assumed as central to the teaching activity is the content recommended by the curriculum, which is developed by the people who make up the school. In line with the view that a problem mobilizes thought (E. V. Ilienkov), we believe that imagination, emotion, and feelings are inherent components essential for those who objectify pedagogical activity as a unity of two activities with different motives: teaching and learning. However, these need to converge toward appropriating the meanings of the object (concept) in motion for both the teacher and the student. Therefore, pedagogical activity requires awareness of the motive for appropriating concepts as tools for producing and assimilating culture in the broadest sense. Considering the production of the

motive and the development mode of the activity that enables problem-solving experience, both collectively and in terms of the activity's structure as the development mode of the subjects' potentialities, gave rise to the formulation of what we call the Learning Triggering Situation (LTS).

The theoretical perspective of THC emphasizes the roles of play and imagination in developing knowledge. This led us to consider selecting references relevant to the core activity of those who would solve the problems present in SDAs for the production of these situations. We selected references that included the virtual history of the concept, games chosen for their ability to systematize a concept (now called educational games), and everyday situations. To better understand these concepts, I recommend reading the teaching guidance activities dossier, a publication from the Obuchenie period. *Journal of Didactics and Educational Psychology*. The virtual history of the concept was created in the 1980s and is influenced by our belief that students should have the opportunity to reflect on the logical and historical development of concepts. It refers to episodes in the history of a concept that enable students to formulate a problem to solve in groups. In this way, students experience a problem-solving method similar to those used in the development of a concept. This process follows the macro structure of the activity, which includes developing an action plan, identifying and using known theoretical tools, and conducting analysis and synthesis. Finally, the group concludes and tests the solution to the problem. Clearly, the knowledge and personal meaning of the group members are involved in this process.

Thus, feelings and emotions, which are part of students' stories, contribute to the objectification of teaching and learning activities. Teachers intentionally create the triggering situation as part of the teaching activity to set it in motion and make it a learning activity for students, who give meaning to the concept in the process. This process, based on an understanding of the conceptual links that constitute it, gives the system of concepts a new quality for those who assimilate it. In this way, it also gives a new quality to those who appropriate

it. This is one way to put a Vygotskian maxim into practice that reveals his conception of good teaching: promoting development.

AML and RVP: Guided teaching activity initially emerged from contributions made by historical-cultural psychology. It then gained momentum through dialogue with more recent Soviet authors representing theories that emerged from the historical-cultural approach, such as developmental learning. There has been increased interest in this field in Brazil over the last decade, as access to developmental didactics has grown substantially. The genesis and development of developmental didactics in Brazil are associated with the efforts of various Brazilian research groups collaborating with researchers of different nationalities. Undoubtedly, the work of this collective has played a fundamental role in the growth and deepening of this framework in Brazil throughout this historical process. In this trajectory, are there any milestones for the rise of this approach in the country? How would you describe the connection between these authors' ideas and the development and establishment of Guiding Teaching Activity within this historical movement?

MOM: Developing a concept for organizing teaching based on Historical-Cultural Theory and Activity Theory naturally leads to forming or consolidating groups that aim to implement these theories. These groups become guidelines to be followed under the threat of rendering their actions meaningless. Their practices based on other theories no longer align with reality, so they cease to produce what they believe is relevant to achieving their goals as historical subjects. This is how we acquire new qualities as people and gain a new understanding of the activities we perform. Searching for partners who share our theoretical conceptions becomes natural. This is why groups are necessary. There must be leadership to formulate such theoretical conceptions and implement them. There must be an activity that makes the theoretical formulations seem true from a logical perspective. Therefore, research becomes necessary as well. In our case, we believe the best

way to carry out school education is through teaching activities guided by teaching activities. Our group, GEPAPe, has created spaces that enable pedagogical praxis. We propose teaching activities according to the structure of teaching guidance activities. This structure implies initiating activities through a learning trigger situation and developing them collectively. This requires understanding and practicing school education as an activity from a Leontievan perspective.

The establishment of educational workshops, math and science clubs, and advisory services for teaching systems has made it possible to use AOE as a reference for research activities. This allows for an investigation into the systemic development of AOE's central elements. Therefore, I consider the formation of research groups that use AOE as a reference to be a natural progression. The theoretical basis of Teaching Guidance Activity is the same as that of Developmental Didactics. I consider this quality of the concept of didactics to be very fortunate because it is relevant and consistent with the most important aspects of pedagogical activity in the Vygotskian perspective on the role of teaching. According to this perspective, good teaching promotes development. I agree with you that this perspective on didactics is valid.

Figure 5: Speakers at the IV International Colloquium on Developmental Teaching: Elkonin-Davidov System, promoted by the Faculty of Education of the Federal University of Uberlândia. Prof. Ori is third from right to left in the front row.



Source: Archive of the Study and Research Group on Developmental Didactics and Teacher Professionalization (Gepedi).

Attentive readers of Vygotsky who study his formulation of the role of teaching will see that he had to develop syntheses based on extensive theoretical study of human processes of cultural appropriation to arrive at this synthesis. These theoretical syntheses could only converge on this original formulation, which provides guidance for formulating a didactic approach that sets in motion subjects impacted by teaching as an authentic human activity. Thus, I believe the theoretical methodological principles of Guiding Teaching Activity converge with those of Developmental Didactics. This convergence enables permanent pedagogical praxis because, as Leontiev (2021) assures us, being an activity is the development of consciousness and personality.

AML and RVP: The foundations of guided teaching activity are linked to the concept of psychological activity theory developed by A. N. Leontiev. Based on these contributions, at least two alternative Soviet developmental teaching systems were produced: the Galperin-Talízina system and the Elkonin-Davidov-Repkin system. A set of propositions from these systems reached Brazil primarily through the works of P. Ya. Galperin, D. B. Elkonin, and V. V. Davidov. Only since 2014 has Brazilian academia had access to the works of V. V. Repkin. As dialogue with these authors intensifies, could we understand Guided Teaching Activity as a collective and continuously evolving endeavor that incorporates elements of these approaches? In this sense, it would be interesting to explore the possible dialogues between: a) Guided Teaching Activity and Guiding Basis of Action, developed by P. Ya. Galperin and his collaborators, and Guiding Teaching Activity and study tasks, study actions, control, and evaluation, developed by V. V. Davidov and his colleagues.

MOM: As I mentioned earlier, the authors central to my approach to historical-cultural theory were Vygotsky, Luria, and Leontiev. Leontiev undoubtedly contributed the most to our group, enabling us to focus our research on pedagogical activity. Mario Golder, an Argentine psychologist and Leontiev's advisor, joined our

group to participate in a seminar. His presence brought invaluable theoretical contributions, deepening our understanding of the context of Soviet psychology. He also broadened our view of the diversity of actors involved in the fruitful intellectual production on human development. Seth Chaiklin and Marianne Hedegaard, who were with us at the beginning of the group's formation, also provided insight into Western interpretations of Soviet work. Our group's annual colloquiums have introduced us to various works, particularly those from the group you coordinate, which present a vast collection of Vygotskian publications. One author who has greatly contributed to the foundation of our research is V. V. Davydov. In my opinion, his theoretical work has clearly contributed to the formulation of a teaching method based on the foundations of Soviet psychology.

A careful reading of the fundamentals of historical-dialectical materialism, as presented by Davidov (1988) as the basis for his teaching proposals, provides guidance for deepening our knowledge of school education and organizing teaching in a way that impacts learning processes more effectively. In my view, Vygotsky's maxim that good teaching anticipates development is the principle that elevates Didactics to Developmental Didactics. Our group refers to concepts such as "study task, study actions, control, and evaluation," especially when defining situations that trigger learning and the process of objectifying the teaching activity. Being an activity, the latter contains the actions necessary for evaluating what has been objectified.

AML and RVP: Given the current situation in Brazil, how relevant do you think this approach is? What is your assessment of the current state of the theory in Brazil? How has GEPAPe organized itself to maintain active research and educational activities in this context? What strategies help the group remain vibrant and continue to develop rapidly?

MOM: The production of knowledge to increase capital and the need to better understand human production led to Fordism, Taylorism, and Industry 4.0. On the other hand, there is a call for theorists to produce paradigms and methods for what is called

Education 4.0. Fortunately, there is also the law of contradiction of dialectical materialism. This law produces knowledge that serves as a means of understanding phenomena caused by the dynamics of productive forces. This possibility is generated by the same mechanism that realizes all conscious activity. Consciousness formation could not be otherwise. It occurs in the same way that we carry out an objective activity.

A fundamental aspect of education that can overcome barbarism understands that forming consciousness requires fully experiencing the activity one carries out. This means having the ability to plan, use tools, and evaluate the results of one's ideas. We understand that this continuous process of human formation occurs through the activities they carry out. History has also shown us that we can continue to deepen our understanding of this process. This deepening is enhanced through the formation of groups that occupy various university spaces. These groups are guided by a theoretical concept under development that shapes a sense of belonging to a community. This community carries out activities that contribute to a deeper understanding of pedagogical activity, which is mediated by teaching (Moura & Araujo, 2018). In this way, the theoretical concept under development constitutes and is constitutive of a method that allows us to organize our actions into projects to achieve our goals. Thus, we can understand the formation of a network of research groups, which we call GEPAPe em Rede (GEPAPe Network), as the coordination of research activities of groups whose central focus is pedagogical activity.

Figure 6: Members of the Study and Research Group on Pedagogical Activity (Gepape), at the VI GEPAPe Colloquium, held on October 15, 16, and 17, 2022, at FEUSP.



Source: <https://sites.google.com/usp.br/gepape-usp>

The GEPAPe Network is a collaboration of groups that seek to understand the issues involved in school education from historical and cultural perspectives, particularly from the perspective of Activity Theory. Our research on pedagogical activity responds to the needs of groups building identities based on a combination of individual motives and collective goals. Our theoretical instruments organize teaching, research, and extension with knowledge and methods, empowering us to understand and carry out pedagogical activities that contribute to the full development of human potential. The Teaching Guidance Activity has enabled the formation of the unity necessary for the development of the GEPAPe Network, which contributes to research in teaching, learning, and the formation of spaces for carrying out pedagogical activities, such as pedagogical workshops and mathematics and science clubs. Over the years, these training spaces have largely been created thanks to the tireless persistence of young researchers who developed research projects subsidized by relevant teacher training funding lines after completing their doctorates. It is crucial that we advocate for government programs that support

the initial and ongoing education of teachers, such as the Education Observatory (OBEDUC) and the Institutional Program for Teaching Initiation Scholarships (PIBID). The network project that we carried out with OBEDUC's support consolidated what we now call GEPAPe in Network and constituted a relevant source of data for research on pedagogical activity.

Figure 7: Brochure for the Third Education Observatory Seminar held in 2013 in the city of Pirassununga, São Paulo.

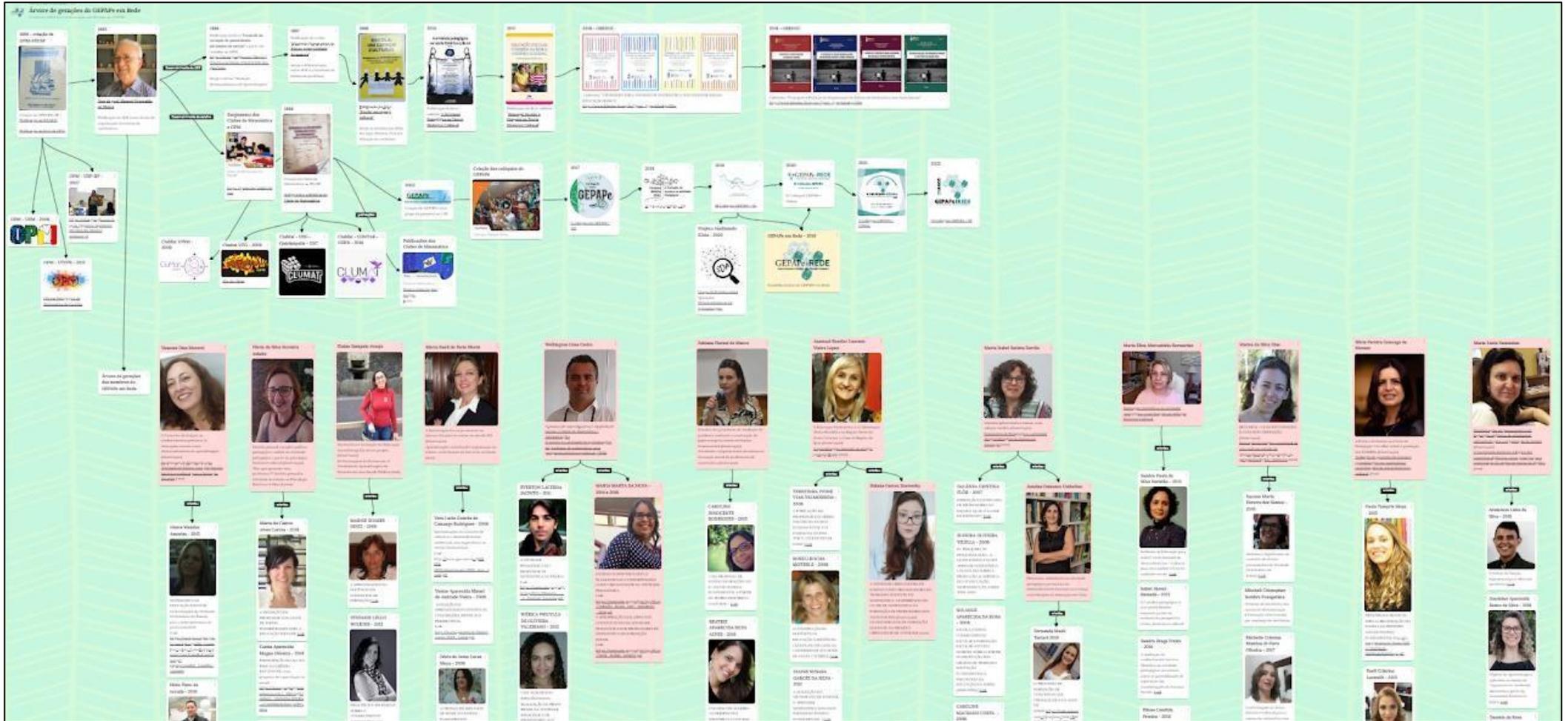


Source: Author's personal archive.

AML and RVP: GEPAPe's work has national significance and important impacts on scientific production and the training of students and teachers, especially those in Brazilian public schools. Much of this work has been published in theses and

dissertations from the five regions of Brazil, as well as in book chapters and scientific articles by group members. Some of this history is recorded on the group's website: <https://sites.google.com/usp.br/gepape-usp/>. In any case, we consider it important to share books and dossiers that could be considered historical milestones in developing this approach, as you see fit.

MOM: The formation history of GEPAPe is presented on a Padlet organized by the new generation of "GEPAPe em Rede" (GEPAPe Network) and presented at our 2022 symposium. This Padlet contains publications representing the collective work of much of our group's history. Visiting the link <https://padlet.com/nataliaoliveira22/1s71drfylxip1epo> will illustrate what I have been explaining throughout this "(inter)view. Yes, "interview," as in the perspective of someone who shares what they consider turning points in their life, with everyone represented here, as well as representatives of those not in the photos who contributed to our experiences and helped us grow emotionally and cognitively. Through the link, readers will have a more complete view of our group's publications and participants.



Source: <https://padle.com/nataliaoliveira22/1s71drfylvxip1epo>

My gratitude to all those who have been and continue to be part of me, and to you, for giving me this opportunity to present this way of understanding the constitution of our “GEPAPe Network.”

Teoría del Aprendizaje Desarrollador (TAD): diálogo con Manoel Oriosvaldo de Moura

RESUMEN

Manoel Oriosvaldo de Moura, Profesor Titular jubilado de la Facultad de Educación de la Universidad de São Paulo/BR, es responsable por la creación del Laboratorio de Matemáticas; el proyecto del Club de Matemáticas; así como el Grupo de Estudios e Investigaciones sobre la Actividad Pedagógica (GEPAPe). Investigador consagrado por la academia brasileña, el Prof. Ori es autor de una vasta obra con un legado que marca su compromiso con la producción y divulgación del conocimiento científico a través de acciones docentes, investigativas y de divulgación. Su trayectoria está marcada por una humanidad indescriptible, con una posición política, ideológica y pedagógica comprometida siempre con la lucha por la igualdad y la no alienación, lo que lo llevó a defender una perspectiva de educación marxista, guiada por procesos de humanización. Sin haber abandonado nunca sus raíces en Piauí, construyó su vida profesional y académica en São Paulo/SP, donde desarrolló (de manera colaborativa) una propuesta metodológica denominada Actividad Orientadora de Enseñanza, basada en los presupuestos de la Teoría de la Actividad Leontiviana.

Palabras clave: Manoel Oriosvaldo de Moura. Ori. Teoría de la Actividad. Actividad Orientadora de Enseñanza. Brasil.

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