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ARTICLE

THE RELATIONSHIP AMONG THEORETICAL CONCEPTS, CURRICULUM, AND TEACHING ORGANIZATION

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ABSTRACT: Theoretical foregrounding, methodology, and assessment processes are required to prepare school curricula and pedagogical policy projects (PPPs), although these factors are not always perceived in an articulated form. Consequently, these documents fail to direct the pedagogical issue. A section of qualitative research in this paper evidence the relationship between the prescribed curriculum and teaching activities. Field data were collected by the studied group, and integrated by teachers involved on the curriculum proposal development, based on Historical and Dialectical Materialism, Historical and Cultural Theory, and Historical and Critical Pedagogy. Results show that teachers' participation in curricula and PPPs development favors discussions on the articulations of such studies coupled with pedagogical practice. Thus, it is essential to investigate teaching activities that may be derived from the curriculum's basic concepts.

Keywords: curriculum; pedagogical policy project; teaching organization; historical and dialectical materialism; historical and cultural theory.

RELAÇÃO ENTRE PRESSUPOSTOS TEÓRICOS, CURRÍCULO E ORGANIZAÇÃO DO ENSINO

RESUMO: Na elaboração de currículos escolares e projetos políticos pedagógicos (PPPs) é exigido que sejam evidenciados os pressupostos teóricos, os encaminhamentos metodológicos e os processos de avaliação. Todavia, nem sempre esses elementos são vistos de modo articulado, por isso, esses documentos não orientam o trabalho pedagógico. A partir dessa problemática, este artigo, com o objetivo de evidenciar a relação entre o currículo prescrito e as ações de ensino, apresenta parte de uma pesquisa, de natureza qualitativa, cujos dados de campo foram coletados em um grupo de estudos do qual participaram professores envolvidos na elaboração de uma proposta curricular fundamentada no materialismo histórico-dialético, na teoria histórico-cultural e na pedagogia histórico-crítica. Os

resultados apontam que a participação dos professores no processo de elaboração de currículos e de PPPs provoca neles reflexões acerca da articulação desses documentos com a prática pedagógica e gera a necessidade de compreender ações de ensino que podem ser derivadas dos fundamentos anunciados no currículo.

Palavras-chave: currículo; projeto político pedagógico; organização do ensino; materialismo históricodialético; teoria histórico-cultural.

RELACIÓN ENTRE PRESUPUESTOS TEÓRICOS, CURRÍCULO Y ORGANIZACIÓN DE LA ENSEÑANZA

RESUMEN: En la elaboración de currículos escolares y proyectos político-pedagógicos (PPPs), se requiere que se evidencien los presupuestos teóricos, lineamientos metodológicos y procesos de evaluación. Sin embargo, los elementos no siempre se ven de forma articulada y, por tanto, estos documentos acaban por no estar orientados al trabajo pedagógico. A partir de esta problemática, este artículo, con el fin de resaltar la relación entre el currículo prescrito y las acciones docentes, presenta parte de una investigación cualitativa, cuyos datos de campo fueron recolectados a través de un grupo de estudios en los que los docentes participaron en la elaboración de una propuesta curricular basado en el materialismo histórico-dialéctico, la teoría histórico-cultural y la pedagogía histórico-crítica. Los resultados indican que la participación de los docentes en el proceso de elaboración de currículos y PPPs provoca en ellos reflexiones sobre la articulación de estos documentos con la práctica pedagógica, generando la necesidad de comprender acciones docentes que puedan derivar de los fundamentos enunciados en el currículo.

Palabras clave: currículo; proyecto político pedagógico; organización docente; materialismo históricodialéctico; teoría histórico-cultural.

INTRODUCTION

In the elaboration of curricula and pedagogical political projects of basic education teaching institutions, the philosophical and conceptual principles that base them are required, in addition to the curricular components accompanied by the respective methodological referrals and adopted evaluation processes. Veiga (1998) explains that the construction of the Political-Pedagogical Project is marked by three different acts: situational act, in which the reality of the school is described; conceptual act, which concerns the conception of society, man, education, school, curriculum, teaching and learning; and operational act, which deals with the actions for the operationalization of the project.

In each of these acts, the concepts already mentioned are present, forming the basis of all pedagogical work in an articulated way. They express the idealization of the arrival point of the formative process that concerns the type of society that is desired, the purposes of school education in the face of this societal project, as well as the didactic-pedagogical means to achieve this end.

A curriculum and a political-pedagogical project have real value when they are structured as a compass that guides decisions about the path to follow toward the desired destination. The theoretical assumptions, called philosophical and conceptual aspects (PARANÁ, 2018), in which the conceptions of society, man, knowledge, and school education are explained, in an articulated way, offer the criteria to define which contents to prioritize, which books select didactics, which projects to be undertaken, which actions to be carried out to promote student learning, etc. This reveals the close relationship between the concepts exposed in the curriculum and the teaching organization.

In compliance with legal requirements, the documents prepared by the departments of education and schools contemplate the determined topics, however, not infrequently, these elements do not dialogue with each other. In this way, they do not constitute a basis that guides and expresses, the pedagogical work carried out or to be carried out. By assuming the nomenclature used by Veiga (1998), it is possible to state that there is not always coherence between the conceptual act and the operational act. With that, the pedagogical practice remains very similar in different schools and municipalities, without a differential that would correspond to the specificity of the announced theoretical-methodological conceptions.

Based on this problem, this article, to analyze the relationship between the prescribed curriculum and teaching actions, presents part of the research whose field data were collected via a study group with teachers from the early years of elementary school, involved in the elaboration of a curricular proposal based on historical-dialectical materialism, historical-critical pedagogy, and historical-cultural theory. Initially, we highlight how these teachers demonstrate the need to understand the relationship between theoretical aspects highlighted in the curriculum and pedagogical practice. Subsequently, we present studies on the organization of teaching that reveal the particularity of teaching and student actions when based on the theoretical assumptions present in the curriculum of that municipality.

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FROM CURRICULUM TO TEACHING ACTIONS: A PATH TO FOLLOW

The relevance that the elaboration of the curriculum and the political-pedagogical project assumes is quite different in each municipality or state. In some places, the elaboration of these documents occupies a special place in discussions and the continuing education of teachers. Normally, these documents are produced collectively and involve many teachers in their preparation. For this reason, they are valued by these professionals. In other places, restricted to bureaucratic requirements, the production of these documents does not involve the school collective and, often, they are not known by all education professionals. In this second situation, the curriculum, and the pedagogical political project pass by the sidelines of the continuing education of teachers and, contradictorily, are not references for discussions about the organization of teaching.

However, where there is the involvement of teachers in the preparation of these documents, greater reflection by these professionals is perceived in search of coherence between the assumptions stated in the curriculum and the teaching activity they carry out since they expect there to be, and there should be, a differential in the pedagogical work carried out in teaching networks where there is greater awareness of the theoretical foundations on which they are anchored.

This is what can be evidenced because they participated in a study group whose purpose was to study the conception of knowledge and organization of teaching in the Historical-Cultural Theory¹. The teachers belonged to a municipal teaching network whose curriculum and political pedagogical projects of the schools were based on the Historical-Dialectic Materialism² elaborated by Marx and Engels (2007), the Historical-Cultural Theory³ whose main references are Vygotsky (2009), Leontiev

¹Due to the data collected during the course being used for research purposes, the project was submitted to the Permanent Committee on Ethics in Research with Human Beings – COPEP-UEM, via Plataforma Brasil, and approved on November 22, 2017 (CAAE: 77680317.3.0000.0104).

² Dialectical historical materialism refers to the theoretical productions elaborated by Marx in partnership with Engels, which had as their central problem the unveiling "of the genesis, consolidation, development and crisis conditions of bourgeois society, founded on the capitalist mode of production, [...] making conscious its foundations, its conditionings and its limits - at the same time that the contents of this knowledge are verified from the real historical processes, in opposition to the philosophy of Hegel, the English political economists (especially Smith and Ricardo) and the socialists who preceded him (Owen, Fourier)" (NETTO, 2011, p. 17-18). To this end, the authors elaborated fundamental premises for unveiling the objective reality and for carrying out the methodological path using the categories totality, contradiction, and mediation.

³ Theory of psychological science produced by Vygotsky, Leontiev, and Luria, based on the dialectical historical materialist method, with the purpose of understanding the development of the human psyche through the process of appropriation of cultural goods historically produced by humanity, based on some general educational principles: "a) the conception of man as a historical subject; b) understanding the social formation of consciousness; c) the definition of education as a process of appropriation of the social experience of humanity; d) the defense of the development of the psyche as a result of practical human activity, mediated by signs and instruments; e) understanding that higher psychic functions are first shared between subjects (interpsychic) and later internalized (intrapsychic); f) the defense that the appropriation of knowledge is always an activity mediated by other people (the collaboration of the most experienced)" (NASCIMENTO, 2010, p. 102).

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(1978) and Luria (1991) and the Historical-Critical Pedagogy⁴ developed by Dermeval Saviani (2005).

The study group was part of a didactic experiment ⁵ that aimed to analyze to what extent the understanding, by the teacher, of the concept as a mediating instrument, allows changes in their way of organizing teaching and overcoming decontextualized and/or fragmented practices. The group consisted of five people, four teachers from the early years of elementary school, and the researcher. In general, the didactic experiment was carried out in three stages, with a total workload of 40 hours, with 32 hours of face-to-face studies and 08 hours dedicated to the preparation of the teaching plan by the teachers. Initially, the teachers individually elaborated a teaching plan on the content present in the curriculum, according to their choice. A new teaching plan was elaborated after carrying out the studies on the conception of the concept according to the dialectic logic, on the processes of learning and psychic developmental Teaching. We analyzed the initial and final plans to identify possible changes and permanence in the way teachers organize teaching, bearing in mind theoretical and methodological concepts that were objects of study by the group.

The municipality's curriculum and the schools' PPPs were collectively prepared, and their theoretical foundations are systematically addressed in continuing education courses. The reflexive movement provoked by the elaboration of the curriculum and the continuing education generated in these professionals the need for coherence between what is recommended in the curriculum and actions in the classroom. Initially, we will present some of the teachers' speeches to highlight problems and needs arising from practice to, later, deal with the organization of teaching based on the theoretical references already mentioned.

The teachers showed that they value that the municipality has a curriculum with a clear theoretical basis and agree with the training perspective assumed in it. But they point out that the greatest difficulty they experience is teaching the content according to dialectical logic. More specifically, teacher 1 states:

I would like to point out that these questions make me very anxious. I think that's our big challenge. Sometimes I wonder how to effectively implement dialectical historical materialism in the classroom. The content must be scientific content, historically produced and accumulated

⁴ Pedagogical theory elaborated by Dermeval Saviani in the late 1970s which, based on dialectical historical materialism, is based on thinking of school education as a dimension for human development and overcoming capitalist society (SAVIANI, 2008).

⁵ The didactic experiment as a research methodology is based on the research method created by Vygotsky and his collaborators, called the experimental genetic method. For the author, this method was considered the most suitable for the study of the development of the human psyche, as it enabled the understanding of psychic processes from their origin and all their complex subsequent development. In the context of research based on the Historical-Cultural Theory, "The formative experiment method is characterized by the researcher's active intervention in the mental processes he studies. In this sense, it differs substantially from the verification experiment (verification, confirmation) that only focuses on the already formed and present state of a mental formation. Carrying out the formative experiment presupposes the projection and modeling of the content of the new mental formations to be formed, the psychological and pedagogical means and the ways of their formation" (DAVIDOV apud LIBÂNEO; FREITAS, 2013, p. 328).

by humanity (Teacher 1).

The speech of Teacher 1 indicates the theoretical foundation in the philosophical field recognized by her, which allows her to identify that there is a gap between this foundation prescribed in the curriculum and the work that effectively takes place in the classroom. When talking about content, she resorts to the expression present in theory and curriculum, that "school content must be scientific content, historically produced and accumulated by humanity". However, Teacher 1 does not advance in explaining what the fact of understanding that this is the central content of the school means or differs from other practices that are not so emphatic in this statement.

Teacher 2 also highlighted the value attributed to scientific content as central to schoolwork but does not link this appreciation to any specific methodological aspect: *"I think that valuing scientific content is an essential issue. It is not possible to teach without understanding the importance of scientific knowledge. That's an assumption. But I don't think that the definition of content interferes with the methodology"* (Teacher 2).

Teacher 3 agrees with Teacher 1's statement about considering the dialectic in understanding teaching and learning. She reaffirms the importance of considering the content, subject, and form relationship in teaching (an issue that was previously discussed in the study group) but does not explain how teaching would take this relationship into account. Then, this teacher mentions the curricular proposal of the municipality: *"I also think that our great challenge is to guarantee the implementation of the curricular proposal in the classroom. Teaching and learning dialectically. The importance between content, method, and subject is essential"* (Teacher 3).

Teacher 4 also mentioned the relationship between content, method, and subject. This subject caught her attention because it was not common in studies she had already carried out. Specifically, the consideration of the subject of learning to organize teaching is a new element for her. But it confirms that her concern, among these three elements, is greater with the application of the dialectical historical materialist method in the teaching and learning processes.

> I know that we must consider the subject of learning in the teaching process, but I usually hear and study authors who speak only of the relationship between content and form, or content and method. This is new to me. Thus, bringing the three together. But the big challenge for me is to ensure the application of the method in the classroom, in the classroom itself (Teacher 4).

The issue of the search for harmony between dialectical logic and teaching is not new, nor is it just about the Brazilian educational reality and a specific municipality. The concern presented by these teachers is like the concerns and difficulties encountered by Russian psychologists and pedagogues who sought to overcome a teaching perspective linked to formal logic that was common in Soviet schools.

> Our psychologists and didacticians accept dialectic as a general method of scientific knowledge and employ it in their investigations. At the same time, the problem consists of *reflecting the principles of dialectical thinking and expressing them in the "technology" for developing didactic material, in the procedures for forming concepts in schoolchildren, and in the means for organizing their thought activity.*

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However, the concrete "technology" of these processes is currently structured, generally based on the principles of empirical discursive thinking (DAVIDOV, 1988, p. 108, our translation, emphasis added).

Understood dialectics as a primordial logic to understand the nature of knowledge, the concern of these authors was essentially centered on how to express dialectics in teaching and the resources used by the teacher, and not in mechanically transposing the categories of the method of knowledge production for the process of teaching and appropriation of knowledge.

A similar concern is present in Vygotsky (1996) when establishing the relationship between psychology and the historical-dialectical materialist method. He emphasized the care not to apply this method directly to the field of psychology and stated that it was necessary to create a theory that used the dialectical method as a foundation, to guarantee the production of categories specific to the epistemological field of psychology. It is possible to say the same in teaching, that is, the materialist method and the psychology that is based on it cannot be directly applied to the field of teaching but are fundamentals to produce categories of the pedagogical field.

The discussion about the relationship and the specificity between the dialectical historical materialist method and the pedagogical work draws the attention of Teacher 2, who states: *"Wow, this is not an easy question to understand. [pause] Does that mean we don't apply the method in class specifically?"* (Teacher 2).

The categories of the dialectical historical materialist method are not directly applied in the classroom, as they constitute philosophical foundations for understanding objective reality. Teaching must contemplate them but by having the promotion of learning as its purpose, it also requires the mediation of other sciences that offer specific theoretical corpus on learning and the means for organizing the teaching of scientific knowledge, such as psychology and didactics, respectively. That is, the dialectical historical materialist method presents essential concepts that, in conjunction with other sciences, allow the structuring of a pedagogical theory that guides the teacher's work.

Davidov (1988), when exposing the need to overcome a perspective of teaching based on formal logic, deals with the importance of structuring school subjects and content to think about the organization of teaching from a dialectical perspective.

The problem of teaching and education that drive development is closely linked to the logicalpsychological foundation of the structuring of school subjects. The content of these and the means to use them in the didactic-educational process essentially determine the type of conscience and thinking that forms in students during the assimilation of the corresponding knowledge, attitudes, and habits. For this reason, *issues related to the structuring of school subjects are not of narrow importance but of broad importance, from the point of view of the particularities of the students' psychic development* (DAVIDOV, 1988, p. 99, our translation, emphasis added).

The problematization announced by the author underlies the understanding that the school curriculum, through the choice and organization of contents, makes it possible or not to work in

dialectical logic and, consequently, boosts or limits psychic development, in the formation of theoretical thinking from the students. Based on the excerpt, it is possible to highlight the close relationship between psychology and didactics, insofar as the structuring of school subjects and their respective contents in the curriculum directs the organization of teaching. Given this reflection, Teacher 2 states:

So... I understand that today we have a curriculum that brings the issue of dialectical materialism very clearly. But I realize that there is no difference in the way of teaching in the classroom. It is difficult for me to understand the relationship between materialism and, effectively, the teaching process with students. It seems that what prevails is the teaching of concepts such as definition (Teacher 2).

In the curriculum of this municipal education network, the importance of scientific knowledge in the teaching and learning process is highlighted:

The school must ensure that students are in contact with the most elaborate scientific knowledge, as they are what will effectively enable the autonomy and awareness of the working class, *with a focus on "what to teach"*, bringing students closer to the intellectual richness produced historically. In this sense, *the role of teachers in public schools must be committed to this objective, with the transmission of scientific knowledge* (CASCAVEL, 2008, p. 22, emphasis added).

This excerpt was read in the study group and the consensus around the primary function of the school was reaffirmed. Teacher 1 said: "Look, I think there is no doubt that the role of the school is to teach scientific knowledge. This for me is the fundamental issue of teaching" (Teacher 1). Teacher 4 adds: "The issue of scientific content is essential for me. Also, the intentionality of the teacher. These two issues give quality to teaching" (Teacher 4).

Teacher 2, as shown in the quote below, draws attention to an element that was not present in the excerpt: the relationship between scientific knowledge and the development of higher psychological roles, as exposed by Vygotsky (1993). The memory of this relationship is probably the result of her reading other parts of the curricular proposal and previous studies. But it does not explain the reasons why the learning of scientific knowledge favors the development of higher psychological roles.

It's correct for me! (Referring to the statement in the curriculum excerpt) The teacher's work must be the teaching of knowledge historically accumulated by humanity. This is what develops the students' superior psychological functions: the learning of scientific knowledge (Teacher 2).

Once again, Teacher 3 resumes the discussion about the content, subject, and form unit, and, in addition to affirming the importance of scientific knowledge, she highlights that, when organizing teaching, the emphasis cannot be on just one element, even if still not sure about what it would be like to think of the other elements as a unit.

I consider the importance of scientific knowledge in teaching, but the slide brings up other issues just as important. For example, the other elements: subject and form. So, would it be the unit: the content, the subject, and the form? (Teacher 3).

The teachers' statements show a fundamental element of teaching that promotes the development of students: scientific knowledge. This is a general position of the group of teachers in this teaching network, built with intense ongoing training work with theorists who emphasize the importance of this content as a priority in the teaching process.

However, other elements, such as the subject of learning and the way of organizing teaching, were mentioned only by Teacher 3. In a way, according to the presentation of the others, there seems to be an understanding that clarity about the importance of work with scientific knowledge would be enough to guarantee quality work based on the assumptions of the historical-dialectical materialist method.

However, scientific knowledge is also valued in formal logic and by traditional pedagogy, even if based on another conception of knowledge. In this way, the fact of valuing scientific knowledge is not enough to promote an education that enables the development of conscience, as exposed in the curricular proposal.

Vygotsky (1993), despite not dealing with investigations on the organization of teaching, when he announces the importance of appropriating concepts for development, states that "[...] *a correct organization of the child's learning* leads to the mental development" (VIGOTSKII, 1998, p. 115, emphasis added). It is inferred from this statement that working with scientific knowledge, by itself, does not guarantee that teaching is based on dialectical logic and enables the development of students. Thus, it is important to think about an organization of teaching that considers the content, the subject, and the way of teaching.

The need to seek theoretical-methodological support for planning teaching actions is felt more clearly when one realizes that the available textbooks do not organize the teaching of concepts according to this theoretical perspective since they follow other theoretical-methodological assumptions (BACARO, 2018). Even if the textbook is not used in its entirety in schools, it exerts influence on teaching actions, since it is often the main reference material used by teachers to prepare classes.

It is necessary, however, that the teacher has autonomy in the organization of his-her work and that he-she does not depend on ready-made classes available from publishers, websites, or teaching systems. For this, he needs to have knowledge that will help him to master a general teaching method that promotes the development of students. Teaching work is "an activity that requires not only technical knowledge but theoretical mastery of teaching and learning actions" (SFORNI, 2020, p. 21). This domain is acquired with knowledge present in philosophical, psychological, pedagogical, and didactic assumptions.

ELEMENTS FOR THE ORGANIZATION OF EDUCATION IN HISTORICAL-CULTURAL THEORY: IN SEARCH OF HARMONY BETWEEN THE PRESCRIBED CURRICULUM AND THE PEDAGOGICAL WORK

Based on the Historical-Cultural Theory and understanding of the relationship between Educação em Revista|Belo Horizonte|v.39|e35586|2023 psychology and didactics to think about the organization of teaching, principles, and didactic actions were structured by international researchers (DAVIDOV, 1982; 1987; 1988; 1999; DAVYDOV; MARKOVA, 1987; SEMENOVA, 1996; REPKIN, 2014; RUBTSOV, 1996) and national (LIBÂNEO, 2009; MOURA, 1996; 2000; SFORNI, 2004; FREITAS, 2016; NASCIMENTO, 2010, among others).

We emphasize that our reflections are based on the contributions of these authors to think about *a general way to organize teaching*, as they constitute guiding aspects of the teaching activity in planning, teaching, and evaluation.

As much as curricular content is considered important by society or by the teacher, this importance is usually not yet perceived by the student. The fact that the student attends or is present in the classroom does not mean that he is interested or willing to learn. On the contrary, sometimes the student attends or participates in class only out of fear, obligation, or habit, in a mechanical process. However, learning, whether in the school context or outside it, requires having reasons to learn.

This does not mean that we are advocating that the class must consist of fun activities daily as if they will, attention and interest in learning and studying were always linked to a festive environment or "far-fetched" teaching practices.". Instigating, questioning, being attentive, and being interested in the content to be studied usually results from how knowledge is presented to the student and the actions he takes with this content.

Leontiev (1978) points out that there will only be a reason to study when it becomes an activity for the student and "is associated with a particular class of psychic impressions: emotions and feelings" (LEONTIEV, 1978, p. 297). According to the author, "Not every process is an activity. We only designate by this term the processes that, realizing this or that relationship between man and the world, respond to a particular need that is his own" (LEONTIEV, 1978, p. 296).

The knowledge taught as definitions and terms systematized as school contents were produced because of social needs throughout the historical development of humanity. However, in the systematization of this knowledge, its movement, its contradictions, and mediated relationships are lost, as they constitute abstractions that move away from the real dynamics of the world. If presented in this way, students show little interest in learning.

However, understanding the logical and historical aspects of knowledge enables us to identify the historical and social need for its production, that is, the unveiling of the genesis and need for knowledge in the historical process of humanity. Kopnin (1978) asserts that "to reveal the essence of the object it is necessary to reproduce the real historical process of its development, but this is possible only if we know the essence of the object" (KOPNIN, 1978, p.184).

How to do this in the teaching process in the classroom?

It is essential to recreate the need and reasons for producing the knowledge to be taught so that it makes sense to students. We understand, however, that it is impossible to recreate the real situation

of its genesis. Thus, didactic actions are necessary that, in short, trigger in students the need that led humanity to produce certain knowledge.

In their learning activity, students reproduce the real process by which men create concepts, images, values, and norms. Therefore, the teaching of all subjects at school must be structured so that, in a concise and abbreviated way, the real historical process of the genesis and development of knowledge is reproduced (DAVIDOV, 1988, p.174).

It is important to emphasize that this need is not presented by the professor through exposition or explanation, but through tasks that put students in front of the need for mental elaborations in search of answers that require new knowledge. In this sense, knowledge consists of responses to needs and questions raised in the process of its creation. The procedure that provokes an active thought process to understand the means of solving the problem can trigger the student's needs and reasons to learn. Sforni (2015) highlights, in this sense, that

[...] The need and reason to learn a certain content do not exist a priori in the student, they are

[...] The need and reason to learn a certain content do not exist a priori in the student, they are created during the activity. Therefore, offering the content without the student being involved with the problematizations related to such content, without being included in the understanding of the human reasons for the elaboration of this synthesis, is like offering someone answers to questions that they did not ask. The lack of meaning of the information for the subject manifests itself in his apathy towards it (SFORNI, 2015, p. 387).

Thus, in the teaching process, knowledge loses its essence if it is taken only as a summary compiled in textbooks through words, terms, or definitions. As a theoretical concept, in addition to abstractions, knowing presupposes the process of developing mental actions related to the content that the subject learns, referring to the needs and historical reasons for its creation.

This understanding leads to the need to problematize knowledge.

By highlighting the need to include in the process of teaching children of school age the independent solution of cognitive tasks, M. Skatkin also speaks of the possibility of making effective use, at school, of the so-called exposition of the problematic nature of knowledge [...] The main aspect of this exposition is that the teacher not only communicates the final scientific conclusions to the children, but to some degree, he also reproduces how these conclusions were reached ("the embryology of truth"). By using this approach, the teacher *demonstrates to students the same path taken by scientific thinking*, forces students to follow the dialectical movement of thought towards the truth, making them, in a way, co-participants in the scientific search (DAVIDOV, 1988, p. 92, our translation, emphasis added).

Through the structuring of the Guiding Teaching Activity - *AOE*⁶, Moura (2010) explains that it is possible, in the teaching process, to recreate the need and the reason for creating knowledge through the methodological referral of the triggering problem and/or situations that trigger learning. This referral constitutes an initial action of the class, in which the teacher, by using various resources such as a story, a representation, a problem situation, a game, or experiments, recreates the need that men had to elaborate the knowledge that will be worked with the class. The main objective of this referral is "to

⁶ Teaching Guidance Activity (AOE- *Atividade Orientadora de Ensino*) constitutes a proposal for organizing the teaching and learning activity produced by Professor Manoel Oriosvaldo Moura (MOURA, 1996), based on the assumptions of the historical-cultural theory, and presented as a possibility of carrying out the educational activity based on the knowledge produced about the human processes of knowledge construction.

provide the need for the appropriation of the concept by the student so that his actions are carried out in search of the solution of a problem that mobilizes him for the activity of learning-appropriation of knowledge" (MOURA et al., 2016, p. 116).

In this sense, Moura (2000) points out that

the activity, [...], belongs to the subject, it is a problem, triggers a search for a solution, allows an advance in this subject's knowledge through the process of analysis and synthesis, and allows him to develop the capacity to deal with other knowledge from of the knowledge he acquires as he develops his ability to solve problems (MOURA, 2000, p. 35).

On the other hand, the triggering problem also enables interaction between students in a collective process of "cooperation", as already pointed out by Rubtsov (1996) and as confirmed by Moura et al. (2016) when stating that "[...] mobilized from the development movement of the triggering situation, they interact with others, according to their potential and aim to reach another level of understanding[...]" (MOURA et al., 2016, p. 118).

When explaining the triggering problem in the process of teaching mathematical concepts, Moura (1996) mentions that it can be accomplished by what he calls the "virtual history of the concept".

They are problem situations posed by characters from children's stories, legends, or the history of mathematics as triggering the child's thinking to involve him in the production of the solution to the problem that is part of the context of the story. In this way, counting, performing calculations, and recording them may become a real need for her (MOURA, 1996, p. 20).

It is important to highlight that virtual history can be used to teach the most varied concepts of different disciplines (SFORNI, SERCONEK, BELIERI, 2019). This referral is linked to understanding the social need for the knowledge studied and at the same time its theoretical development. The triggering problem enables the student to understand that knowledge is produced only through a problem present in objective reality, a need that needs to be resolved.

The triggering problem highlights the theoretical-practical dimension of knowledge as it needs to be linked to a human need. At the same time, its performance presupposes showing that in the production of certain knowledge, there was a question, a doubt or a problem to be solved. On the other hand, this methodological procedure is also linked to the need to create reasons in the students in the appropriation process, as it enables them to understand it as part of their lives and to respond to human needs even today. For this reason, when solving the triggering problem, the logical-historical dimension of knowledge increases for the student becomes alive and enables a deeper understanding of the object. In this sense, Kopnin (1978) asserts that

> the study of the history of the development of the object creates, the indispensable premises for a deeper understanding of its essence, which is why, enriched by the history of the object, we must return more to the definition of its essence, correct, complete, and develop the concepts that express it. In this way, the theory of the object provides the key to the study of its history, while the study of history enriches the theory, correcting it, completing it, and developing it (KOPNIN, 1978, p.186).

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If, on the one hand, mastery of the logical and historical aspects of the concept enables the teacher to problematize the knowledge to be worked on and the understanding of its historical and social need, on the other hand, it allows him to identify the essential concepts for his understanding.

We understand that this procedure constitutes an important element in the teacher's planning process because when we take Vygotsky's explanation (1996) as a basis, in which he states that the concept must necessarily be understood in a system of relations, no concept can be explained by himself. Thus, when identifying the process of genesis and creation of the concept, the teacher will define, through the *elaboration of a conceptual system*, the concepts necessary for learning.

In the same sense, Libâneo (2009), when discussing didactics for human development, explains that

teaching planning begins with content analysis, in which the fundamental, essential relationships are first sought, that is, the formulation of an idea that expresses the internal principle of the subject under study (which is the core concept) and discovering how this relationship appears in many specific problems (LIBÂNEO, 2009, p.13).

For example: When teaching the content of nuclear energy, before the class, it is important for the teacher to identify the essential concepts, considering that the appropriation of this content requires mastery of the general concept of energy, which occurs through understanding its historical process, marked by movement, transformation, and change. Thus, it will be able to propose tasks that contemplate the supra-ordinate concepts and the subordinate concepts and allow the students to identify the conceptual relations that orbit this system. In this process, specifically, the movement of "ascent from the abstract to the concrete" is evident, which occurs through the relationship between the universal and its manifestations.

The elaboration of a conceptual system to identify other concepts for the explanation of a specific content, allows the teacher to show *what is core of the concept*. By revealing its essence, it understands its most generalizing aspect, that is, the general aspect that must be known by its students for the resolution of tasks that cover the manifestations of this knowledge. In this process, the task of abstraction highlights Kopnin (1978, p. 161), "is not to separate one from the other sensorially perceptible indications, but through them to discover new aspects in the object that translate the relations of the essence".

To understand the essence of the concept, we consider it necessary to use *scientific language* by working with texts. Such action is related to the need to use texts and language that have theoretical consistency in the various areas of knowledge. The theoretical text, in addition to exposing and developing the concepts as accepted by the area of knowledge to which they are linked, brings other concepts necessary for their understanding.

We emphasize that scientific language, in addition to being present in theoretical texts, can

also be expressed in iconographic and semiotic schemes and models that synthesize and/or represent the universal relationship of objects and phenomena of a given explanatory body. In this sense, the use of theoretical models favors the understanding of the essence of the concept and enables students to carry out *tasks that require the use of the concept*.

The understanding of the logical and historical aspect of knowledge, which allows identifying what is core to the concept, makes it possible to "look" at various elements of reality that, despite being different in appearance, can be understood based on appropriate knowledge. This becomes more evident when we take the energy content as an example. If, in the process of teaching the concept of energy, students identify and understand its essential traits, that is, its stable and universal properties when observing its manifestations in the form of wind, solar, and electric energy, among others, the students will recognize that these different ways of producing energy can be understood, in part, by the general concept already studied. This procedure is linked to the action defined by Davidov (1988, p. 181) of "building a system of tasks to be solved by a general procedure. In this way, students solve tasks using a general concept".

It is emphasized that such tasks must require students to mentally operate with the studied concept and that the simple fact of defining, reporting, or narrating what they have read does not guarantee this mental procedure, as they can remain only in the aspect of abstraction, without carrying out the process of ascending from the abstract to the concrete. It is necessary, in the formulation and/or choice of tasks, that they are related to situations that require the use of the concept for their resolution.

The tasks that require the mediation of the studied concept and the organization of moments in which students think, discuss, and elaborate collective syntheses are essential referrals, which involve the analysis and synthesis processes. At first, these syntheses may be provisional. This procedure makes it possible to understand the essence of the studied concept and, at the same time, its manifestations, highlighting the processes of abstraction and generalization.

The processes of discussion, analysis, and collective synthesis presuppose the proper use of the studied concepts and evidence a mental process with the concept in which its meaning is made explicit. In this sense, Sforni (2017, p. 95) explains that, in this procedure, there is "a union between the language of students and scientific language". On the other hand, as stated by Rubtsov (1996), carrying out these tasks, as they require everyone's cooperation to carry them out, constitutes a process of strengthening collective activity.

Given the elements presented, another question becomes essential: How to evaluate the knowledge appropriation process? The basis for thinking about evaluation lies in the very conception of what knowledge is. If the concept is a mediating instrument in the subject's relationship with reality, its appropriation is revealed in the instrumental function it comes to have for the student.

As the concept is an instrument that enhances the intelligibility of the objective reality by the

subject, developing the ability to understand links and relationships that cannot be captured only by the organs of the senses, the evaluation process must accompany the manifestations (oral, written or behavioral) of students if their mental actions are mediated by the concept or conceptual system that was the object of teaching.

According to Leontiev (1991), the acquisition of knowledge by each subject occurs through the formation of intellectual actions and operations. Such an understanding excludes the possibility of evaluating this acquisition only through the student's ability to define the concept. With the definition, it is evident only the description of something in its most abstract, purest form, and it is not evident whether the student establishes relations between the general pure form and the manifestations in the phenomena of reality. The definition makes evident only the abstract dimension of knowledge and not its theoreticalpractical unit, in which the relations between the general, the particular, and the singular are revealed.

In this sense, we reiterate, based on Sforni (2017) that, in the evaluation process, it is necessary to propose tasks that require students to use the concept for their accomplishment and not just the description or definition that must be required. For example, when working with the concept of photosynthesis, instead of resorting to questions like: what is photosynthesis? Or how does photosynthesis occur? It would be convenient to carry out tasks with unique situations different from those presented in the classroom to explain the concept, which would require students to analyze these new situations through the mediation of the concept of photosynthesis, explaining the reasons for the phenomenon under analysis, why it occurs in one, and not in another situation. In this process, the student will need to have abstracted what is general about the concept, the general laws, which are presented in particular situations.

In this perspective, the students think about real situations based on the concept. This requires that, in their thinking, the concept be content and a way of thinking, be a mental action, and allows the student to "look" at the phenomena so that they gain intelligibility through the mediation of the concept, to overcome the immediate appearances with which they manifest themselves in reality.

Thus, in the evaluation process, not only the verbal definition is in evidence, the formal aspect of knowledge, which is understood as an important process, but also requires the movement from the abstract to the concrete, which makes explicit the process of mediated thought by the concept. It is precisely this thought process that enhances the understanding of reality in its multiple connections and associations, revealing nuances, perspectives, and misconceptions about reality.

This conception of evaluation is linked to the understanding that the concept is a mediating instrument, which enhances man's action on nature to modify the form and content of his thinking. For this reason, only the definitions and/or descriptions of objects and phenomena not offer the teacher safe indicators about the appropriation of a certain concept by the subject. Based on this evaluation, it is possible to recognize if the student thinks with the concept, that is, if he has appropriated this cultural

mediator or just reproduces ready-made phrases that disconnect the theoretical-practical unit of the studied knowledge.

By demanding that the student only say what it is or how a certain phenomenon linked to the concept occurs, as explained by the teacher, the use of memory is primarily required. Despite being an important higher psychic function, memory is just one among others that develops in the learning process, therefore, other functions must also be required. In addition, memory can be comprehensive or mechanical, and in the explanation based on memory, only mechanical memory can be involved, without an effective understanding of the meaning of the word, which is another reason for not reducing the evaluation to the requirements of definitions and examples. The evaluation process as one of the privileged moments of the teaching process demands to enable the student to develop his/her potential to the maximum and not be characterized only as a formal moment of the school ritual.

As previously stated, the elements presented throughout the article are part of the systematization of researchers who have been committed to thinking about the organization of teaching and teaching activity as promoters of the development of theoretical thinking. Part of these systematizations is presented in the summary table (Chart 1) prepared by Sforni (2017), which contributes considerably to the understanding of the principles and actions presented.

1. Starting point Thinking about the subject - the object and the affective-cognitive processes	 1a) Analysis of the genesis of the concept in its logical-historical aspect to look for what is core in the concept – Analysis of the concept to be taught. 1b) Assessment of the current level of development and prediction of the expected level of development – Analysis of the learning subject. 1c) Choice of activities with concepts that mobilize Higher Psychic Functions – Analysis of cognitive processes.
2. Action planning From external to internal actions: the material or materialized plane (illustrative), the verbal language (oral and written), and the mental plane.	 2a) Elaboration of triggering problems, whose solution requires the student to mediate the concept (material or materialized plan: use of materials, experiments, problems) 2b) Provision of moments in which students dialogue with each other, elaborate collective syntheses, even if provisional (language – reflection, and analysis). 2c) Use of scientific and classic texts from the respective area of knowledge or conceptual models/modeling (scientific language) 2d) Orientation of the process of elaboration of conceptual syntheses by students (union between students' language and scientific language) 2e) Inclusion of new learning problems so that students mentally operate with the concept (action on the mental plane - use of the concept as a mediator - generalization)
3. Assessment	3a) Inclusion of new learning problems at the end of the study process to analyze whether students mentally operate with the concept (action on the mental plane - use of the concept as a mediator - generalization)

Chart 1 – Summary table of actions for the organization of teaching

Finally, we consider that the previously announced elements can guide the teaching performance when defending an education that promotes the psychic development of students. Aware of a general way of teaching organization, teachers can elaborate the planning defining content, objectives, methodology, resources, and evaluation in a more coherent way to what is announced in the curriculum and the political-pedagogical proposal.

The elements for the organization of teaching presented in the form of a summary in this sub-item were study content and discussions in the group of teachers. Although the studies were focused on understanding the teaching and learning processes, two teachers, based on the studied concepts, presented situations that went beyond the objective of the study and analyzed the very way of structuring the curriculum, concerning a specific curricular component:

When he says that the conception of knowledge in dialectics presupposes a way of organizing teaching, the question of the triad comes into play. The question of the subject, content, and form enters [...]. It is especially necessary to think about who my subject is, and what are his/her learning needs. An example would be the curriculum for [specific curriculum component]. The way it is organized does not affect the subject teacher. The way it was organized, the classroom teacher cannot understand the contents. It would be more for a person formed in that specific area. So, even then, one of the questions and concerns regarding the problem encountered with the organization of the curriculum in this area is that we cannot understand, that is why we do not work, or we work and do not know what we are working on because what it is written there is not understood (Teacher 1).

The realization by Teacher 1 that the writing of the curriculum in a certain curricular component does not consider the subject, in this case, the subject teacher at his level of development, so that he understands the contents to be taught, made it possible for the Teacher 4 elaborated an important argument: *Look how fantastic this is! The curriculum must consider the subject that will teach and the subject that will learn. Therefore, it is necessary to consider didactics and the concept of development (Teacher 4).*

The manifestations about the pertinence of the way the curriculum is organized reveal a generalization movement carried out by the teachers that was, in a way, unexpected, since this aspect was not a direct object of discussion during the experiment. However, this is a new quality of thought provoked by the rise of abstractions of elements for the organization of teaching and the concrete and unique situation experienced by them in the elaboration of the curriculum. This situation gained intelligibility with the mediation of new concepts appropriated in the study group. Although the students' teaching and learning processes were the focus of discussions, the teachers recognized themselves as subjects of learning and, in this condition, pointed out the need to be considered when preparing educational documents. Facts of this nature indicate that the search for theoretical-methodological coherence of the prescribed documents (curriculum and PPP), important for improving the quality of teaching, is also a means to put the teacher in study activity and, in this way, promote his development as an education professional.

FINAL CONSIDERATIONS

When talking about school curriculum, normally, one refers to curriculum proposals, that is, to what is prescribed in official documents, but as defined by Sacristán (2000), there is also the curriculum in action. As we have already stated, it is not uncommon for there to be a large gap between the *curriculum in action* and the *prescribed curriculum*. That is, a state or municipality may have a well-designed curriculum proposal, however, the teaching activities carried out in schools may not correspond to what is defined in this proposal, being guided by other theoretical assumptions, including those contrary to it. The same occurs with Pedagogical Political Projects.

The requirement to contain in these documents the philosophical and conceptual principles, curricular components, methodological referrals, and evaluation processes are precisely aimed at weaving the lines that articulate the society we aspire to, which is a much broader project, and the training that is taking place daily at school.

Therefore, the theoretical and general conceptions about society and education must be in tune and materialize in the contents, methodological referrals, and evaluations that are present in the pedagogical practice. Schoolwork cannot be ensured in its entirety by the educational ideals of education professionals, it is the result of multiple determinations that often escape the control of the people involved in it.

However, the clearer the desired destination and the paths to reach it, the better the possibility of not getting lost at the constant crossroads. One of the ways to share, in the school collective, the destiny and paths of schoolwork is the participation of teachers in the elaboration of the curriculum and the PPP. When these documents are seen as guiding pedagogical practice and, coherently, their theoretical-methodological assumptions are part of the contents worked on in continuing education, little by little, teachers begin to feel the need for greater explanation about a theoretically based organization of teaching. Thus, "[...] oscillating between a moment of theoretical reflection and practical action and simultaneously complementing them, the teacher gradually constitutes himself as a professional, through his teaching work, that is, the pedagogical praxis" (MORETTI, 2007, p. 101).

The search for coherence between the theoretical assumptions expressed in the curricular documents and the pedagogical practice makes the teacher remain in a movement of reflection and analysis of the theoretical-practical aspects of the teaching activity. For this reason, in addition to resulting in a better quality of teaching, it constitutes, at the same time, an activity that promotes professional development.

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