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Article

Teachers understanding of the study activity: Implications in the pedagogical process

A compreensão docente sobre a atividade de estudo: Implicações no processo pedagógico

La comprensión de la actividad de estudio por parte del profesor: Implicaciones en el proceso pedagógico

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ABSTRACT

The transition from early childhood education to the 1st year of elementary school reveals that a guiding activity that involves role-playing will be gradually transformed into a study activity, whose teaching understanding is the object of this investigation. Field research is presented, in which 26 teachers from the 1st year of elementary school were interviewed individually from 15 schools in a municipal education network in western Paraná, whose curriculum has been based on historical-cultural theory since 2008. The results showed the teaching appropriation of important elements related to the concept of study activity. However, this process is slow and complex, requiring regularity and persistence in continued training that combines theory and practice. Reflection on teaching praxis implies a constant focus on developing theoretical thinking and training students for critical reading, which promotes an active insertion into reality.

Keywords: Study Activity. Learning. Development. Elementary School.

RESUMO

A passagem da educação infantil para o 1º ano do ensino fundamental revela que a atividade-guia que envolve a protagonização de papéis vai gradativamente sendo substituída pela atividade de estudo, cuja compreensão docente é o objeto desta investigação. Apresenta-se uma pesquisa de campo, na qual se entrevistaram individualmente 26 professoras do 1º ano do ensino fundamental de 15 escolas de uma rede municipal de ensino no oeste do Paraná, cujo currículo se fundamenta na teoria histórico-cultural desde 2008. Os resultados demonstraram a apropriação docente de elementos importantes relativos ao conceito de atividade de estudo, mas esse processo é lento e complexo, exigindo regularidade e persistência em uma formação continuada que articule teoria e prática. A reflexão acerca da práxis docente implica o compromisso constante de desenvolver o pensamento teórico e educar o aluno para uma leitura crítica, que promova uma inserção ativa na realidade.

Palavras-chave: Atividade de Estudo. Aprendizagem. Desenvolvimento. Ensino Fundamental.

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RESUMEN

El paso de la Educación Infantil al 1º de Educación Primaria revela que la actividad orientadora del juego de roles está siendo progresivamente sustituida por la actividad de estudio, cuya comprensión docente es objeto de esta investigación. Se presenta una investigación de campo, en la que se entrevistó individualmente a 26 docentes del 1er año de Educación Primaria de 15 escuelas de una red educativa municipal del Occidente de PR, cuyo currículo se basa en la teoría histórico-cultural desde 2008. Los resultados mostraron la apropiación docente de elementos importantes relacionados con el concepto de actividad de estudio. Sin embargo, este proceso es lento y complejo, y requiere regularidad y perseverancia en una formación continua que articule teoría y práctica. La reflexión sobre la praxis docente implica un compromiso constante con el desarrollo del pensamiento teórico y la formación de los estudiantes hacia una lectura crítica, que promueva una inserción activa en la realidad.

Palabras clave: Actividad de Estudio. Aprendizaje. Desarrollo. Escuela Primaria.

PROBLEMATIZATION AND OBJECTIVE

It is clear that the results of the schooling process are below children's learning possibilities, as demonstrated by the results of large-scale assessments carried out throughout Brazil (INEP, 2007).

This gap, which has greatly concerned Brazilian scientists, was also observed in Russia, which led Soviet scientists, during the 1950s and 1970s, to formulate "[...] hypotheses about the presence of great reserves in the cognitive possibilities of underage students" (Mendonça, 2019, p. 93). And, consequently, to research what was happening in the schooling process, so that the cognitive development of school-age students was considered below their real possibilities. The results revealed the defects produced by a form of teaching based on empirical thinking, whose consequence was the formation of linear thinking based on the appearance of phenomena.

The search for pedagogical alternatives by representatives of Soviet psychology, who are based on the historical-cultural theory — among them Daniil Borosovich Elkonin (1904–1984), Vasily Vasilovich Davidov (1903–1998), Vladimir Vladimirovich Repkin (1927–) and Aelita Kaptónovna Márkova (1934–) — culminated in the choice of the study activity as that capable of, through the necessary mediations, promoting qualitative transformations in the personality of school-age children.

Reality is chaotic; however, it is the starting point for its understanding. This reading of reality can remain in the mere description of what is apparent, or it can go further, revealing what, even if hidden, determines that which is apparent. The thought that underlies the superficial and linear analysis of the apparent can be called empirical thought, and theoretical thought is that which makes it possible to understand reality in its social, cultural, political and ideological complexity.

Through the educational process, from the perspective of the historical-cultural theory, the aim is to form individuals who can overcome the understanding of apparent reality, making a critical reading of it, overcoming linear and empirical thinking, and based on this they can be active and contribute to the reduction of inequalities that mark the capitalist mode of production.

It is understood that man is a historical subject, formed in his social relations and, at the same time that he contains this social world, he expresses and constitutes it. In this formative process, the school plays a fundamental role, considering that it is a place where scientific knowledge is systematized for its apprehension. Therefore, it is the place, par excellence, for the development of the student's theoretical thinking.

Russian research has found that activity theory, by supporting pedagogical practice, constitutes an important possibility for the advancement of empirical to theoretical thinking. Therefore, reflecting in Brazil on the possibility of pedagogical work supported by study activities, which allows students to develop their theoretical thinking through successive visits to reality, alternating with reflective syntheses at increasingly advanced levels, can broaden the understanding of the multiple relationships that support this reality.

But how is study activity constituted? How does the teacher understand it? In the search for better learning conditions, based on historical-cultural theory, what is the contribution of teaching supported by study activities to advancing learning, and therefore, to student development?

This article reflects on these issues and presents the report of a research that aimed to investigate whether teachers understand the concept of study activity. The field research took place in a municipality in western Paraná, which was chosen because it has based its pedagogical work within the municipal education system on historical-cultural theory since 2008 and, in recent years, has worked with activity theory, as explained in the latest version of its official curriculum (Cascavel, 2020).

From this perspective, this article is structured in two sections. The first begins by clarifying the main foundations of historical-cultural theory and its contribution to the understanding of the social importance of school. Next, the paper discusses the contributions of teaching supported by study activity to learning and, consequently, to the student's cognitive development.

The basic elements that constitute the concept of study activity are presented, linking to the learning process and, therefore, to human development.

Drawing on Davidov (2020b), the significant components necessary for the planning of a task that can integrate the study activity are exposed, and the teaching action based on this concept is discussed.

The second section presents the data and analysis of the results of the field research on the understanding presented by teachers of students from early childhood education and entering the 1st year of elementary school, about the study activity. In this research, the main aspects of the concept of study activity, explained in the first section, are taken as the criterion for evaluating the teachers' responses. It concludes by emphasizing the importance of the teachers' understanding of the study activity for the planning and implementation of the pedagogical process.

UNDERSTANDING STUDY ACTIVITY

ASSUMPTIONS OF HISTORICAL-CULTURAL THEORY

The theory is based on the concept that man is constituted in his social relations, through work, and as a human race, collectively, he produces culture, that is, the means necessary for his survival: scientific, technological and artistic instruments and knowledge. Likewise, the social relations that are established in school work, through pedagogical mediation, produce quantitative and qualitative transformations that promote the development of the child's psyche. Among the principles pointed out by Davidov and Márkova (2019) to support the conception of study activity, the historical materialist dialectic stands out, which brings the need to analyze pedagogical phenomena in a way that is coordinated with social phenomena, aiming to reveal their interrelationships. Secondly, the unity between the psyche and the activity is pointed out, revealing the process of mental representation of materiality, which is necessary for human development to the extent that the individual, through thought, no longer needs the very palpable material to refer to it. Also noteworthy is the category of activity, investigated by Alexis Nikolaevich Leontiev (1903–1979) when he proposed the historical-cultural theory as a psychology that can contribute

to the explanation and mobilization of motor and mental actions and operations that promote human development, highlighting its historical-social nature.

Based on these principles, the studies of Elkonin (1987), supported by Lev Semenovitch Vygotsky (1896–1934) and Leontiev (2004; 2010), highlight the periodization of child development, clarifying that, in each period of this process, an activity is considered a guiding one in that it drives this development. In the school period, this is the study activity, which, having been nurtured in early childhood education, can contribute to the formation of theoretical thinking throughout the schooling process of basic education.

STUDY ACTIVITY: CONCEPTUAL ELEMENTS

The analysis of the concept of study activity reveals elements that, although not watertight, are interrelated and interconnected. These conceptual elements are highlighted below:[1]

1. The study activity is a psychological process that enables the student's development.

The study task, which is part of the study activity, is distinguished from the students' practical tasks precisely in terms of the product of this activity, because while the result of practical tasks carried out by the student is the product obtained at the end of its completion, that is, in the modification of the object with which he acts, in the study task the product is intrinsically linked to the student's intellectual transformation.

> The fundamental difference between the study task and all other tasks is that its objective and outcome consist of modifying the acting subject himself—that is, in mastering certain modes of action, and not in modifying the objects with which the subject interacts. (Elkonin, 2020a, p. 140)

In other words, in the process of solving the task, the student assimilates the modes of action that the content taught involves. If this objective is not achieved, one should not move forward, but rather reorganize the task proposition. In this way, the study activity promotes a psychological process that provides for the student's development.

2. Intrapsychic transformations are promoted which result from interpsychic actions.

In the social relations promoted by the study activity, a fundamental concept is that of assimilation/appropriation.

> *Assimilation* is the process of reproduction, by the individual, of the historically formed procedures of transformation of objects and the surrounding reality, of their types of relationships and the process of conversion of these socially elaborated patterns into forms of individual "subjectivity". Development takes place through the assimilation (appropriation) by the individual of the historical-social experience. (Davidov and Márkova, 2019, p. 196-197, emphasis added by the authors)

The main objective of the study activity is assimilation, that is, the appropriation of scientific concepts, which enables the elaboration of theoretical knowledge.

Appropriation depends on social interaction, which must be promoted by the tasks proposed by the teacher.

1 These same conceptual elements were taken as a reference to analyze the teachers' responses in the field research.

Human beings are in constant development through social relationships that are established throughout their lives. These relationships are called interpsychic. They gradually become intrapsychic as the subject internalizes socialized knowledge (Vigotskii,[2] 2010). This same movement, from the interpsychic to the intrapsychic, occurs in the process of assimilation/appropriation of scientific concepts, which results in qualitative leaps in the student's relationship with the world through transformations of this student, as he/she appropriates scientific content, establishing intrapsychic relationships with it.

> [...] Assimilation (appropriation) is not the passive adaptation of the individual to the conditions existing in social life, it is not simply the summary of social experience, but that which represents the result of the individual's activity aimed at mastering the socially elaborated procedures of orientation in the object world and its transformations and procedures that gradually become means of the individual's own activity. (Davidov and Márkova, 2019, p. 198)

That is, the intrapsychic appropriation of knowledge and modes of action that constitute living occurs in the active relationship between different subjects in a collective learning process, causing, as a consequence, psychic transformation resulting from an assimilation process that allows them to orient themselves in the world.

3. Qualitative leaps in the subject's relationship with the world are enabled.

When the student acts to perform the task proposed by the teacher, he performs actions and operations necessary to master the general principle of the way of solving the proposed task and carry it out satisfactorily.

Leontiev (2004, p. 323-324) explains that operation is understood as "[...] the way an action is executed. The operation is the indispensable content of every action, but it is not identified with the action. [...] while an action is determined by its end, an operation depends on the conditions under which this end is given."

In other words, operations are performed automatically to execute the actions necessary to perform a given task.

Assisting scientific content promotes qualitative leaps in child development, as the proposed tasks enable and simultaneously require the performance of increasingly complex actions and operations.

Qualitative leaps in the pedagogical process can be said to correspond to the advances that the subject presents in the assimilation of scientific content during the learning process. They enable the subject to have more elaborate ways of relating to knowledge, and result from neoformations.

Davidov emphasizes the importance of neoformations for human development. Neoformations correspond to the neurological connections that are processed in the individual during the performance of activities, enabling the relationship between what he has already appropriated, and therefore is at the level of real development (Vygotski, 1996) and what is close to being appropriated, with help.

The teacher will act in this zone of imminent development, proposing tasks that generate the child's need to seek new objectifications and new knowledge to put him/herself into activity, developing the actions and operations that will satisfy this need.

2 Regarding the spelling of the name Vigotskii, the spelling used by the respective authors was respected in the citations.

4. Theoretical thinking is developed through the appropriation of scientific content.

Before entering elementary school, in the family and at school, the child already classifies and describes objects — two operations that constitute the first step in a process of generalization of thought. Under these conditions, the categories are based on immediate observation and are therefore related to empirical thought. It is necessary for the child to appropriate descriptive categories in order to be able to overcome them through actions that develop theoretical thinking.

Guidance by empirical thinking, at home or at work, is identified with automated daily activities, but this type of thinking is insufficient as an objective for pedagogical work. When the pedagogical work remains tied to the structures of empirical thinking, assimilation of the content worked on remains at the level of object manipulation, "[...] *and it does not create the necessary premises* for the formation of the study activity itself with the corresponding content and structure" (Davidov, 2020b, p. 171, emphasis added).

It is the development of theoretical thinking in students that creates the necessary conditions for a more critical analysis of reality, overcoming the empirical-classificatory worldview. The incorporation and overcoming of empirical-classificatory thinking leverages the development of theoretical thinking in the student, since the progression from empirical to theoretical thinking results from the appropriation of scientific knowledge.

The appropriation of new theoretical knowledge promotes "[...] the formation of both the fundamental qualities of the school-age child's personality and the distinct psychic processes that constitute mental functions" (Elkonin, 2020a, p. 139). As Davidov (2019, p. 184) emphasizes, the mastery of modern science and of a creative activity in the face of reality "[...] involves understanding the internal contradictions of things, which are ignored by empirical reasoning".

Theoretical thinking — as well as empirical thinking — does not develop spontaneously, but through social relations and pedagogical actions intentionally planned for this purpose. Therefore, this development requires an organized teaching process, with a view to a perspective that prioritizes the humanization of subjects and, based on a dialectical logic, seeks contradictions and contextualizes knowledge historically.

Thus, it is important to promote tasks that, by requiring the necessary conditions for the appropriation of scientific knowledge, overcome empirical-classificatory thinking to leverage the student's theoretical thinking. A pedagogical practice based on historical-cultural theory enables the student to make appropriations that lead him to perceive and interpret the contradictions present in social relations.

5. Opportunities for generalization are provided and the "[...] formation of intellectual and cognitive forces in the child" (Elkonin, 1987, p. 119, our translation) is encouraged.

Generalization involves the relationship between assimilation and expansion of modes of action and operation for carrying out tasks, which are subjectivized by the subject of learning. This assimilation enables their externalization, when these modes of action and operation are used again in the student's relationship with the world, when making use of appropriate knowledge, applying it in situations that require analysis and reflection for solving school tasks and fulfilling the tasks that life demands of him.

A pedagogical process that considers the study activity as a possibility to promote development in the student requires another level of relationship, and therefore of assimilation of the content and its structuring, favoring the process of generalization. Thus, the now expanded capacity for generalization begins to direct a new relationship that surpasses the empirical-classificatory worldview typical of the traditional school, involving the development of intellectual and cognitive

capacities that lead the subject to perceive and interpret the contradictions present in social relations, surpassing the mere vision of their regularities (Davidov, 2020b).

In this sense, Dangió and Martins (2018, p. 186) highlight that, in the teaching process, already in the 1st year "[...] it is expected that the child develops the ability to reason with academic, that is, scientific concepts [...]". Learning to read, to the extent that it demands longer attention spans from the child, fed by the pleasure of learning to read, enhances this ability by promoting the generation of new motives that will boost the child's psychological development. Therefore, with literacy, the six-year-old child acquires new instruments that will favor the formation of increasingly complex concepts from the first years of elementary school.

MAIN STEPS IN ORGANIZING THE STUDY ACTIVITY

The study activity requires the organization of actions that will enable the performance of operations which, as a whole, will promote cognitive advances in the subject. Davidov (2020b, p. 171) listed its significant components, described below:

a. *Transformation of the situation to reveal the general relationship of the system that is being analyzed* — consists of the analysis of the central content of the study task, its object, seeking the universal principle and the relationships that establish it as such, its essence, to indicate "[...] a relationship at the base of which is the general procedure for its resolution" (Mame, Miguel and Miller, 2020, p. 9). For example, constructing the multiplication table so that the child can understand the principle that governs it, the repetition and the sequence of numbers.
b. *Modeling the relationship indicated in graphic and symbolic form* which refers to the graphic representation of the content seeks to reveal the characteristics of the object, not yet revealed in the initial analysis. This modeling can be *objectal* — when it involves the concrete materials that help in the motor and mental relationship; *graphic* — when it uses different types of record: writing, drawing, diagram or a formula or with letters, numbers, indicative arrows, signs and images. It is also possible to assemble a model, use a drawing or a diagram.

These are different ways of representing the mental action to be developed for the content assimilation. Symbols and signs are used to create models that demonstrate the basic characteristics of the object under study, representing what is universal to be assimilated by the student. For example, the visual creation of the multiplication table with different resources and its recording. The possibilities of modeling in the study activity vary according to the child's development conditions and the material conditions in which the assimilation process occurs.

c. *Transformation of the relation(ship) model for the study of its properties in pure form* — aims to understand the properties and reveal the connections established in the dynamics in which the object of study is constituted and generalized to any situation. For example, highlighting, in the model, the addition once again of the number that is being multiplied, whatever that number is. So if it is the 4 times table, it's once again the 4, and so on. If it's the 5 times table, it is once again the 5....
d. *Distinction and organization of a series of specific concrete practical tasks, which are solved by the generalized mode of action* — involves the proposition of particular tasks that can be solved based on the procedure identified as universal. In this context, thought moves from the general to the particular. For example, identifying in which other situations the general principle of the multiplication table can be used.
e. *Control in the fulfillment of previous actions* — verification of operational coherence in solving the task. For example, comparing models, checking whether the actions are achieving the expected result.

f. *Assessment of the assimilation of the generalized mode of action as a result of solving the study task in question* — verification of the application of the procedure, initially identified and transformed, making it possible to solve the given task. "[...] the evaluation shows whether the student has in fact assimilated, and to what extent, the procedure for solving his study task; whether or not he has fulfilled the objective of the task" (Mame, Miguel and Miller, 2020, p. 10). Content assimilation is assessed, not only in the result, but in the entire process.

It is important to highlight, together with the child, the details of the concrete actions that are necessary to resolve the proposed task, that are involved in the study activity.

> It is necessary to show children in detail and precisely the sequence of study actions, highlighting which among them should be done on the objective, verbalized or mental plane. Sometimes, it is important to create conditions so that object activities acquire a mental form by being properly generalized, summarized and assimilated. (Davidov, 2020a, p. 186)

A properly organized pedagogical action, taking into account the "system of particular actions for solving tasks" (Davidov, 2020b, p. 171), places the child in an active relationship with the knowledge to be assimilated. This expands the possibilities for the child's cognitive and intellectual development during the transition period and throughout elementary school.

It is considered that the school's role is to advance teaching processes, giving greater emphasis to new cultural demands objectified in scientific knowledge, which will promote greater learning and development in students. The study activities make it possible to meet these demands, presenting tasks that promote the development of intellectual and cognitive potential in children's learning.

The training process developed by the *municipality* where this research has taken place has been discussing the concepts exposed here. It is understood that a very important point for teachers to develop tasks involving actions and operations that provide the formation of theoretical thinking in the pedagogical process refers to the appropriation by teachers of the concept of study activity. Thus, below, we present a field research study developed with this objective.

METHODOLOGICAL ASPECTS OF THE RESEARCH

To overcome the observation of the apparent, which remains in itself, and approach reality with the intention of capturing what is implicit, it is necessary to understand the multiple power relations present, but not always revealed, in society. Among these multiple implicit determinations, but fundamental in the organization of the pedagogical process, the teaching conception of study activity stands out in this research; that is, how the teacher understands it, as well as its elements and use in the pedagogical process, based on his/her experience in the 1st year of elementary school. Thus, this qualitative field research was developed with special care to avoid a fragmented analysis of theoretical data alone.

The field[3] research took place in a municipality located in the western region of Paraná. Its municipal education network has 129 schools, of which 55 are municipal early childhood education centers and 64 schools serve early childhood education (kindergarten) IV and V and the initial years of elementary education.[4]

3 The research project was approved by the National Research Ethics Committee (CONEP), through Opinion No. 4,479,125, and authorized to be implemented in the municipal network by the Municipal Department of Education of Cascavel.

4 Source: Curriculum for the municipal public education network of Cascavel: volume II: elementary education- initial years. / Cascavel (PR). Municipal Department of Education; [general coordinator: Rosane Aparecida Brandalise Corrêa; general advisor: Marta Sueli de Faria Sforni] – Cascavel: SEMED, 2020.

Of the 62 teachers in charge of 1st grade classes, 52 were contacted, and 26[5] were interviewed through the WhatsApp application. They were selected due to meeting the criterion of teaching in one of the two largest or two smallest schools in each region of the municipality: north, south, east, west and center.

The interview took place remotely due to the pandemic period, being recorded and transcribed on the Google Meet Platform.

It is noteworthy that 100% of the interviewees were female, which highlights the predominance of women in teaching. The teachers' ages ranged from 25 to 55 years (average = 38.8 years). The interviewees' teaching experience ranged from 3 to 31 years, with a predominance of the age group of 36 to 50 (50%). Regarding teaching experience, 88.4% worked as classroom teachers from the 1st to the 5th grade of elementary school and 76.9% in early childhood education classes. Twenty-five, or 96%, of the teachers were hired by the municipal education system through a public selection process, and 62% of them worked a 40-hour weekly workload.

The Table 1 below shows the level of training of teachers:

Table 1 – Education level of 1st grade elementary school teachers.

High School		Graduation								Postgraduate			
No.	%	Pedagogy and Biology		Pedagogy and Letters		Pedagogy		Letters		Specialization		Master's degree	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	4%	1	4%	3	11%	19	73%	2	8%	20	77%	3	11%

Source: data collected by the authors (2020).

The teachers interviewed were identified with the letter P followed by the numerical sequence P1, P2, ..., in order to preserve their identities.

Therefore, in the search to understand the relationship between theory and teaching action in order to better organize teaching, supported by the perspective of historical-cultural theory, we will reflect below, based on the teaching discourse, on the

conception and contributions of the study activity for the schooling process of children from early childhood education and entering the 1st year of elementary school.

THE TEACHERS' CONCEPT OF A STUDY ACTIVITY: PRESENTATION AND ANALYSIS OF RESULTS

To analyze the teachers' conception of the study activity, the following conceptual elements were taken as a basis: 1. it is a psychological process that provides development in the school; 2. it promotes intrapsychic transformations resulting from interpsychic actions; 3. it enables qualitative leaps in the subject's relationship with the world; 4. it develops theoretical thought through the appropriation of scientific contents; 5. it provides opportunities for generalization and drives the "[...] formation of intellectual and cognitive forces in the child" (Elkonin, 1987, p. 119, our translation).

In the analysis of the teachers' understanding of the conceptual elements that characterize the study activity, in order to broaden the understanding of this category, the process of concept formation proposed by Vygotski (2001) and revisited by Davidov (1992) was taken as a basis. For Vygotski (2001), the appropriation of a concept is not limited to itself, as the concept is in a constant movement and can be modified through appropriations that promote humanization.

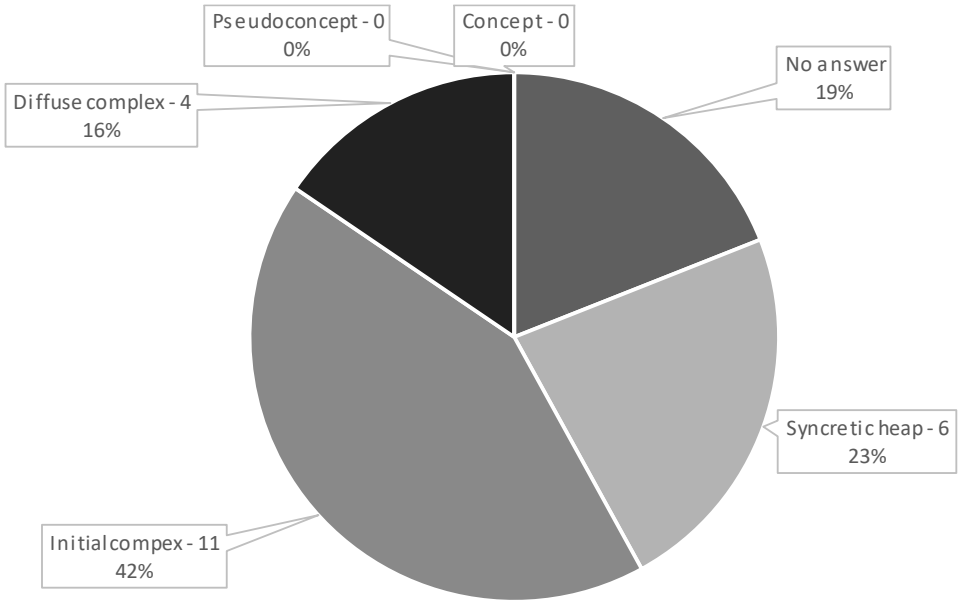
5 Source: Staffing of schools in September 2020.accessed 09/21/2020 semed.cascavel.pr.gov.br/quadros/pesquisa.

Vygotski (2001), while experimentally researching the process of concept formation in children, established different levels. It is understood that, since the research that gave rise to this article focused on the formation of the concept of study activity, used by adults in their professional lives, its appropriation process goes through similar stages. These stages or levels start from the most elementary, moving towards the most complex, as knowledge becomes more complex through the appropriation of new characteristics related to the concept that is being appropriated, and the subject is able to generalize it at increasingly comprehensive levels. Of the levels indicated by Vygotsky in the analysis of thought formation, five categories were used: syncretic heap, initial complex (associative), diffuse complex, pseudoconcept (last stage of thought in complexes) and concept.[6]

It is important to clarify that, in this research, the teachers' speeches may not show theoretical-conceptual mastery, and may sometimes be generic. Furthermore, the oral presentation of a concept is an improvisation that differs from written language, which allows for reviewing and improving the writing. Thus, the mention of words was considered, understanding them as elements referring to the concepts in question, when they expressed traits that constituted the concept analyzed.

Figure 1 shows the results obtained.

Figure 1 – Levels related to the teachers' conception of a study activity.



Source: data collected by the authors (2020).

Nineteen percent of the teachers either did not answer the question or did not present significant elements related to the study activity, as proposed by Davidov (1992) and Vygotski (2001), and to the curriculum developed by the municipal education system, as can be seen in the statement of P8.

6 Vygotsky (2001) established three levels to describe the process of concept formation: syncretic heap, thinking in complexes, and concept, which are taken here as the basis for organizing the collected data. When referring to the syncretic heap, Vygotsky proposes three phases which, for the present analysis, will be unified under the category of "syncretic heap." Regarding thinking in complexes, Vygotsky describes its evolution in five phases: associative complex, collection, chain, diffuse, and pseudoconcept. In this article, we will use the terms initial complex, referring to the first three levels of thinking in complexes: complex; diffuse complex; and pseudoconcept. And, finally, the concept level.

> *Study activities, as I said, all of them have a purpose. I think that the role-playing part is more about the child getting to know themselves in the moment they are living with their family, with the teacher, the child really likes that. When I think more about the study part, [...] it is not a game that allows the child to develop, but when you think more about the study part, you think more about the content part. What you can have in a social game and you can work on this play together with the content you are giving at that moment.* (P8)

P8 recognizes the relationship between the games played, the guiding activity of the previous phase, and emotional issues. However, he only relates the study activity to content learning, without mentioning the elements that characterize it.

Twenty-three percent of the teachers presented one or another element related to the concept of study activity. However, it can be seen that these elements are disconnected and do not involve essential aspects of the evaluated concept, making it possible to classify their answers at the *syncretic heap* level. For instance:

> *It's when the children are already... their psyche is practically formed, several higher functions have already been developed, so they can already internalize other concepts, other contents. They go through this new phase in which the teacher starts to mediate things and they can more easily abstract, they can understand why they can abstract, they don't need to experience it. Of course we make them experience it, but they don't need to imitate or experience a certain situation, they can imagine it. They can abstract, so that's why the study activity, they no longer need to see it 100% in practice, pick up that object to know that it exists, they no longer need to play in a certain way to know that the game exists, they have already internalized it, they can learn from abstraction itself*. (P4)

In his speech, P4 presents the idea of a "practically formed psyche", refers to the child's capacity for abstraction, and considers the practical part as hardly necessary. It is worth noting that this capacity, as well as other higher psychological functions, are developing in children who come from early childhood education, and will continue to change throughout life. Each new concept learned involves functions such as perception, memory, language and thought, thus modifying the relationship with reality.

The study activity, by promoting the assimilation of systematized knowledge, will further favor the development of functions such as abstraction, attention, thought and language, which were already developing during the period in which role-playing was the main activity.

However, as Davidov (2020b) pointed out when stating the components to be observed in pedagogical work based on study activities, it is important to emphasize that even in the period in which this becomes the main activity to promote child development, the manipulation of concrete material is essential for the child to internalize modes of action which will gradually become mental operations.

The author states that "[...] it is important to create conditions for object activities to acquire a mental form, being properly generalized, summarized and assimilated (Davidov, 2020a, p. 186). In other words, only after the child becomes capable of performing an action by transforming the object only in thought, will he/she no longer need the materialization of this action.

> *[...]When I'm planning, I'm already imagining each of their faces, they're already in our heads. Sometimes you imagine that wonderful class and when you go into practice, everything goes wrong and in the end you end up having to improvise*

> *on top of that content that didn't work [...] you end up having to replan. So, when I'm planning, I always try to imagine what each one of them will be like. How can I intervene in the one who has the most difficulty when planning? Sometimes by expanding an activity with a larger font, a larger sheet, with more spacing [...]* (P16)

When conceptualizing the study activity, P16 refers to the importance of considering who the planned teaching actions are aimed at when planning, enabling more effective pedagogical practice, so that learning promotes the necessary cognitive development. However, other elements that characterize the study activity are not found in his speech.

The teaching action has direct consequences on the student's appropriations, so the understanding of how child development occurs enables an intentionality in the pedagogical process which makes it more effective.

Of the teachers interviewed, 42% presented elements in their speeches that are situated at the level of the *initial complex*, as they bring some elements that characterize the concept. However, they still fail to realize that the study activity is a process that occurs in the child's psyche, leading to the transformations that materialize through the completion of study tasks and actions provided to the students.

The statements reveal elements related to some characteristics of the concept of study activity, but they are random and disconnected. For example, they refer to the content, but not to the way of presenting such content to the students, which involves planning detailed actions and operations that lead the student to assimilate it. Some examples are presented:

> *In the study activity, let's say we would have more content. [...] in early childhood education there is also content, but let's say that in the first year the content, the activities are a little more focused on literacy, reading, the appropriation of the writing system, the issue of mathematics, although it is done in a playful way, it also has the specificities of understanding writing content.* (P5)

> *A study activity would be teaching them to read and write, to understand and assimilate what is the basis. In fact, it would be the basis of everything, it's a repetition every day, so the routine, especially with the youngest ones, every day, headwork [sic], these things, so that they are really assimilating what we are trying to teach. Ah! I work on B, so I go over B several times so that they memorize it, I don't know if memorize is the right word, but they'll be learning, assimilating what I'm teaching them, I'll be instigating them... a lot, in several aspects.* (P22)

The statements emphasize the importance of the teacher's role as the one who plans tasks and actions which, through this study activity, will promote the development of the child's psyche. P5 emphasizes the importance of the content and its articulation with the teaching methodology, important aspects for the development of theoretical thinking, although he does not clearly explain this relationship.

Although he does not articulate relevant elements of the study activity, P22 describes the systematization of actions that can be carried out with 1st grade students. These simple actions, for the child who is appropriating historically systematized concepts, are essential to boost his/her development.

It may be that the teachers, who constitute the subjects of this research, because they are experiencing an initial process of appropriation of the concept of study activity, do not yet generalize it. However, they present some of its aspects, as they describe situations that are close to what Davidov (2020b) and Elkonin (2020b) called study tasks and actions.

Carrying out the actions and operations that integrate the planning from the perspective of the study activity involves the effective participation of the student, allowing him, through the assimilation of the contents worked on, to form a solid base of knowledge at increasing levels of generalization, enabling him to access them in other situations.

Sixteen percent are at the level of thought called *diffuse complex*. This level of conceptualization can be guided by unexpected changes, since the attributes that characterize the concept, although present, undergo constant transformations, as they still appear in an unstable and variable form (Vygotski, 2001).

During the concept formation process, the teachers in this group bring elements that describe the actions and operations to be carried out by students and present a conception of the study activity at an increasingly comprehensive level, revealing greater appropriation and generalization of this concept. For example, if we focus on P26 and P3:

> *Study activities are more in the age range of six, seven years old, which would be the 1st and 2nd grades. They are activities that are more focused on writing, reading, speaking, reading and writing. Using paper, printed activities, the child's notebook. Those activities in which we introduce the scientific concepts, not that they don't in early childhood education, but they are different ways of working on knowledge. We introduce the concept, we explain it, we use images to illustrate this content, we talk to the child and we give consolidation activities to the child, to see if the child has appropriated the content or not, if they need to go back to that content.* (P26)

It may not yet be clear to P26 that the concept is being appropriated as the teacher proposes tasks to the child that involve actions and operations that place them in conscious activity with the concept that is being worked on. However, P26 highlights the moment of the child's entry into elementary school and the work to be done. This work may involve several actions so that the student can assimilate the knowledge, as P3 also highlights:

> *Study activities are activities that enrich them, that make them think, not a boring activity, or a memorization or consolidation or repetition, but an activity in which they can use their knowledge in a practice that makes them fix what they already know. Not a repetition, but a consolidation activity, a more focused and planned study, but not just a simple study time. They can acquire this knowledge to use later, because... I think we have to take advantage of their moments, because since they are still young, if I do a study activity based only on reading and writing, I might not reach everything that I could use from them in terms of breadth, for example, in motor coordination, in thinking, in their elaboration of concepts. So the study activity will not always be linked to the paper, the pencil, the pen, but it will be a moment in which they take everything they know, even if abstracting, and they can use it in the activities, in the exercises.* (P3)

P3 also refers to an essential aspect of the study activity, generalization. The pedagogical practice involves the study activity and is oriented towards the development of the child's ability to generalize, taking into account that the learning of a given content is not an end in itself, but rather expands the possibilities for the child to use its principles in similar situations to solve problems. This ability results from an intentional pedagogical action aimed at the development of theoretical thinking in the child that incorporates and surpasses the immediate aspects of empirical thinking.

The importance of repetition in the child's development process is presented by P3: "[...] not a repetition, but an activity of consolidation [...]". His speech reveals repetition as a necessary

action for the study activity; not meaningless repetition, but rather one loaded with meaning and content. His statement is based on Ribeiro (2014, p. 116), who states that "systematic work does not mean being boring or mechanical. This systematicity has to do with planning, organizing time and objectives."

Entering elementary school alone does not guarantee that the child understands the need and reason for engaging in study activities. According to Leontiev (2004; 2010), the child may refuse to do schoolwork or, when they do, do it in a careless way, without the necessary attention and dedication. This occurs because, for the child, the need to study has not yet become an effective reason, capable of mobilizing them to seek the object that will satisfy the need to learn what is being taught. Or because the socially embodied meaning in the study activity has not become necessary for them, as they do not yet take it with a personal meaning.

> The observation of these difficulties justifies the need for theoretical-conceptual studies that seek to clarify the process of transition from playing social roles to study activity, elucidating the psychic capacities that can be developed in this process and that are linked to theoretical thinking. (Carbonieri, Eidt and Magalhães, 2020, p. 2)

The study activity is not the result of biological, natural or even chronological factors. However, it is developed through social relationships that drive in each student the need to seek conditions that can promote transformations in their psyche.

Finally, when the teacher's conceptualization of the study activity is at the *diffuse complex* level, important aspects of the child's development, guided by the study activity, appear in the teacher's discourse, but the concept is not yet considered to be fully formed, since important elements are not yet mentioned.

The *pseudoconcept*, a moment of extreme importance for the development of thought, is characterized by being effectively close to what would be the scientific concept from the perspective of formal logic, but still very much tied to the elements that compose it and to verbal definitions, that is, to the external aspects that materialize the object. According to Vygotski (2001), there is a certain difficulty in distinguishing between the pseudoconcept and the concept itself. It would be as if, when describing the study activity, one still remained tied to its practical aspects, relating it little to the development of the theoretical thought that it enables.

The development of thought at the *conceptual* level ascends to the external and internal aspects of the object, which are interrelated and maintain a connection, to constitute the concept itself. At this level of conceptualization, both the motor and mental actions and operations foreseen in the teaching plan aim to promote, in students, the conditions for the study activity to guide their development.

It was established as a criterion that, in order to be considered a *concept*, the teacher's discourse on the study activity should contain the conceptual elements already discriminated. However, analysis of the data obtained showed that the set of established criteria was not evident. Therefore, it was considered that there were no teacher responses situated at the *pseudoconcept and concept* levels, evidencing the need to develop, in continuing education, the theoretical discussion of the concept of study activity in order to broaden its understanding.

Reflection on the teachers' responses suggests the need to emphasize, in initial and continuing education processes, the relationship between the activity and the teaching mediation — pedagogical aspect — with its consequent mental representation, the main objective of these mediations. In other words, when the teachers mention the pedagogical aspects and omit the psychological aspects related to the formation of higher functions, it seems that the intrapsychic transformations are outside the teaching focus because they are not yet sufficiently understood. The same seems to occur with the relationship between the formation of theoretical thought and the process of

generalization, essential for a dialectical understanding of reality, an aspect that was absent in the discourse of the interviewed teachers.

FINAL CONSIDERATIONS

The historical-cultural theory presents the study activity as the guiding activity that can contribute to child development, from the time they enter elementary school. This becomes possible when the pedagogical work places the child in an active interaction with the core of the knowledge to be learned, allowing them to perform motor and mental actions and operations simultaneously, which favor the appropriation and generalization of this knowledge, boosting the development of theoretical thinking in school.

The repetition of exercises is not a meaningless practice; it must be planned consciously and in conjunction with the development of theoretical thinking. In the absence of an understanding of the concept of study activity, a fissure may occur in pedagogical practice, so that practice is still very far from theory, and consequently the teaching action only promotes learning supported by empirical thinking focused on utilitarian, practical and fragmented aspects of knowledge.

The pedagogical work supported by the perspective of the study activity advocates that teaching action, aiming to overcome empirical thinking, promotes the appropriation of theoretical concepts by students, in order to enable the real implementation of learning, resulting in transformations in the students themselves.

The research revealed that the teachers gradually acquired important elements related to the concept of a study activity, which can benefit the teaching process. However, considering the fact that the continuing education processes in the municipality studied have been based on the historical-cultural theory since 2008, when the curriculum of the researched municipal public school system studied was made official, bringing aspects related to study activity in recent years, it is clear that the formation of concepts is a slow and complex process, which demands attention, regularity and persistence in the training processes, involving both new and experienced teachers.

Therefore, the reflection on teaching practice implies a constant commitment to developing theoretical thinking by teachers and students, since the possibility of increasingly comprehensive conceptual generalizations can equip the subject for critical reading and an active insertion into reality.

This reaffirms the need for public policies aimed at promoting a teacher training process that enables reflection and highlights the requirements necessary to promote study activities in basic education. In this way, the main concepts of historical-cultural theory and consequently of study activities will be constantly revisited, in order to favor the organization of a pedagogical process that allows all children who enter school to access the most elaborate cultural forms of expression of reality created by the human race, in science, technology and arts.

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