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ARTIGO

CONTRIBUTIONS TO UNDERSTAND GRADUATION AND TEACHING TRAINING

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ABSTRACT: This paper analyzes aspects of the students university and teachers activities based on the principles of historical-cultural and activity theory through teacher training projects, integrating university and schools public. The considerations presented are derived from research results that the authors develop in the public universities in which they work. The data obtained were arranged and analyzed in accordance with the principles of historical-dialectical materialism, epistemological field of historical-cultural theory. From the analysis of social places and the main activity of the subjects, it conclude is that there is need for differentiation of the elements that comprise the universes of meaning of forms of training is required so that the organization of the training process is performed according to specific areas of knowledge. In this way, the actions will be sustainable both for the movement of change of personal sense, as in teaching activities as the subjects in training will develop.

Keywords: Teacher training. Education degree. Continuing education. Cultural-historical activity theory. Cultural historic theory.

CONTRIBUIÇÕES PARA COMPREENDER A FORMAÇÃO NA LICENCIATURA E NA DOCÊNCIA

RESUMO: A partir de projetos de formação de professores, integrando universidade e escolas públicas, analisam-se aspectos da atividade do licenciando e do professor, tendo por base os princípios da teoria histórico-

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cultural e da teoria da atividade. As considerações apresentadas decorrem de resultados de pesquisas que as autoras desenvolvem nas universidades públicas em que atuam. Os dados obtidos foram dispostos e analisados em conformidade com os princípios do materialismo histórico-dialético, campo epistemológico da teoria histórico-cultural. Conclui-se que, a partir dos lugares sociais e da atividade principal em que os sujeitos se encontram, há necessidade da diferenciação dos elementos nos universos de significação de tais modalidades de formação, para que a organização do processo formativo seja intencionalmente definida em conformidade com áreas específicas de conhecimento, de modo que as ações se tornem sustentáveis para o movimento de mudança tanto de sentido quanto da ação docente que os sujeitos em formação virão a desenvolver.

Palavras-chave: Formação de professores. Licenciatura. Formação continuada. Teoria da atividade. Teoria histórico-cultural.

INRODUCTION

The discussions about the reorganizes necessary for changes in teachers pedagogical practice to improve their students learning and, consequently, the low levels of learning of the basic contents of school education have not been enough to reach such an attempt in the Brazilian scenario. Among the questions that can be put to this fact, the one that understanding has on the processes of change of the practice of teachers and the conditioning factors for this to happen are considered essential.

In order to broaden the view of these processes, this article sought to articulate discussions about the elements present in intentional training processes in undergraduate courses and during the exercise of the teaching profession, from a look at the initial formation in a Mathematics Degree in a public university and of teaching formation, observed in projects characterized by university / public school integration, resulting from research developed by the authors of this article.

For this, the contributions of historical-cultural theory, focusing on the concept of activity, extended and deepened by Leontiev from Vygotsky, from which the practices of change of the practice depend on the internal changes of the individuals that occur through processes mediated in their relation to objective conditions, in the case of teachers, as subjects that teach.

The referrals and considerations presented come from insertions in processes in which the researchers develop projects and participate in practices arising from them in the public universities in which they work. Both data collection and production were established in the context of sharing study actions. By means of units

of analysis, data obtained from observations and field notes, reports, semi-structured interviews, among other instruments used, were arranged and analyzed in accordance with the basic principles of historical-dialectical¹ materialism, whose epistemological apparatus guides the principles of historical-cultural theory.

In this theoretical perspective, such processes are linked to the conditions in which individuals develop activities that result in the development of their higher mental functions. Moreover, changes in the attitude of subjects to reality depend on transformations modulated by abstractions and generalizations of theoretical concepts, which, according to Davidov (1983, p. 413, emphasis added)², are essential for “a theoretical approach to reality appear in their **own** thinking”

It was taken into account that, in addition to training as an individual and in the same way as a social subject, the constitution of being a teacher demands the supply of specificities characteristic of the function that is to develop in the composition of the social structure. Its essence is to make it possible for the students to use the means of appropriating the objectivities of the non-everyday spheres. The institutionalized conditions are then taken as means to materialize such an attempt.

In the case of teacher training, this materialization includes specific learning that comes from intentional training processes that are present in the undergraduate courses and in the formations that operate during the exercise of the teaching profession. Such processes are universes of meaning that are organized and defined according to specific areas of knowledge, with the aim that the subjects to which they are destined, in the initial formation and teaching, appropriate the knowledge implied in them.

As a result of historically elaborated systems of signification, the mediating elements present in the set of scientifically structured contents inhabit such universes of signification. The appropriation of content is then established in the individual-collective dialectic relations and involves complex overcoming of the subject in learning activity.

As part of the collective, but keeping the characteristics of their individualities, the subject in learning activity evolves to more elaborate levels of knowledge, from empirical knowledge to theoretical knowledge, through processes of feedback and individual-collective re-signification, mediated by theoretical and practical reflections which constitute the object of the activity.

At the same time as scientifically structured contents carry the human cultural potential within themselves and conform to the evolutionary framework of societies, in all their historicity, they

exercise in the structure of activity the role of mediators of the relations of man with the symbolic systems embodied in them. Thus, when appropriating such contents, the individual also appropriates a mode of organization of the universal thought present in the structures of higher levels of thought.

Such appropriations are not acquired empirically through everyday actions linked to the levels of empirical thought, since they are linked to theoretical thought and depend on institutionally organized teaching processes in which the meanings historically produced are reproduced.

The processes in which empirical thought and theoretical thought are structured are explicit in the general structure of the activity, and the relations between objectification and appropriation of subjects are also established in this context. In an analysis of these processes, elements and reflections about their relevance will be aligned to the awareness of the subjects in the formation for teaching from looking at the initial formation and in the teaching.

Taking these assertions as a baseline understanding of the referrals of this textual narrative, we then searched for elements to understand, in the complexity of the relationships established in the training movements practiced, in the degree and in teaching, those that encompass the universes of meaning of such training modalities, initial and in teaching, that can act as structuring of the organization of sustainable actions for the movement of change of personal sense and to the teaching action of the subjects in formation.

SINGULARITIES OF THE TRAINING UNIVERSES

It is a fact that, in the acquisition movement, the subject appropriates something external to itself. For this, it establishes specific patterns of mental organization, relative to the specificities of the objects of such appropriation that are crystallized in them. Such specificities are products of the historical process of human material and intellectual production, which is considered by Leontiev (1978) as signification.

Dialectically, appropriation is linked to objectification, for man appropriates the objectifications produced by antecedent generations. Objectification is the product of human activity that lasts in time, and is related to the production of physical and symbolic instruments, which mediate the relation of man to nature in order to satisfy initial primary needs which, in the course of human development are created

by him/her in social relations. In this sense, man complexes his/her existence, because in producing physical and symbolic objects, he/she produces knowledge and forms of thought.

It is assumed that, despite the essence of the elements of signification, of what is taught in the two modes of formation, being the same, the universes of signification of each of them vary dialectically. As this occurs, the activities of the subjects that compose them also vary. Consequently, their motives, senses, meanings and the relationship of appropriation of concepts to teaching are distinct in the activity, both of the subjects in initial formation as in those who are already exercising in teaching.

This leads to consider as necessary the differentiation of the elements that encompass the universes of meaning of such initial and teaching modalities, so that the organization of actions can give sustainability to the movement of change of personal sense and to the teaching action that subjects in training will develop.

EDUCATION TRAINING

With the focus on preparation for teaching, reflections on some aspects of subject activity in undergraduate courses are presented. The historical-cultural perspective is taken here as the essence of such reflections, since it is considered as an appropriate theoretical field to understand the phenomenon of teacher formation in relation to the purposes of human formation.

To this end, teacher training processes should provide the subjects with cultural contents referenced in the act of teaching and specific conditions to their internalization, since, in the theoretical perspective adopted here, the processes of appropriation of historically accumulated knowledge are mediated by instruments of the external environment.

It is emphasized that this is not obtained spontaneously, through physical contact and through simple interactions with objects. It depends on processes with essential characteristics which, according to Solovieva (2004, p. 75-77), comprise “mediated structure, conscious and voluntary character and social genesis.” Thus, this movement of internalization depends on transformations of external activities into internal ones, fundamental to the process of development of higher psychological functions.

By focusing on the subject's place in the initial training process, it is understood that in a hurried look at the reality of

undergraduate courses, one might initially think that the university student is not unaware of the profession that is addressed when the course begins, and their motives are supposed to converge with that choice. In a more refined reflection, one can, however, argue about the provisionality of their choices and the possibility of having been defined in a disjointed way to such knowledge, by the proximity of their residence to the university or even by the influence of friends or relatives. In this case, the action of providing a college entrance examination is generated for motive-stimuli³, non-effective motive, since the motive for the choice does not coincide with the purpose for which the course is intended (LEONTIEV, 2001).

By following the trajectory of the university study, it was noticed (DIAS, 2015) that it is common, in the first year of the course, to go through conflicts in relation to its continuity, that is, once immersed in the structures of undergraduate courses, knowing the specificities of these and can confront them with their own needs. At times, there is no finding of its motive with the social objective to which its formation is directed. When this meeting is confirmed, the motive-stimuli can become effective.

The lived experiences in Bachelor's Degree courses in Mathematics attended by these researchers and those in which they act as teachers show that those students who stay in such courses have a tendency to focus almost exclusively on their efforts focused on specific content disciplines. The students' commitment to Differential and Integral Calculus, Algebraic Structures, Matrix Algebra, Real Analysis, among others, present in the curriculum, occurs to the detriment of pedagogical disciplines, such as: Fundamentals of Education, Didactics, Psychology and Teaching Practice, in which the theoretical elements of Education and the organization of teaching is structured (DIAS, 2015).

This tends to disassociate from the objective of the degree course, whose purpose theoretically goes far beyond the learning of advanced mathematic contents. It presupposes, moreover, the appropriation by the certified of the structure under which the whole field of Mathematics is organized, as Moura points out (2013), the work of the teacher cannot be taken by a simplistic view of the practice of teaching content.

Work in the dimension of **praxis** implies, for the worker, the complete mastery over what he performs: to plan, define his instruments and choose a set of actions that allow him to achieve the goal he has created. In this movement, he is guided by a theory that allows him to foresee the result of what objective, which gives him the possibility to evaluate the result of his actions. In this sense, the work of the teacher is his teaching activity. (MOURA, 2013, pp. 97-98)

As Souza, Esteves and Silva (2014) point out in their research, this is also the case with university students in Pedagogy. These authors point out that, in this case, the university students have privileged, in their studies, specific disciplines of pedagogical components, placing in the second plane, those contents that they must teach. Such tendency to disregard the dimension of the object of the work of the teacher in the processes of initial formation shows that this phenomenon is not restricted to a specific area. Reflections in this sense are essential to think about changes in the modes of curricular organization and the teaching of teacher training courses.

In the accompanying training processes, it is noticed that varying levels of students' awareness of the purpose of undergraduate courses have led them to two extremes: on the one hand, there are those who **find** themselves professionally and on the other, those who only take the stance to **pass** certain subjects without much involvement. In this second case, it is noticed that the activity of the subject does not coincide with the objective of the course. Therefore, it is necessary to intervene in the direction of approaching their motives with such objectives so that the formation activity is established.

A moment considered potential in the course, because it is characteristic of elements that can drive changes in relation to the profession to which the undergraduate course is destined, is the experience in the internship. This is a phase in which conflicts can culminate in the event of sudden psychological changes occurring in university students when they come into contact with the professional reality they will face in the future, causing the development of the subject in formation to become stormy (DAVIDOV, 1988).

In this phase, the need to establish forms of institutional organization that bring in themselves objectifications that influence the constitution of the universes of meaning in the training of teachers for which it is intended becomes essential, so that conscious analyzes of the role of the teacher, their possibilities and social attributions can be appropriated by the subjects in formation. In the formative contexts, such as the degree programs and the stage itself, the processes of culture communication are structured and organized in an intentional way and must be adapted to the specific times and spaces.

In this sense, school culture is the main axis around which learning actions and the consequent development of individuals become viable, as "a particular sphere of social life that creates and organizes the ideal norms of objects, instruments and communication" (SOLOVIEVA, 2004, p.140).

On the other hand, the school environment where the graduates perform the internship is not totally foreign to them, since, even superficially, they know their organization, norms and general activities, that is, they do not feel foreign from the ethnographic point of view to this school culture. However, the task of traineeship in school allows them to perform a different activity from that which they performed as students of basic education, that is, they occupy another place in school activity, arising from the becoming of the new social position, in which the apparent can produce reflections capable of generating new personal senses.

The moment of the internship provides a manifestation of new relations between the contents seen in the training disciplines and the current school reality. This relationship is intended by the teacher of the subjects of Teaching Practice and Supervised Curricular Internship. In this phase, the undergraduate realizes the need to deal with a complexity of elements that go beyond those present in the so-called specific and pedagogical contents and that transcend the undergraduates' own curricula.

In the same physical environment that was previously studied, it is possible for the undergraduate to initiate a differentiated analysis of those realized as students of basic education and, with that, to develop a process of awareness of the new social place that will play out in their life as a professional. The mental planning of this change occurs in the measure of the diversity of elements and the dynamics of their organization in the formation of thought.

The relationship between elementary school and university should therefore enable educational institutions to fulfill their social function. Taking the product of cultural development as a reference for work, according to Solovieva (2004, p. 140-41), it would provide "the development of the ideal plane in the consciousness of man, the plan that serves as the basis for historical inheritance of communicative, linguistic, and work skills, etc.". This because

[...] Cultural means - language, art and scientific knowledge - become internal instruments that mediate the psyche within the activity, that is, in ideal forms of activity: the ideal is the form of the thing, however, outside of this thing and within the man in the form of active activity (ILIENKOV, 1968)⁴. Intellectual development depends on the cultural experience of mankind, which the subject has been able to internalize and convert into his psychological instruments. (SOLOVIEVA, 2004, p.141)

It is a movement that does not consist, therefore, of linear processes in which the subjects are limited to the simple reproduction of the preexisting sets of norms, that is, by the

process commonly known as the transmission of knowledge⁵. On the contrary, it depends on conditions in which subjects interact in the activity, through processes of individual-collective feedback and re-signification mediated by the theoretical and practical questions that constitute the object of the activity.

In this sense, developing actions that are disconnected from their activity is not enough for such transformations to occur in the subjects. As previously discussed, the activity is characterized by the object to which it is directed and not only as the product of an action, in addition, motive, action, operation and object are connected by a specific format that constitutes its structure. For Leontiev (1983), the category of activity, together with consciousness and personality, allows to explain the origin, the functioning and the structure of the psychic reflection of reality.

Necessity is the origin of activity. It refers not only to the basic questions related to survival, but also to the needs created by the individual in society. The motive is generated by necessity and it is what drives the development of actions to apprehend the object. These actions are mediated by operations, which are already developed and automated forms of thinking in the individual, that is, they do not undergo a process of analysis by the individual during a given activity. In this conception, external (interpsychic) activity and internal (intrapsychic) activity are intimately linked (LEONTIEV, 1983).

In the universal movement of activity in which, in a process of mutual transformation, conceptually related need ↔ motive ↔ purpose, the way of obtaining the purpose “is given by the unity of purpose / conditions (which conform the task).” Such a process “is generated in the dialectical movement between activity ↔ action ↔ operations” (DAVIDOV, 1988, p.31).

According to Leontiev (1983, pp. 84-85), in the procedural relations established in the movement of activity, actions constitute a “process subordinated to a conscious objective”, which was generated by a motive connected with a given need. In turn, the goal, the end of each action that fuels this process, does not establish a direct link with its own generating motive with which it is not directly linked, since, this reason is oriented in the direction of satisfying the motive of the activity.

It can then be said that the activity is constituted of a motive generated by a given necessity. This activity triggers actions and each action will follow its own goal. Each action will be carried out through operations, which will depend on the concrete conditions of achievement in which the activity is inserted.

In the meantime, the types of activity vary in the course of human development according to stages that evolve within systems conditioned by the main activity of the individual, which organizes and sustains the psychic process in which the major changes of it are defined within each stage.

The main activity is the one that configures the social place occupied by the subject in the human activity. This is understood according to the socio-historical development, that is, the humanization, which consists in the appropriation by the individual of the humanized culture. Such a social place does not only refer to a function in society, but, dialectically, the main activity becomes the means of organizing thought, for development develops around it.

In this perspective, Leontiev (2001) identifies three main activities in human development: the activity of role playing, which comprises the infantile phase, preschool; the activity of study, that developed, especially in the school; and the professional activity carried out in the scope of labor.

Although the study activity is configured from the earliest years of the child's schooling, it is no longer mainstream in the university phase, but the development of theoretical thinking, its main content is not lost. The knowledge learned at this stage relates more closely to the chosen profession, by the understanding that the concepts presented to it bring in themselves elements fixed in them from social experience and from the discoveries reached by previous generations.

The acquisition of such elements occurs through processes in which social experiences are internalized in individual experience and are elements of intellectual development, which demands the intentional organization of didactic actions. Thus, the teaching process, which presupposes "the passage from the spontaneous course of the activity [...] to the organized activity directed to the objective" is the way by which the possibilities of later action of the individual are extended "with the concept in a **conscious and voluntary** way" (TALIZINA, 2009, pp. 266-267, emphasis added).

Both the organization of teaching and the selection of contents and the choice of methods bring within them conceptions of the theoretical basis that justify the nature of the process that will be conducted. The theories that consider "the developmental role of teaching and education in the process of personality formation" are pointed out by Davidov as those that guide "the search of psychopedagogical means with the help of which one can exert a substantial influence both on the general psychic development of students as well as the development of their special abilities" (DAVIDOV, 1988, p. 9).

By taking as a basis what has been synthesized above, some reflections about the transition from study activity to teaching activity (MOURA *et al.*, 2010) are raised as being the main activity of the teacher, which characterizes his/her social place. The constitution of the profession of teacher has its essence in teaching; he/she is a mediator between the theoretical knowledge developed by mankind and the process of appropriation by the students (MOURA *et al.*, 2010). For this, the motives and actions of the teaching activity, such as planning and organization of teaching, are directed to the promotion of student study activity.

The study activity of Davidov and Márkova (1987b) brings important elements for the foundation of this passage, both from the point of view of the actions and organization of the study of the university for its formation and for the constitution of its teaching activity.

Based on their research on developmental teaching, these authors emphasize study activity as an important form of activity. This is particularly due to the psychological role it plays in the ability of subjects to assess their own actions in a relational way, that is, to restructure the characteristics of the content of intellectual activity based on the content and structure of such activity.

Thus, they consider as their main content “the assimilation of generalized procedures of action in the sphere of scientific concepts and the qualitative changes in psychic development [...] that occur on this basis” (DAVIDOV, MÁRKOVA, 1987b, 324).

They point at a characteristic of this base, an organized movement, whose composition comprises a certain content on which the study actions are developed, oriented to the identification of general relations and the key concepts of the area of knowledge to which it refers; within situations expressed by the unit study tasks with control and evaluation actions.

Thus, the levels of fulfillment of the components of the study activity can be monitored when, in the task of study, one observes the comprehension of the teacher’s task by the learner; his/her assumption for him/herself; the autonomous planning of the task; the planning of a task system; in the study, actions develop procedures to differentiate the general relations of didactic material and its concretization and the registration of the relations in the form of different graphic models and symbols; and develops, in the actions of control and evaluation, forms of self-control, such as the prognosis that is carried out before beginning the work, the follow-up of the steps that are taken during the accomplishment of the work and the results that is effected after the work is finished. How

self-assessment can be considered: outcome assessment; adequate or unsuitable; global or differentiated; and others.

Thereby, linked to the unfolding of each component of the study activity, one can verify the degree of autonomy with which the student faces compliance and the ability to move from one component to another. All components can be followed in their evolutionary dynamics.

Taking as a reference the undergraduate courses of public universities in which these researchers work, with the objective of training teachers prepared for labor, they encounter curriculums originally conceived by socially conceived structures in the principle that the subjects in formation will have time to carry out their studies comprehensively, as well as other activities surrounding scientific-cultural formation, such as participation in projects developed by the university.

However, the situation experienced in these courses presents a reality that can be characterized by three groups of subjects: those who only study, those who, in addition, also act as teachers and those who work in other professional areas other than teaching. (DIAS, 2015). As a result of this picture, the following mobilizing question arises: how is the activity of the undergraduate organized in the concrete conditions of his/her life when he/she works and studies? (Here, the work is considered as a position that the subject occupies in an institution to obtain a salary).

Apparently, the link between the study and teaching activities of subjects who act as teachers may become less contradictory as to the relationship between personal sense and meaning than to those working in other areas. While the articulation between the theories studied and the movement of pedagogical practice may become narrower in the conditions of the first, this possibility does not seem so obvious when one considers those who work in another professional area other than teaching. For them, the distance between the content they study and the needs they face in their work space is divergent, making it difficult to raise the level of awareness of future teaching activity.

It also affects the groups that do not dedicate themselves exclusively to the course, the reduced time they have to develop their actions related to the study activity, which must be divided with those referring to the function they carry out at work. In the case of those who act as teachers, it is probable that the pressing needs in the universes of meaning, linked to their work spaces, are convergent with their study activity, and that such dialectic links are established with their teaching activity.

In the case of those who work in other areas, if one takes as an example those graduates in mathematics who work in the financial area, the convergence previously mentioned will probably be focused on another universe of meaning, that is, the relations with the content of their work could converge with the theoretical study of financial mathematics that they perform in the university for the common characteristics that they establish, but not necessarily in a way bound with the necessities connected to the teaching of such content. For Leontiev (1978, p. 310):

Some types of activity are, at a given time, dominant and have a greater importance for the further development of the personality, others have less. Some play an essential role in development, others play a secondary role. A reason why we should say that the development of the psyche depends not on the activity of its whole, but on the activity of the dominant.

It is understood that the context of the internship in undergraduate courses, if well oriented, can be characterized as a special moment for the regulation of the professional activity of the subjects. Even in the case of university students who are not yet totally immersed in the professional assignments of education, the approach to the internship has revealed both in movements in which they begin to identify and define their careers as teachers and in which they fail to identify and change their professional option.

In this scenario, it is understood that it is up to the university professor to adjust the planning of his/her classes, with the intention of involving the graduates in movements of “creative productive work” (DAVIDOV, 1988, p. 84), so that they become mere reproducers of information.

For this, it is not enough only to appropriate new knowledge, but to elaborate, through reflections, analyzes and syntheses with the already internalized knowledge, the production of new motives that, in the dialectic between signification and personal sense, will generate motives endowed with meaning. The role of the teacher is to assume the orientation of the teaching-learning process to which it will be integrated organically. In such a process, in addition to the ability to plan, organize, put into practice and evaluate teaching, it shares meanings with subjects in the performance of their practice, “builds, diffuses or indicates a particular way of being and making the world to those who arrive at school” (MOURA, 2000, p.23).

Sharing meanings implies the teacher not only to form, but to form in the individual-collective relationship as subject of the educational action that consubstantiates as a formative unit; which encompasses the transformation of both the student and the teacher, who, imbued

with new acquisitions, reconstruct the patterns of scientific knowledge, as well as their actions with the objects of knowledge, characterized in school education by the contents of teaching materials.

Thus, as in the interactive theory-practice process, the teacher transforms and is transformed by the movement of appropriation of the knowledge present in the teaching-learning relationships, it also re-signifies his/her teaching activity and develops his/her professional awareness.

At the same time, while the objective of the school is to organize the set of school contents that meet the needs and goals established by the whole of the educational society, to the teacher, it is the responsibility of organizing the teaching of such contents, that is, activities whose intended actions allow the subjects to establish relationships among themselves. In such actions, there must be forms of knowledge aimed at ensuring the appropriation of new concepts, by exploiting the substantial elements of teaching content (MOURA *et al.*, 2010).

In short, institutionalized education in the school makes it possible to acquire culture to the new generations that start to generate culture, in a socio-historical movement of progressive complexity. The broad analysis of the development of mankind shows, according to Leontiev (1978), that for each new stage of this development, new forms of education are necessarily linked.

In the wake of the changes generated by this movement, the attributions aimed at the school collective and, in particular, the teacher, are not always compatible with the needs of the school and the teachers. This one, without perspectives to relate the actions developed within the school with his professional needs, dissociates his/her school actions from the motives of his/her activity, teaching, which occurs distanced from praxis, as it results from alienated and alienated practices.

For Leontiev (1978, p. 122),

The 'alienation' of man's life results in a disagreement between the objective result of human activity and its motive. In other words, the objective content of the activity does not now agree with its subjective content, that is, with what it is for man himself. This confers particular psychological traits to consciousness.

Finally, the contexts in which the initial formation of teachers is currently developed are shaped by the complexity of the conditions imposed by the multifaceted social contexts and demand diverse proposals from those traditionally thought by unique standards, both of formation and evaluation of the resulting social products; Since the needs and motives of the groups in formation are diverse and in accordance with their fields of action.

TRAINING IN TEACHING

Regarding training in teaching, it is considered that this should not be understood as mere offering of occasional courses parallel to the work of the teacher, but as a continuous training linked to the needs that are integrated into their professional practice.

Thus understanding, when dealing with teacher training in teaching, it refers to an object of study in continuous movement, whose investigation demands to consider the dynamics that characterize it. The instruments used for the seizure of static objects do not conform to this case. In order to think about the continuous formation of teachers, it is necessary, according to Moura (2004), to know their reality, integrating with the teacher's own environment as being part of the phenomenon. The understanding of the dynamics of this training modality implies, for this author, to understand how the organized actions for the accomplishment of school education can reveal its development.

When the undergraduate student becomes a teacher and starts his/her work in the school, the elements of his/her experience while he/she was a student of basic education and the specific knowledge that were part of his/her formation in the university are for him/her re-signified. The performance in the school propitiates the manifestation of new relations between what he/she learned in the university and the school reality.

In spite of the contacts previously established with the school environment in which he/she begins to develop his/her teaching tasks and practices, as a university student, the objective conditions that regulate his/her formative actions during the internship period establish links with the intentionality of his/her teachers' orientations. Already in the process of professional performance, they are regulated by labor standards, during which the teacher is appropriating a certain mode of teaching action, sometimes in a solitary and disconnected form of the collective.

In the exercise of the profession of teacher, the norms, rules and social and historical context of the school begin to relate not only to the teaching activity that will develop, but with elements characteristic of new tasks that are his/her responsibility as a teacher, that is, that make up and constitute their work.

The teaching activity that has development as a task will depend on its activity of study as an individual in training at work, whose learning will depend on the learning of their students.

Its structure - tasks, operations and study actions - will be directed to the assimilation of different theoretical knowledge related

to the need to teach, so that the tasks of study aimed at this purpose should provide forms of organization that explore the general principles of action that lead to the resolution of various concrete and particular problems.

It is in the process of systematically carrying out the study activity that it opens the possibility to the teacher of a more intense formation of the mental operations of theoretical character as opposed to those in which the knowledge is presented according to traditional procedures. It is necessary, therefore, for such formation to organize a special type of activity, in which the main role is not only in relation to the actions with the didactic material, but also to the assumption and the autonomous planning by the teacher of the tasks of study.

During the formation of the study activity, it is necessary to reveal and create the conditions for the activity to acquire a personal sense, to become the source of the teacher's self-development, to the multilateral development of his/her personality in the condition of its inclusion in social practice (DAVIDOV; MÁRKOVA, 1987a).

Thus, in the process of training in teaching and through educational work, teachers aim to train the thinking of their students by appropriating theoretical concepts, which is why they seek to organize teaching in their task of study. At the same time, they develop their own thinking and theoretical concepts in the execution of the study activity (FRANCO, 2015). In this respect, Franco (2015, p.104, emphasis added) states

From the didactic point of view, when the teacher contributes to the formation of this type of study activity, by the way in which he organizes the actions, by the methods that he uses in each of the intended objectives in the development of a given concept, in our view, expressed the essence of the concept of **teaching activity**, in view of the appropriation of a certain concept by the students. From the formative point of view of the teacher, this process implies in the awareness of the actions that the students need to accomplish, he needs to know how to form them. The focus of developmental teaching and didactics presented by the authors, [Davidov and Márkova] [...], reveals the interdependence between teaching activity, study activity and development.

In this new condition, but now with other characteristics, there is the same heterogeneity, previously pointed out in the spaces of initial formation. They vary, for example, the objective conditions of those who work in various schools to complete their journey of those who have their work concentrated in a single school. Diversity of training, time of exercise as teacher, target audience of his/her work and physical conditions of the school where he/she works are also process variables.

The specificities of the different areas of knowledge, the level of involvement with school management and the level of awareness about public educational policies are also among the many differences that can be found, which, according to Basso (1998, p.2), which:

The analysis of the teaching work, thus understood, presupposes the examination of the relations between the subjective conditions - teacher training - and the objective conditions, understood as the effective working conditions, encompassing from the organization of the practice - participation in school planning, preparation of classroom etc. - up to the teacher's remuneration.

It is understood, therefore, that the needs linked to the different groups of teachers need to be considered in the planning of the processes of formation in teaching, because, in an objective way and as a socially determined being, like every professional, the teacher develops professionally when inserted in the exercise of teaching in interface with his/her own work, which focuses on the function of teaching, that is, mediating the human formation through the teaching activity.

Thus, assuming that their needs are tied to teaching issues, in their professional practice, their activity is sustained by what is meaningful for them. The appropriation of the essence of the phenomena that are impregnated in the cultural constructs operates transformations in its own conscience.

The characteristics apprehended in its being, derived from such transformations, substantiate its existence by the process that Leontiev (1983) defines as objectification and mark the transformations that operate in their context of action as it develops in activity. When the level of individual consciousness is integrated into the educational community, it is not only one of the main propagators of scientific knowledge, but also a person responsible for humanizing formation. For this, the teacher must see him/herself as being historical and social.

It is thus understood, in the historical-cultural perspective, that "man is made by producing his objects and that, in producing his objects, he also produces its meanings, [...]" (MOURA, 2004, p. 260). From the perspective of activity theory, teacher training presupposes, therefore, collective processes of teaching activities in which the teacher establishes dialogues with multiple levels of objectification, involving the teaching work, provided by the heterogeneity of the group of teachers and students, communities and society.

In teaching, both the time and the space of idealization differ from those experienced in the initial formation, since the commitment to the student's education expands upon the investiture

of the role of teacher. Norms and rules are not simply to be known, but to be fulfilled, questioned or confronted, according to each event and / or actual situation.

The school context reflects the multiplicity of relationships around school education, be it from the ideological, social, economic, historical point of view or from the local issues inherent in management, coordination, physical conditions and surrounding ideals. The movement of doing tends to supplant that of reflecting, by the objective conditions put by the school form, which makes it more complex for the teacher to defend and maintain the humanizing convictions in the community.

At this juncture, collective planning meetings at the school reveal, if they are organized in an intentional way, a great training potential in teaching when they challenge teachers to plan teaching-oriented activities (MOURA *et al.*, 2010) for their discipline. They open a potential space for the production and sharing of meanings of the actions of the individuals that participate in the teaching activity, which is the main activity of the teacher.

However, the teaching profession does not hold sole responsibility for educational practice. The class itself is permeated by beliefs and conceptions that the teacher elaborates on the social relation about teaching and its practice, which are part of an educational system in which there are, in addition to educational practices, also competing practices (SACRISTÁN, 1995). Official public education policies, available educational materials and school management are, among others, factors that influence the organization of the teacher's class.

Without being aware of these issues, when faced with all the complexity of teaching work, teachers often seek out the causes of their difficulties in their initial training on which they negatively criticize. Although they may not be totally mistaken, awareness of the breadth of their role depends on the scope of another level of awareness of their own activity, since their task is not a matter of merely transmitting those scientific knowledge that they have learned in higher education to students of education but to provide situations where the appropriation of such knowledge is consolidated at various levels.

Access to higher levels of awareness does not occur naturally, but rather through mediated processes that provide "situations of interaction that enable reflective action on the object of study, in a restricted or broad way" (BERNARDES, 2012, p. 90). There is a need for formative spaces that provide, in large and small groups, intellectual elaborations in which to consider the multiplicity of

educational factors and the possibilities of pedagogical activities with real students, in order to contribute to their humanizing formation.

Bernardes (2012, p. 93) also points out that,

In addition to the need for the educator to appropriate knowledge related to children's development, pedagogical practices and social and philosophical relationships that mediate the teaching performance in the school context, it is necessary to consider the appropriation of specific knowledge by the educator that relates education, learning and human development in a historical and social dimension.

Many teacher training programs are not articulated with their professional needs because they relate in a timely manner to the elements that make up the teaching work. In some cases, they only address the updating of scientific and technical knowledge and, in others, only the methodology for teaching this knowledge.

In the investigations carried out by the research groups that these researchers participated in, the reality they encountered during their research showed that it is not uncommon to find training proposals in which teachers from different schools come together to plan activities, involving varied methodologies, without any concern to consider the objective conditions of the school reality in which each teacher acts, nor its conceptual deficiencies regarding the knowledge that intend to teach and how to organize this teaching.

It is a fact that, in having to plan and perform actions and evaluate, the teacher needs to use the knowledge previously constituted during his / her graduation, including the reflections on the curricular internship, but now it is necessary to re-signify them in the teaching activity, whose organization becomes the propulsive spring of formation. Such re-signification depends on intentional interactions and mediations, integrated into collective work, which are not consolidated in sparse training courses.

The guarantee of a continuous and integrated training process is given to the teacher as part of the teacher activity in the school where they work or in other spaces, either with other teachers or with other education professionals. This would allow the development of collective actions in which, even in a short period of time, they can establish dialogues and share meanings with their partners. It is necessary to integrate the actions developed in such spaces of formation with the teaching work, since the process of appropriation is only consubstantiated, as affirmed by Franco and Longarezi (2011, 578)

[...] the teachers' motive relates to the content of the action, and this is directly linked to the concrete conditions of their teaching life. If the teacher's relations

with reality change in the attempt to meet their needs and interests, it means that continuing education actions must also be reorganized in their teaching life. These actions begin to make sense for the teacher, because they mean something extremely valuable for their pedagogical and personal action, in concrete social practice.

With respect to the standards thought to be suitable for the subjects in initial formation, according to the specific conditions of the universe of meaning of the formation in teaching, the differentiation in the forms of organization of the formation of the teacher becomes necessary; since the motives that generate activity within each universe do not necessarily coincide. In this sense, appropriations and objectifications of the school contents are differentiated in the formative process of the subjects in the teaching, in relation to those of the degree.

CONSIDERATIONS

The activity of the subject-teacher in formation, both in the initial and in teaching, takes place in a collective system and in the relation individual-social context, an indissoluble unity that to such subject allows to broaden the vision with respect to the universe of meaning characterized by the social place which acts. At the same time as the concreteness of their activities is constructed in the context of society, such activities are elements of their individuality and the transformation of their personality, which only occurs in praxis, provided that objective meanings have a concrete role in personal life processes of these subjects.

The perception of the place that the scientific knowledge occupies in the activity of the undergraduate student and the teacher of basic education is not something simple, mainly in the form in which the university and basic education develops in the Brazilian actuality. But in this context, it is undoubtedly important to consider the meaning of teacher training in all its breadth, since if in the training of the graduates non-productive and creative work is developed, in the sense of contributing to their psychic and humanizing development, what do you expect from your practice in teaching?

The mere transmission of content, without articulation with his/her own life, that is, without contributing to the development of his/her personal sense, makes it impossible for the subject to see him/herself as a generic being. This makes it difficult to confront the current school organization regarding teaching content in order to provide a humanizing education for students, especially if there are no actions

in the school environment that favor teacher education in a shared and collective way. Thus, it is in the adjustment of these formations that other levels of teachers' awareness about their actions and the possibility of overcoming conservative practices will be in the midst of the appropriation movement, consistent with their teaching activity.

In this sense, the creation of training environments, composed of groups integrated between universities, institutions of Elementary and Middle Education, has been the focus of investigations of these researchers and has been shown as one of the effective ways of insertion of the subjects that deal with the act of teaching. Actions of studies and research intentionally planned and discussed in collective spaces are conducive both to the access of the subjects of the educational institutions as to the knowledge produced in the research situation, as well as the access of the subjects in initial formation to the challenges posed by the complexity of the relations that are established in school environments.

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NOTAS

¹ These principles are presented and discussed under the research focus in Martins (2006), where they can be deepened by the reader.

²In the references, the names of the authors Davidov and Vygotsky are written as they are written in the original used, hence the variation Davýdov and Vigotsky. In the body of the text, it was chosen to write them as they appear in the beginning of this footnote; form adopted by great part of the translations for the Spanish language to which the researchers had access.

³The terms **motive-stimuli** and **sense-forming motive** are used in the meaning adopted by Leontiev (2001). Briefly, effective motives are those that are meaningful in the activity of the subject, but can be generated for initially understandable motives. Depending on the conditions, this transformation can occur from the attribution of a new meaning by the subject to the result of the action that it executes; this action was initially generated by a (understandable) motive that only induced him to do it.

⁴ ILIENKOV, 1968 *apud* SOLOVIEVA, 2004, p. 141). Original book: ILIENKOV, E.V. **Acerca de Ídolos e Ideales**. Moscú: Editorial Estatal Política, 1968

⁵A conception in which communication starts from the sender subject, is linearly directed to the recipient subject, which in turn captures such information

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