

## Collaborative research: contributions to didactic training and pedagogical work of the basic education teacher<sup>12</sup>

*Edileuza Fernandes Silva*<sup>3</sup>

*Enílvia Rocha Morato Soares*<sup>4</sup>

*Henrique Rodrigues Torres*<sup>5</sup>

### ABSTRACT

The article is the result of collaborative research, financed by FAP-DF, with the aim of discussing the contributions of specific didactics to the training and pedagogical work of basic education teachers. Based in a qualitative approach, data collected from Google Forms questionnaires answered by 26 teachers were analyzed. Didactics in teacher education, its contributions to pedagogical work and the subsidies of collaborative research for the formation of researchers committed to the reality of the school are conceptually discussed. We conclude reaffirming the relevance of didactic training for pedagogical work with a view to ensuring that all students acquire skills and that collaborative research is successful for the production of knowledge about didactics and teacher training, as well as for the training of researchers.

**KEYWORDS:** Education. Didactic. Teacher formation. Collaborative Research. Pedagogical work.

---

<sup>1</sup> Research funded by Fundação de Apoio à Pesquisa do Distrito Federal – FAP-DF.

<sup>2</sup> Translation funded by the Post-Graduation Program of the University of Brasília Education Faculty with resources provided by PROAP/CAPES. English version by Sátia Marini. E-mail: [satia.marini@gmail.com](mailto:satia.marini@gmail.com).

<sup>3</sup> PhD in Education. Universidade de Brasília, Brasília, Distrito Federal, Brasil. Orcid: <https://orcid.org/0000-0002-9837-2958>. E-mail: [edileuzafeunb@gmail.com](mailto:edileuzafeunb@gmail.com).

<sup>4</sup> PhD in Education. Secretaria de Educação do Distrito Federal, Brasília, Distrito Federal, Brasil. Orcid: <https://orcid.org/0000-0002-7405-2167>. E-mail: [enilvia@hotmail.com](mailto:enilvia@hotmail.com).

<sup>5</sup> PhD student (Geography). Secretaria de Educação do Distrito Federal/Universidade de Brasília, Brasília, Distrito Federal, Brasil. Orcid: <https://orcid.org/0000-0002-2405-5271>. E-mail: [henriquetorres.sedf@gmail.com](mailto:henriquetorres.sedf@gmail.com).

*Pesquisa colaborativa: contribuições para a formação didática e o trabalho pedagógico do professor da educação básica*

### **RESUMO**

O artigo resulta de pesquisa colaborativa, financiada pela FAP-DF, com o objetivo de discutir contribuições das didáticas específicas para a formação e o trabalho pedagógico de professores da educação básica. Analisamos, a partir da abordagem qualitativa, dados levantados de questionários no *Google Forms* respondidos por 26 professores. Discutimos conceitualmente as didáticas na formação docente, suas contribuições para o trabalho pedagógico e os subsídios da pesquisa colaborativa para a formação de pesquisadores comprometidos com a realidade escolar. Concluímos reafirmando a relevância da formação didática para o trabalho pedagógico com vistas à garantia das aprendizagens de todos os estudantes e da pesquisa colaborativa para a produção de conhecimentos sobre didáticas e formação docente, bem como para a formação dos pesquisadores.

**PALAVRAS-CHAVE:** Educação. Didáticas. Formação de professores. Pesquisa Colaborativa. Trabalho Pedagógico.

*Investigación en colaboración: contribuciones a la formación didáctica y el trabajo pedagógico de los profesores de la educación básica*

### **RESUMEN**

El artículo es el resultado de una investigación en colaboración, financiada por la FAP-DF, con el objetivo de discutir las contribuciones de las didáticas específicas para la formación y el trabajo pedagógico de los profesores de educación básica. Analizamos, desde el enfoque cualitativo, los datos recogidos a partir de los cuestionarios en *Google Forms* contestados por 26 profesores. Discutimos conceptualmente la didáctica en la formación docente, sus aportes al trabajo pedagógico y los subsidios de la investigación colaborativa para la formación de investigadores comprometidos con la realidad escolar. Concluimos reafirmando la relevancia de la formación didáctica para el trabajo pedagógico con el fin de garantizar el aprendizaje de todos los estudiantes y la investigación colaborativa para la producción de conocimiento sobre la didáctica y la formación de profesores, así como para la formación de investigadores.

**PALABRAS CLAVE:** Educación. Didáctica. Formación docente. Investigación en colaboración. Trabajo docente.

## Introduction

Primary school is the stage of basic education that gathers the largest number of students in Brazilian schools. According to the Basic Education Census of Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP) (BRASIL, 2020), from 47.3 million enrollments, 26.7 million (56.4%) are in the primary school. Municipalities are responsible for 68.1% of enrollments in the first years, while states are responsible for offering the remaining 41.4%. In the Federal District (DF), federation unit in which this study was developed, from 543,833 enrollments offered to the public schools network, 50.99% are in primary school, which represents 277,300 students in this learning stage (DISTRITO FEDERAL, 2019).

Despite the developments as to the universalization of primary school for children and teenagers from 6 (six) to 14 (fourteen) years of age, a target reiterated in the *Plano Nacional de Educação 2014-2024* (PNE, National Education Plan) (BRASIL, 2014), this is not a guarantee that at least 95% of the students will conclude this stage in the recommended age. According to data of Censo DF 2020, 50,589 (18.24%) of primary school students show a discrepancy age/school year, characterized by the divergence of two or more years of age regarding the school year they were expected to be. This suggests that some contents proposed in school curriculum are not being learned, that is, part of the students are deprived from access to the knowledge accumulated by humankind.

Considering that public school accommodates the majority of students coming from less privileged social and economic groups, this discrepancy raises awareness of the fact that the “movement of the educational exclusion process is not within the school access issue anymore, it is within the school” (MÉSZÁROS, 2008, p. 11). It happens due to internal mechanisms such as the pedagogical work it develops, but still takes into account the external

determinations that influence it. This is the case of external evaluations and the national curriculum bases, among others.

Due to this reality, the Research Group registered at Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) – coordinated by higher education professors with over 30 years of experience in basic education teaching and comprised by undergraduation, graduation and scientific education students, as well as by teachers linked to the Federal District Education Secretariat (EAPE-SEEDF) – made huge theoretic and methodologic efforts involving the joint deliberate and planned cooperation to develop a collaborative research. This research comprises: contributions do specific didactics in training and pedagogical work developed by teachers of the primary school of the Federal District public schools network coming from the licensing degrees of higher education public institutions; and the subsidies of collaborative research for training researchers committed to the school reality.

Understanding the cooperation “as an ideal model to assure the professional development of teachers along their careers, learning *par excellence* for students and the transformation of schools” (LIMA, 2002, p. 7) allows us to assume that collaborative research produces scientific knowledge in a political and educational perspective. It is political since it brings the opportunity to analyse meanings and practices as those of professors coming from the university who, at the same time, welcome and confirm the Research Group expressing a commitment with teaching and research linked to the basic teaching network. And it is educational, since it is a research based on the training aspect of higher education professors, for undergraduation and scientific initiation students, future teachers of basic education. Since it is a continuous training of school system teachers committed to it, we understand that collaborative research may also trigger a conceptual and practical review of the training promoted by EAPE/SEEDF and, consequently, positive changes in schools.

Based on such premisses, the Group assumed the challenge of developing a collaborative research, under a qualitative approach, unabling us to understand the nature and situation of relations between researchers and researched, reestablishing the whole beyond the formal perspective of what was settled. We aimed to interpret the reality studied considering the conceptions and practices of the acting subjects – teachers arising from licensing degree courses. This perspective has demanded from researchers a holistic view of the concrete world phenomena, including dialectic movements and their consequent transformations that mediate individuals and society relations. That is, the didactic-pedagogic training in licensing degrees is considered to be connected to the transformations following the relations within public schools and their classrooms.

The choice for a model that explains reality, taking into account the existing contradictions among its elements (aiming to consider it based on the life-giving movement and making it changeable and inserted in a continuous development process) was the criteria considered to define dialectic epistemology (WACHOWICZ, 1989) based on this research.

Thus, the research methodology promoted dialogue and contributed to the cooperative construction of knowledge in a relational and dialectical way among experienced researchers, beginners and teachers participating in the research. This cooperative movement that aims knowledge has generated and created senses in the alternating social practices of communication (LINELL, 2009), in which researchers and researched are grouped and contribute to produce knowledge that enable rethinking the subjects conceptions and practices in a movement that induces university-school cooperation.

In the collaborative research perspective, researchers assume the position of history producer subjects. However, under specific contradictory conditions, they point out to the need to build a future, which requires an analytical perspective of the whole considering

theory-practice units (PALUDO, VITÓRIA, 2014), teaching-research, university-basic school.

In order to collect data, an online questionnaire was applied to 26 teachers of the final years of primary school acting in DF public schools, graduated in: Languages-Letters Portuguese and Letters English; Physical Education; Visual Arts; Mathematics; Nature Sciences; Social Sciences – History and Geography, aiming to analyse their perceptions on specific didactics and their contributions to the pedagogical work they apply at schools. The data in the questionnaires were analysed, aiming to know not only the content of the messages, but also what is “underneath”, as well as the absences noticed, in an “effort to evidence the silence that comes with words” (SHIROMA *et al.*, 2005).

We consider in such discourses that “messages express social representations as socially built mental productions, based on the dynamics established between the psychical activity of the subject and the knowledge object” (FRANCO, 2008, p. 12). Thus, the discourses expressed in the questionnaires were analysed as to the context in which they were produced, allowing us to evidence implicit or absent aspects that show the representations set by teachers that come from different license degrees, whose conceptions and practices unveil unique processes for being a teacher.

This article is divided in three sections. In the first one, we discuss the concept of didactics in basic education teacher’s training, stressing specific didactics since they comprise teaching based on the epistemologic field of the disciplines to which teachers are trained to work in the final years of the primary school, the focus of this article. In the second, having as reference the structuring elements of pedagogical work, we look for the contributions of such didactics to teachers working on the final years of primary school, based on the data raised in the questionnaires. In the third section we make considerations on the contributions of collaborative research to understanding the relation

between didactic training and teacher's work and to the training of researchers committed to the school and to emancipating education.

### **Specific didactics to basic education teacher training**

School is a space in which the teacher develops its activities coordinating knowledges in the epistemologic area, transformed in the school content, which depend on general and specific didactic-pedagogic knowledge. Thus, in teachers relationship with student, they can mediate these activities, accomplishing teaching and learning. We recognize that all content has a specific format, and the way it is transmitted defines the conception of school education as a progressive or conservative social practice (WACHOWICZ, 1989). Thus, "what will determine one or another direction is partially didactics, since due to the way it is carried out it will be characterized" (*Idem*, p. 13). Therefore, Didactics and Specific Didactics "need to coordinate to the pedagogical science, in a relation of intimate adherence, since, if pedagogical foundations that support it are lacking, it becomes a mere tecnology (PIMENTA; FRANCO; FUSARI, 2014, s/p), which is insufficient to perform the teaching work as a society transforming social praxis.

This cooperation of didactics with the pedagogical science enables future teachers to have a "solid theoretic training to be able to read, problematize, analyse, interpret and propose alternatives to the problems that teaching, as a social practice, present in schools" (PIMENTA, 2018, p. 17). The age-grade discrepancy presented in the introduction of this text reveal one of these problems, and facing it requires public policies, but also, the organization of political-pedagogic conditions favourable to the students' learning and to the development of research that integrates professors that teach teachers and those acting in the basic education in a collaborative perspective.

The mere teacher training is not enough to improve this scenario. However, "it is evident the need to reinforce the pedagogical dimension

of our teaching profession to adapt it to the different situations of our students” (ZABALZA, 2004, p. 38). According to Veiga e Fernandes Silva (2020), such situations as well as school and students’ demands invite us to discuss the quality of didactic training offered to license degree students, by professors of the bachelor course without experience in basic education. This occurs because in teacher’s early training, General Didactics, whose aim is the teaching process, has a central role, since it includes study of comprehensive aspects, teaching foundations, such as: purposes, objectives, choice and organization of school content, methodologies and teaching techniques, assessment and the teacher-student pedagogic relationship. Thus, specific didactics which comprise the singularities of the area of knowledge, also having teaching as object, are equality imperative to the training of the future teacher (VEIGA; FERNANDES SILVA, 2020).

Therefore, discussing teacher education in general didactics and in specific didactics requires going beyond the concern with teaching, they complement each other. It is necessary to contemplate “the process and the circumstances that produce learning and that, in its whole, is called teaching process” (PIMENTA; FRANCO; FUSARI, 2015, s/p).

Within the contradictions that mark reality in the teacher training courses, we assume that professors are “aware or not of their theoretic aspects as well as their political-pedagogic implications, practice a form of Didactics, under the most variable inspirations” (BERBEL, 2013, p. 1). Some of them show a lack of dialog between General Didactics mostly offered in Education faculties and the specific didactics, lectured in the University institutes and faculties. Other inspirations suggest the possibility of cooperation of a more general didactics with specific didactics since both aim teaching as object of study and research, explicit the knowledge teaching process and are linked to pedagogy, which provides training intention to the teaching act (LIBÂNEO, 2008).



Based on such understandings, we discuss the contributions of specific didactics to the pedagogical work of teachers involved in the final years of primary school in the Federal District public schools network, which come from license degrees of the university under research.

### **Specific didactics contributions to the pedagogical work**

Although it is not enough, the didactic-pedagogic training of the future teacher in licensing courses is a necessary and essential condition to subsidise both theory and methodology with a view to conceive, perform and evaluate the pedagogical work accomplished in the teacher-student relationship. Therefore, the initial training of teachers, the didactics and the pedagogical work in the early years of primary school are the central axis of this discussion.

We understand the work as a transforming praxis of the natural man in a social man, with an intentional historic activity suitable to the purposes that transforms nature creating a human world: a world of culture (SAVIANI, 2013). In this perspective, human existence is enlarged through work, embracing new needs and activities that should be transmitted to future generations to guarantee the development of society. “This situation of plural individuality of men which places them in a condition of product and producer of history (collective and private) is provided by the education act, which is conceived in the political and pedagogic dimensions” (SOARES; FERNANDES, 2018, p. 70). Thus, the nature of the pedagogical work requires of its performers autonomy and possibility to create, conceive, develop it in a mindful and intentional ideation process aimed at the purposes of socializing the knowledge of sciences, arts and philosophy, historically designed by humankind (DUARTE, 2016). Such knowledge is necessary so that students understand the reality as a synthesis of multiple determinations, unveiling the possibilities and contradictions of the

human race in this context, including their social, political, economic and educational aspect dimensions. Through teachers work, as a social praxis (SÁNCHEZ VÁZQUEZ, 2007), the teacher expresses, in a partnership with its students, the political and pedagogical meaning to the activities developed.

Discussing the school work requires considering the work as an ontological activity of the social being and as activities of strangeness and alienation, as exploring relation of the capitalist way of production (MÉSZÁROS, 2008). Therefore, although the human being is not only work, disconsidering the way life itself is produced makes unviable all understanding of the human being and society, as well as the pedagogical activity developed in school and in the classroom. From this determination, which is bilateral, the pedagogical work brings specificities that distinguish it, in the non-material social production scope, as a deliberate, systematic and planned training activity.

School is the space of access to universal and mandatory schooling which aims to offer the opportunity to teach subjects of a human or cultural nature, which they do not provide, but produce. Based on this biophysical nature, school education contributes to individualizing and distinguishing each of the subjects, while making them collective and part of their own history, but also social beings (TCHALEKIAN, 2014).

Thus, education work as an “act of producing, direct or intentionally, in each unique individual, the humankind that is historically and collectively produced by the group of men” (SAVIANI, 2013, p. 13) has, due to its pedagogic specificity, its own means and modes to perform, bringing the opportunity to, intentionally, appropriate knowledge. Its pedagogical nature requires specific knowledges from teachers acting in the area, didactic-pedagogical knowledge and political commitment to training subjects. In order for school education to materialize, it is necessary to contribute to the

intellectual autonomy of the individuals, enabling them to act according to reality as to transform it and, thus, modify society.

Based on these considerations, we discuss the answers of 26 teachers emerged from the courses researched on this issue to the question: which were the contributions to the specific didactics for its pedagogical work?

In 2019, the data of these teachers were being analyzed. Teachers vary in age from 22 to 54 years, the majority of them being aged 22 to 30 years. These data inform they are professionals in the early and intermediate phases of their careers and, as they declared, invest in their careers through continued education making courses offered by Coordenação Regional de Ensino (CRE - Regional Teaching Coordination) and Subsecretaria de Formação Continuada dos Profissionais da Educação (EAPE - Continued Training Subsecretariat of Education Professionals), taking part in studies in the pedagogical coordination in schools and in events in the area, as well as reading books of their choice, making internet research, establishing partnerships and exchange with colleagues, and learning with their work experiences.

The total working time of these teachers comprise a period of 3 to 19 years, the majority of them acting less than ten years in the final years of primary school. The teacher that declared the longest time in teaching declared being 54 years old and working for 19 years with students of this school segment.

As to the weekly working hours, 22 teachers work 40 hours, three declared a 20 hours weekly dedication and only one declared working 60 hours. We emphasize that DF public schools network teachers work an increased working regime, that is, of the 40 weekly working hours, 15 are dedicated to pedagogic coordination and 25 to classroom work. The activities of these teachers are developed in a single school.

As to the academic training, teachers declared having studied the following license degrees: Mathematics, Geography, Biology, Visual Arts,

Plastic Arts, Physical Education, Letters-Portuguese and its Literatures, Letters-English License Degree, History, Letters-Spanish, License Degree in French and its Literatures. Thirteen teachers declared having a graduation course, eight *latu-sensu* (specialization) and five *stricto-sensu* (master degree). Distrito Federal public schools network had, in the year of the research, a total of 26,660 teachers, among which: 18,193 (73.78%) with specialization; 1,888 (7.66%) with master degree; and 286 (1.1%) with doctorate degree (EAPE, 2020), and the remainings 6,293 (23.6%) were only undergraduate professionals.

The analyses were made considering the structuring elements of the specific didactics integrating the pedagogical work of teachers: a) learning objectives; b) curricula content; c) teaching methods; d) learning assessment; e) teacher-student relationship; e) teaching planning.

a) Learning objectives. Nineteen teachers pointed out the importance of the training offered by specific didactics to understand the learning objectives, while six considered them less important. This aspect is relevant considering that pedagogical work is responsible for achieving the objectives and aims expressed in the curricula and political-pedagogic projects of schools. That being so, the teacher develops the activity in an intended and planned way, strengthening the role of the school of socializing knowledge. We emphasize however that the educational goals and objectives expressed comprise determinations coming from the modern social dynamic shaped by social relations produced by contemporary society. Thus, although students are not workers, when inserted in the school work organization and in the classroom, they are socialized for work. Thus, we suppose there is an institutional work logic at school, since the economic, social-historic, political-legal, organizational and cultural domains converge, within this space, to a specific social relation.

Then, defining education objectives, the teacher must observe the internal coherence between general and specific objectives and the

political-pedagogic project at school, having in mind that they express expectations of human, academic and professional training, also considering the material teaching conditions and students characteristics, interest and needs (VEIGA, 2008). Establishing objectives is, therefore, a complex task since they are the structure of the didactic process. They consider cultural knowledge, and societies skills, attitudes and values. In teacher education, professors of didactic subjects are required to work so that future teachers understand the learning objectives coordinated with other structuring elements of the pedagogical work and to social, political and economic interests. They must understand, also, that this drafting is not merely a technical and/or neutral selection and organization issue, it reveals concepts of the education and of the person we intend to educate, being, thus, politically and pedagogically determined.

b) Curricula content. Seventeen teachers point out the didactic training as relevant to select and organize curricula contents, six consider them less important, and three, of no importance at all. Contents are a specificity of the school, considering the precipuous function of socialization of historical and socially designed knowledge that comprise concepts, theories, principles, attitudes, habits, values and others.

Similar to the establishment of objectives, the selection and organization of curricular content must have as parameters social practice of subjects being educated, the contextualization, the meaning, the social relevance and the recognition of contradictions that determine pedagogical work and society; and which interfere not only in the selection and organization of contents, but also in the treatment students give them. This job is “performed in the teaching process, in which management and organization of teaching activities by the teacher is followed by students learning and study activities” (LIBÂNEO, 1993, p. 127). Didactics are responsible for approaching these issues concerning the curricular content: General Didactics

involving general aspects, such as purposes, specificities, selection and organization criteria and the specific didactics with similar approaches, considering the specificities of the epistemologic field of the subjects.

c) Teaching methods. Nineteen teachers confirmed the contribution of the education received in specific didactics to the selection of teaching methods and the development of the pedagogical work, while seven of them do not consider they contribute. Among them, five declared to have a small contribution and two pointed out no contribution in this aspect. Teaching methods make it possible to reach general and specific objectives, by means of teachers and students activities. They are, thus “guided to objectives; imply a planned and systematized succession of actions, both from the teacher and from the students; require the use of means” (LIBÂNEO, 1993, p. 149). In the final years of the primary school, this is a basic task, considering how challenging it is to develop the didactic process to meet the demands of a diverse and plural group of students, with very different and comprising interests and expectations, mainly in the present context of society, its new technologies of communication and information.

Thus, the training of conscious and critical subjects requires theoretical and methodologic changes. Promoting them demands from teachers didactic-pedagogical actions planned in a conscious and critical way “aiming to make teachers and students work easier and more productive to reach the aimed and necessary goals for the full development of students” (RAYS, 2006, p. 97). That being so, the didactic-pedagogic training offered in the licensing courses need to comprise the study of teaching methods in an enlarged and critical way, which implies going beyond the emphasis in the technical and instrumental dimensions.

Although they should not be understood separately – limiting didactics to the study of teaching methods – we cannot deny the importance of this element to the development of the pedagogical work.

This can be pointed out as an intervenient factor in the student performance that rebound in the age-grade levels of discrepancy, as shown by the data of MEC/INEP Census (BRASIL, 2020). We highlight that according to Data of the School Census 2019 of the Federal District Secretariat of Education, Federal District public schools network had, at the time the research was done, 124,414 students in the final years of the primary school, and point out that 38,020 (30.56%) of them were with age discrepancy as to the grade of the course. Teaching methods should, thus, be carefully discussed in the training processes.

d) Learning assessment This was the category of pedagogical work which graduated teachers considered to have the highest contribution in the didactic-pedagogical work, with 20 indications. Four declared it has a lower importance and only two consider it to have no importance. Curiously, assessing is a practice that seems to be very complex to teachers in the final years of primary school, if we consider the high rate of failure that increases the age-grade discrepancy statistics of students in this learning phase, as mentioned before. Assessment is the basic category for the pedagogical work and “expresses power relations in the school and in the classroom, molding the access to the content and interferes, more than we could possibly think, in the teaching method chosen for those students” (FREITAS *et al.*, 2009, p. 23).

In Federal District public schools network, to which the respondent teachers are related, school organization in cycles, implemented in the final years of the primary school has revealed a certain lack of understanding of the function of school assessment. It compromises teachers work in what regards the choice of the method and, therefore, students content acquisition, as Freitas (*Idem*) emphasizes.

Besides, learning assessment is a curricular content little regarded in teacher education. Thus, the way the future teacher is assessed as a student, both in basic school and during the undergraduation course, will influence his/her assessment practices.

It may be that the considering number of teachers that confirm the contributions of specific didactics for the pedagogical work they develop reflect the emphasis given to part of the researchers to procedures and assessment instruments, specially in the tests, often used under the argument of checking knowledge, and not to assessing the practice, as a process. Thus, the answers suggest that, in the didactic training the approach of the issue is merely reduced to procedures and instruments, a perspective that reinforces the concern with how to do, how to assess, that is, with the technical dimensions of the assessing act.

e) Teacher-student relationship. This is a category that was recognized by eighteen teachers as an important subsidy to the didactic training offered in licensing courses. Three of them declared it brings little contribution in this regard and five, no contribution at all. Characterized as a set of interpersonal relations developed in the pedagogical work, the pedagogic relation is made effective in the interactions and communications, in the collective activity aimed at the construction of knowledges, meanings, values, attitudes and bonds, directed to students learning (PATTO, 1997; POSTIC, 2007). In this pedagogical relation professors transform knowledge in teaching-learning content, not losing the bond of such knowledge to a more refined way nor with spontaneous and daily expressions. Curricular content lacks a mediation between reality in the social life production (productive area), structural contradictions (social problems) and school reality (education area). Thus, content is the central element to strengthen the teacher-student relationship (POSTIC, 2007). Since it is not so simple or shallow, this accomplishment deserves the attention of teachers educators in all disciplines of the curricula, but, specially, in general and specific didactics and in Psychology of Education, reinforcing the necessary cooperation between these pedagogical subjects in the education process.



f) Teaching planning. Twenty teachers recognized the contributions of specific didactics to plan teaching, while five considered them to have a lower contribution and only one considered it to have no importance of such a knowledge in teacher's education. The didactic process is a "complex meaning, relations and interchange system that takes place in a social scenario that defines learning demands" (VEIGA, 2008, p. 269). Its organization assumes, therefore, a structuration to materialize the objectives and intentionality of this process. Although during the everyday life in the profession some teachers do not systematize the pedagogical work by means of the didactic planning, the number of those that seem to recognize its importance is significant. They provide the learning of general and specific didactics a contribution to this end.

Planning the pedagogical work presumes devising objectives, selecting and organizing content, methodologies and techniques, resources and assessing, and includes defining the kind of assessment to be adopted. The whole process should be in accordance with the understanding of the world, of reality, which gives it a political-pedagogical meaning because it is "a deliberate and systematic activity, whose center is learning or students learning under the guidance of the teacher" (LIBÂNEO, 1993, p. 222). Therefore the need of the study on planning to follow to the classroom, considering the several levels in which the pedagogical work is performed: school, education secretariat and teaching regional administration.

Teacher education requires, thus, considerations on the conception of education and its relation to society and educational instruction, as well as on the student being educated, his/her citizenship and critical awareness (VEIGA, 2008). Such analyses contribute to the pedagogical work to be planned based on the reality to be modified, with a distance from conceptions that insist to associate it to a mere technical and bureaucratic act.

## **Collaborative research: way to build academic and professional knowledge and development**

The collaborative research group is constituted by public basic and higher education professors and by undergraduation and graduation students which have spontaneously gathered, with a view to participate and establish social relations, without regulation or foreign control (FIORENTINI, 2019). Therefore, the more researchers interact and know each other, the stronger becomes the research which produces a “set of knowledge, participants become autonomous and autoregulate themselves and impose their own interests” (*Idem*, p. 53).

The group participated in systematic meetings to plan the research, make theoretical studies, create and apply instruments, organize, analyse of data and to write the report. Dialog, negotiations, agreements, exchanges and interactions prevailed in the meetings and influenced the education of all.

The collaborative research which brought together academy researchers and teachers of basic education favoured the exchange of the knowledge produced on didactic training of the teachers graduated and the work of professionals of the teaching network, thus increasing the possibilities of observations and didactic-pedagogic practices. For undergraduating students, the research on teaching represented “a powerfull tool one can use to introduce the student in scientific initiation, developing the interest for investigation” (LAMPERT, 2008, p. 138), a privileged space-time to think alternatives to the education of the future basic education teacher, that is, education through and in research.

Besides, researching reality of basic education teachers, and having these teachers in the research group has brought us the possibility of understanding teaching practices in a wide and reliable way. This raised some problematizations as to the challenges that arise in the school context with which the university must commit promoting scientific, academic and

pedagogical dialogue that contribute to the production of knowledge to promote the improvement of public basic education.

The cooperation promoted by collaborative research has a political meaning, thus interfering in the autonomy and awareness of teachers in their praxis, since basic theoretical considerations are raised on world, subject, education and work concepts. It gives a new meaning to the commitment of teachers and the university with the social function they must promote and coordinate – teaching, research and extension.

Collaborative research is not, however, a turbulent sea. There were also conflicts, disagreements as well as the difficulties inherent to every research with so many social subjects and financed by funding agencies, whose terms and technical requirements interfere in the relations of researchers. However, everyone was involved in the development of the research and in the achievement of objectives and goals.

Thus, we understand that, collaborative research, research professors, undergraduate and post-graduation students increased their teaching and research points of view completely understanding them as an educational process based on the theory-practice cooperation and, in a context, involving them in the spaces where basic education teachers will act.

### **Final considerations**

Economic and social constraints of a deep inequality determine life conditions and cause a huge damage to school performance, mainly that of less privileged social groups. However, the high levels of students whose learning do not match the ideal school grade for them may also be related to teachers pedagogical practices.

Such practices are not in a theoretical void, they are theoretically and metodologically subsidized by approaches that should not focus strictly on specific knowledges of the specific areas or in the teaching methods and techniques. Thus, general and specific didactics offered in

licensing degrees comprise educational theoretical-philosophical foundations and their respective epistemologic areas, with a view to educate a critically thoughtful teacher prepared to understand and intervene in reality, thus changing it.

Then, the pedagogical work must be an intentional and systematic teaching-learning process accomplished in the teacher-student relationship, being guided by pedagogy as a theory of education. Pedagogy is responsible for “on one hand, identifying the cultural elements that need to be assimilated by individuals of the human kind so that they become humans, and, on the other, and jointly, to discovering the most adequate forms to reach this objective” (SAVIANI, 2013, p. 13). Thus, we ratify the supplementary need of didactic-pedagogic education enabled by the most general didactic and that related to curricular contents of knowledge areas that form the basic education curriculum, which is provided by specific didactics.

General and specific didactics are intentionally linked to education plural social and political purposes, and have epistemologies, principles and relations. They comprise common elements characterized as general education and teaching foundations and specificities, since they enter the specific fields of license degrees. These aspects interfere in the content and in the form to approach teaching and professors in each university course and in the corresponding subjects.

Theoretical-practical discussions presented in this text result from the collaborative research that investigated teachers education and work, becoming educational possibilities for research-professors on basic education, scientific initiation students and university researchers. This cooperation strengthens everyone: undergraduation students that experience the education through research; graduation students that are included in collaborative research groups and build theoretical and methodologic knowledge which will result in an education based on praxis; research professors, since this research contributes to their

professional development; the university which, in the cooperation with teaching networks, reaffirms its academic, political and social prominence in knowledge production based on the concrete reality of the school; and school and its professionals who, dialoguing with the results of the research, may consider the pedagogical work and education necessary to act with didactics and pedagogy with an aim to teach to emancipate students.

Lastly, in the current political and educational scenario of Brazil, with repeated attacks to public education, research and scientific knowledge, a collaborative research is an act of resistance.

## References

- BERBEL, N. A. N. *Didática e práxis*. II Jornada de Didática e I Seminário de Pesquisa do CEMAD: docência na educação superior – caminhos para uma práxis transformadora. 2013.
- BRASIL. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). *Censo da Educação Básica 2020: Notas Estatísticas*. Brasília-DF, 2021.
- BRASIL. *Plano Nacional de Educação 2014-2024: Lei n. 13.005, de 25 de junho de 2014, que aprova o Plano Nacional de Educação (PNE) e dá outras providências*. Brasília: Câmara dos Deputados, Edições Câmara, 2014.
- DISTRITO FEDERAL. *Dados gerais do Censo 2019*. SEE/SUPLAV/DINFE/GETED. Disponível em: <http://dadoseducacionais.se.df.gov.br/dadosgeraiscenso.php>. Acesso em: 08 jun. 2021.
- DISTRITO FEDERAL. *Caderno de Matrículas 2019*. Secretaria de Educação do Distrito Federal. Disponível em: <http://www.se.df.gov.br>. Acesso em: 08 jun. 2021.
- DUARTE, N. *Os conteúdos escolares e a ressurreição dos mortos: contribuição à teoria histórico-crítica do currículo*. Campinas: Autores Associados, 2016.
- FIORENTINI, D. Pesquisar práticas colaborativas, ou pesquisar colaborativamente? In: BORBA, M. C.; ARAÚJO, J. L. (Orgs.). *Pesquisa qualitativa em educação matemática*. Belo Horizonte: Autêntica Editora, 2019, p. 47-76.
- FRANCO, M. L. P. B. *Análise do Conteúdo*. Brasília-DF: Líber Livro Editora, 2008.
- FREITAS, Luíz Carlos de; SORDI, Mara Regina Lemes de; MALAVASI, Maria Márcia Sigrist; FREITAS, Helena Costa Lopes de. *Avaliação Educacional: Caminhando pela contramão*. Petrópolis-RJ: Vozes, 2009.

- LAMPERT, E. O ensino com pesquisa: realidade, desafios e perspectivas na universidade brasileira. In: Docência na educação superior. *Linhas Críticas*, Brasília, v. 14, n. 26, p. 5-24, jan./jun. 2008. DOI: <https://doi.org/10.26512/lc.v14i26.3439>.
- LIBÂNEO, J. C. *Didática*. São Paulo: Cortez, 1993.
- LIBÂNEO. Didática e epistemologia: para além do debate entre a didática e as didáticas específicas. In: VEIGA, I. P. A.; D'AVILA, C. (orgs.). *Profissão Docente: novos sentidos, novas perspectivas*. Campinas, SP: Papyrus, 2008.
- LINELL, P. Dialogical language, dialogical minds, dialogical brains. In: *Conference on Cognitive Dynamics and the Language Sciences*. Cambridge, UK, 2009.
- LIMA, J. A. *As culturas colaborativas nas escolas*. Portugal, Porto Editora, 2002.
- MÉSZÁROS, I. *A educação para além do capital*. Tradução de Isa Tavares. 2ª ed. São Paulo: Boitempo, 2008.
- PALUDO, C.; VITÓRIA, F. B. Contribuições do materialismo histórico-dialético para o entendimento da política pública social na atualidade. In: CUNHA, C.; SOUSA, J. V.; SILVA, M. A. (Orgs.). *O método dialético na pesquisa em educação*. Campinas: Autores Associados, 2014. p. 99-130.
- PATTO, M. H. S. *Introdução à psicologia escolar*. São Paulo: Casa do Psicólogo, 1997.
- PIMENTA, S. G. FRANCO, M. A. S; FUSARI, J. C. *Didática multidimensional: da prática coletiva à construção de princípios articuladores*. Anais do XVII Encontro Nacional de Didática e Prática de Ensino. Universidade do Estado do Ceará, 2014.
- PIMENTA, S. G. *Movimentos críticos da Didática: resistência ao tecnicismo/neotecnicismo neoliberal*. Presença Pedagógica na sala de aula. Ed. 146, ano 23, novembro de 2018. Rona Editora. Belo Horizonte: MG, p. 12-21
- POSTIC, M. *A relação pedagógica*. 2 ed. Coimbra, Portugal: Editora Coimbra Ltda., 2007.
- RAYS, O. A. Metodologia de ensino: Cultura do caminho contextualizado. In: VEIGA, I. P. A. (org.). *Repensando a didática*. Campinas: Papyrus, 2006.
- SÁNCHEZ VÁZQUEZ, A. *Filosofia da práxis*. São Paulo: Expressão Popular, 2007.
- SAVIANI, D. *Pedagogia histórico-crítica: primeiras aproximações*. 11ª ed. Campinas, SP: Autores Associados, 2013.
- SOARES, E. R. M.; FERNANDES, R. C. A. Trabalho Pedagógico Colaborativo no Ensino Fundamental. In: VEIGA, I. P. A.; FERNANDES SILVA, E. *Ensino Fundamental: da LDB à BNCC*. Campinas, SP: Papyrus, 2018.

SHIROMA, E. O.; CAMPOS, R. F.; GARCIA, R. M. C. Decifrar textos para compreender a política: subsídios teórico-metodológicos para análise de documentos. *Revista Perspectiva*, Florianópolis, v. 23, n. 2, p. 427-446, jul/dez, 2005. DOI: <https://doi.org/10.5007/%25x>.

TCHALEKIAN, B. B. A. *Os Sentidos e Significados atribuídos por uma professora da rede pública de ensino de São Paulo aos impasses e dificuldades para a realização da atividade docente*. Projeto financiado pelo Conselho de Ensino, Pesquisa e Extensão da PUC-SP e certificado pela coordenadora Wanda Maria Junqueira de Aguiar em 02/01/2014. Disponível em: <http://www.pucsp.br/iniciacaocientifica/22encontro/artigos-premiados-21ed/BRUNA-B-A-TCHALEKIAN.pdf>. Acesso em: 09 jun. 2021.

VEIGA, I. P. A. Organização didática da aula: um projeto colaborativo de ação imediata. In: VEIGA, I. P. A. (Org.). *Aula: gênese, dimensões, princípios e práticas*. Campinas, SP: Papirus, 2008.

VEIGA, I. P. A.; FERNANDES SILVA, E. Para onde vão a didática geral da educação superior e as didáticas específicas? In: VEIGA, I. P. A.; FERNANDES, R. C. A. *Por uma didática da educação superior*. Campinas, SP: Editora Associados, 2020, p. 41-60.

WACHOWICZ, L. A. *O método dialético na didática*. Campinas, SP: Papirus, 1989.

ZABALZA, A. *O ensino universitário: seu cenário e seus protagonistas*. Porto Alegre: Artmed, 2004.

Recebido em June de 2021.

Aprovado em November de 2021.