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The pedagogic discourse of the teacher-author

Júlio César David Ferreira, Odisséa Boaventura de Oliveira

Universidade Federal do Paraná, Brasil

Abstract

Scientific knowledge is not a series of accumulations, but breaks and corrections in a long dialectical process. However, exercises and expressions which are “ends in themselves” presented to students in science classes hinder the establishment of relations with everyday facts and scientific concepts. The use of the language of mathematical signs and short written texts with objectivity pretensions is predominant, to the detriment of the various languages and materialities by which the school scientific knowledge is constituted. From the theoretical framework of the French Discourse Analysis, we discussed the idea of *authorship* in teaching practice, culminating in what we have called the *teacher-author*. The taking of the *teacher-author* position implies the mobilization of pre-built knowledge and the rupture with practices already institutionalized and crystallized in the educational field. By producing a *polemical pedagogic discourse*, the teacher-author historicizes his/her “say-do” and resignifies his/her teaching practice. It is by moving and reorganizing the meanings to scientific knowledge that the teacher recognizes his/her authorial function and his/her leading role in the essential process of *didactic mediation*.

Keywords

Language; discourse; authorship; science education.

El discurso pedagógico del profesor-autor

Resumen

El conocimiento científico no es una serie de acumulaciones, más de rupturas y de rectificaciones, en un largo proceso dialéctico. Sin embargo, en las clases de ciencias son exhibidos a los estudiantes ejercicios y expresiones “fines en sí mismos” que dificultan el establecimiento de relaciones con hechos del cotidiano y los propios conceptos. Es predominante el uso del lenguaje de signos matemáticos y de los textos escritos cortos y

Contacto:

Júlio César David Ferreira – ferreirajcd@gmail.com

Odisséa Boaventura de Oliveira – odissea@terra.com.br

Rua XV de Novembro, 1299 – 80060-000, Curitiba, PR, Brasil.

Apoyo: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

con pretensión de objetividad, en detrimento de la utilización y reflexión encima de las diversas lenguajes en las que el conocimiento científico escolar se constituía. Partiendo de lo referencial teórico de la Análisis del Discurso de la línea francesa, discutimos la idea de *autoría* en la práctica docente, culminando en lo que tenemos llamado del *profesor-autor*. La toma de la posición *profesor-autor* enreda en la movilización de saberes pre-hechos y en la ruptura con prácticas ya institucionalizadas y cristalizadas en el ámbito educacional. Cuando se produce un *discurso pedagógico polémico*, el profesor-autor inscribe su “decir-hacer” en la historia y resignifica su práctica docente. Es reorganizando los significados para el conocimiento científico que el profesor reconoce su función autoral y su papel principal en lo indispensable proceso de *mediación didáctica*.

Palabras clave

Lenguaje; discurso; autoría; educación en ciencias.

Introduction

Science education comprises different discourses, such as scientific, fictional, mediatic, which we can call a pedagogic discourse. To address this issue, we take the discursive perspective with a focus on language and discourse in the classroom in order to promote a discussion of pedagogic discourse and authorship in the teaching practice, which culminates in what we have called the *teacher-author* (Oliveira, 2006). For this, we used the theoretical framework of the French Discourse Analysis, founded by Michel Pêcheux and pioneered represented in Brazil by Eni Orlandi.

We also consider important to reflect on the discourse that circulates in the classroom because according to Orlandi (2011) every speaker establishes a setting for his/her speech defined in the interaction between the interlocutors. Thus, the author draws a discursive typology based on the relationship between language and context, namely, the situation of dialogue, the circumstance of communication, the interaction between participants, the different meanings produced, etc. Orlandi distinguishes three types of discourses: playful, polemical and authoritarian. These types are derived from the way the interlocutors consider themselves (interaction), the exchange of roles between speaker and listener (reversibility) and the relationship of the interlocutors with the discursive object (polysemy).

Briefly, the playful discourse is one that tends to polysemy (multiplicity of meanings), and the speaker considers his/her interlocutor, thus occurring constant exchange of roles between speaker and listener and they are exposed to the presence of the discursive object. The authoritarian discourse tends to paraphrase (restriction of the senses); the speaker does not incorporate his/her interlocutor, seeking to annul the reversibility to keep his/her word with the speaker and to fix the listener in this place, being both apart of the discursive object, which was hidden in the speech. The polemical discourse is configured between the previous two, as a practice of resistance and confrontations (balancing polysemy and paraphrase). It takes place through the dynamics of the word exchanging, looking for symmetry between interlocutors, who also seek to direct the discourse object and to indicate perspectives.

Our interest in language in the classroom comes from the fact that we consider the educational institution a place where the interdiscursive relations are fundamental, and the study of circulating discourses in that environment can refer to the positions in which

teacher and student take or are submitted. Thus, language in its different manifestations, in its different natures (verbal and nonverbal), should not be thought of in its contents, but as structural material of the subjects. Language is constitutive, being always considered mediation, and the discourse must be considered as an effect of meanings between speakers.

An intrinsic movement of the teaching activity in the classroom is to promote the shift of meanings of scientific discourse toward the materialization of school scientific discourse, or pedagogic discourse. This shift occurs through one of the main constitution processes of school knowledge, the *didactic mediation*: “creation of a reality from contradictory mediations, complex not immediate relationships. A deep sense of dialogy” (Lopes, 1999, p. 209).

We argue that the taking of the *teacher-author* position allows the subject to mobilize pre-built knowledge and to break with already institutionalized and crystallized practices in the educational field, promoting *didactic mediation* in the dialectical sense reported by Lopes (1999). Also, that this practice is relevant to place the voice of students and teachers, that the discourse referent (content) is the focus of the constitution of the object of study, that the school scientific knowledge is faced as a possible interpretation of the facts and not as their imposition. Thus, a teacher can be considered author when he/she stands as creator of his/her classes, and that the practice also devises and institutes creativity in his/her student, and if having no consciousness, at least should reflect on the implications of the position that he/she occupies and to which the students are submitted in the teaching practice. In short, a teacher who is responsible for his/her own emancipation within the pedagogic discourse already established.

Before the discussion we want to develop, we will present some concepts of discourse analysis and our view on the scientific discourse.

Language, Discourse and Authorship

We conceive the language as a “necessary mediation between man and the natural and social reality” (Orlandi, 2005, p. 15). The language is not transparent, neutral, uniform nor natural. It has materiality. It is discourse. In its opacity — and in its incompleteness — the language becomes a favorable field for the manifestation of ideology.

Ideology is not understood as concealment of meanings nor as worldview, but as a necessary function in the language-world relationship, and the discourse as its material base. It produces the effects of evidence, causing the institutionalized meanings to be seen as natural, as if they were “always there”. It is through the ideology that the transparencies of words are built, giving us the impression that we could cross them to reach their contents.

This theoretical notion linked to what happens in the classroom allows us to say that understanding the subject as ideologically constituted brings us to another way of looking at teachers and students as responsible for their speeches. Rather, they are determined by discourses that are their memories.

In the discursive activity, the conditions of production are triggered by a *memory* or *interdiscourse*. It is this memory that “provides speeches that affect how the subject means in a discursive situation” (Orlandi, 2005, p. 31). The interdiscourse (social order) determines what can or cannot be said by the subject in a formulation of the discourse (*intradiscourse*). It is as if an already-said cut the speech of the subject according to the discursive formation

(regionalization of interdiscourse) in which he/she is inserted. The discursive formation is understood as the place of identification of the subject and the constitution of sense.

Thus, the same words can mean differently when inserted in different discursive formations, that is, the meaning of the speech always derives from a discursive formation. For example, the word “evaluation” has different meanings for the teacher and for students. Also, “being a teacher” can be seen as a commitment — when related to a legal and political discursive formation — or as the embrace of a cause in a religious-assistentialist discursive formation.

Therefore, the subject relates to his/her reality through the discursive practice, which has statements that are materialized in ideas and representations. Pêcheux has distinguished three ways in which the subject appropriates the political and scientific knowledge: 1) *identification* (metaphor of the “good subject”: full and ideal subjection without questioning); 2) *contra-identification* (the “bad subject” suspects and fights against the evidence of “unquestionable” knowledge, but there is not necessarily break); 3) *disidentification* (revolutionary practice disassembling discourses to support another discursive and ideological formation). The disidentification process explains the major changes in society (Pêcheux, 2009).

In the educational institution, scientific discourse is amalgamated with the pedagogic discourse in such a way that the positions “teacher” and “scientist” overlap. In this particular discursive function, the teacher is not only an articulator of the supposedly self-sufficient discourse of the science, but one of the protagonists in the appropriation and (re)construction of the pedagogical scientific knowledge. The teacher can/should establish a polemical discourse to his students: “a way of putting oneself in a polemical way is by building one’s text, one’s discourse, so that one is exposed to the possible meanings, and also to leave a space for the existence of the listener as ‘subject’” (Orlandi, 2011, p. 32).

Orlandi (2011) emphasizes that the discourse is characterized by its action. She indicates three types of discourses in its operation: the playful, the polemical and the authoritarian. For the author, the pedagogic discourse corresponds to the third classification, the authoritarian, as teaching is more than informing, explaining and influencing, since it goes beyond the three laws of the discourse, namely the *informativeness* (to inform it is necessary for the listener to be unaware of the fact given), *interest* (you cannot tell the other what is not of interest) and *utility* (there is speech only because there is a utility to do so).

Even in the basic scheme of “questioning and answering” in teaching, which requires an announcer and an interlocutor, Orlandi (2011) highlights that often the questions asked by the teacher are direct, objective and produce an individualized discourse, and the object of the discourse appears as “something you should know”. In addition, the permission to interrogate is exercised by an authority (in this case, the teacher), who converts it into the power for ordering those who have the right to respond. The language of the object of study takes place at the level of metalanguage (rigid definitions, polysemic cuts, automated threads that lead to exclusive and directed conclusions). The knowledge of the metalanguage and procedures, the access ways to the fact, is considered more important than the fact itself.

Orlandi explains that in the pedagogic discourse the interest and usefulness are masked under the pretext of necessity. For example, when using arguments such as “it is a prerequisite for other knowledge”, “it will be useful one day”, among others. Thus, there is the annulment of referential content of education and its replacement by ideological content, reducing the reason of the object of study to the reason of “it is because it is”. The

transmission and memorization of information is considered the objective of the pedagogic discourse.

The evaluation would corroborate this masking, because through it the status of necessity is assigned, providing a legitimate and valued knowledge.

In this case, the didactic material becomes an object, nullifying its mediator condition; instead of using it for something, what matters is knowing how to fill spaces, how to order, to sequence, instead of reflecting.

Orlandi (2011) describes ways to interfere with the authoritarian nature of the pedagogic discourse. One way is questioning its implicit, its informative character, its unity and achieving its effects of meanings. With the implicit, the discourse puts some information that appears as given, predetermined and leaves no room for the relationship between the discourse and its wider context.

The other way refers to the teacher's point of view, in order to put him/herself in a polemical way he/she must build his/her text, his/her own discourse, exposing him/herself to the effects of possible meanings leaving spaces for the existence of the listener as a subject, that is, allowing space to the other one and also the possibility of placing the speaker as listener. As to the student's point of view, the way to bring the polemical discourse in the classroom may be the exercise of disagreement, that is, the student builds him/herself as speaker and author in the dynamics of dialogues, refusing the fixity of what is said, once the polemical discourse is characterized by dynamic roles and by recovering the object of reflection such as the facts and events. In authoritarian discourse these features are hidden.

In contrast to the notion of the subject of discourse, Orlandi (2005) presents the idea of authorship to highlight the subject's relation to the text. Thus, about this passage, Orlandi (1996, p. 69) says: "the notion of author is a function of the notion of the subject, responsible for the organization of the meaning and the text unity, producing the effect of continuity of the subject". In this perspective the assumption of authorship is a broad process that "involves insertion of the subject in culture, his/her position in the historical and social context" (Orlandi, 2005, p. 76), that is an essential function of the subject of discourse, especially in the *teacher-author* position.

Regarding the meanings to which the subject is affiliated or dislocated, three repeating ways are distinguished:

- a. the *empirical repetition* (mnemonic) which is the "parrot effect", only repeats;
- b. the *formal repetition* (technical) which is another way of saying the same thing;
- c. the *historical repetition*, which is shifting, allows movement because it historicizes the speech and the subject, flowing the discourse in their paths, working the mistakes and failure, going through the evidence of the imaginary and making the unfulfilled break in the already established (Orlandi, 2005, p. 54, our emphasis).

In Discourse Analysis, repetition implies recovery and production. Different movements of meanings can take place at the same symbolic object, especially by *historical repetition*. Authorship as proposed here comprises a process that historicizes the speech and the subject constituted as possibilities of rupture of already stabilized knowledge. The historicization — of the speech and the subject — is an indispensable condition to the work of the *teacher-author*.

As stated, the discourse is “a particular element of ideological materiality” (Orlandi, 2012, p. 45), so the pedagogic discourse (with its various discursive formations allowing certain speeches and preventing others) is institutionally privileged to the materialization of the mediation processes. Thus, the pedagogic discourse is a specific materiality of the professorial *praxis*.

Scientific knowledge and the classroom

Knowledge is meanings in movement, it involves subjects and ideas that circulate and how they circulate. It is to consider ways of saying and the relationships between them, the instruments that they are concerned to and the processes of institutionalization. Therefore, in order to think of scientific knowledge in the classroom we need to explain the scientific discourse.

We rely on Bachelard (1977) when he says that science can be seen as a discourse of truth claim, but under an error background. It leads us to argue that the scientific discourse is susceptible to misunderstanding, to failure, to the correction of errors throughout history. If, on the one hand, scientific knowledge is constituted with the purpose of empirical evidence and logical stability, on the other, the contradictions, ruptures and restatements are what ensure the development of the *scientific spirit* (Bachelard, 1990; Bachelard, 1996):

The scientific spirit is essentially a correction of knowledge, an extension of the tables of knowledge. It judges its historical past, condemning it. Its structure is the awareness of its historical faults. Scientifically, the real is thought as historical rectification of a long error, the experience is thought as rectification of the common illusion (Bachelard, 1978, p. 176).

Thereby, there is no uniformity or linearity in the development of knowledge, but a pluralism of rationalities and rupture processes — scientific knowledge is not a series of accumulations, but breaks and rectifications in a long dialectical process. However, in science classes exercises and expressions “ends in themselves” are given to students, hindering the establishment of relations with everyday facts and scientific concepts, dialectically. The use of the language of mathematical signs is predominant, to the detriment of the various languages through which the school scientific knowledge is constituted.

The meanings of scientific concepts are not only the effects of evidence and logical stability of the scientific discourse. It is in the context, mobilization and questioning of scientific knowledge that the student produces meanings and learn. It is worth adding that scientific discourse is not *primary* (Coracini, 2007) in the classroom, that is, the subject of the discourse (in the teacher position) does not address to a specialist to try to convince him/her of the validity and accuracy of scientific research.

In this direction, we affirm the importance of introducing a polemical pedagogic discourse by the teacher (Orlandi, 2011) as a way of deautomatization of the scientific discourse — the “pure” scientific knowledge, logically stabilized and abstract.

The pedagogic discourse, either for its institutional legitimacy, but primarily for its opportunity to be polemical, mobilizer, multiple, is discursive *praxis* in the teacher’s voice, is the realization of didactic mediation. In line with Pêcheux, we understand the discursive materiality as an important level of socio-historical existence, a conjunction between the symbolic and the real that allows new *verbal conditions of living*, conditions which put the

history in the order of the discourse and the discourse itself in the field of *praxis*. The process of didactic mediation, discursively materialized, comprises the set of concrete practices “verbally possible” in the educational context with the essential dialectic between common knowledge and scientific knowledge.

The teacher-author and science education

From the distinction between subject and author-function, Oliveira (2006) defines the concept of *teacher-author* as an important position of the subject, especially in the field of teaching. The author describes this process as a shift of the effects of meanings of a discursive memory. The teacher-author, in addition to breaking with the established, guides his/her practice with questions like: “for whom” is my speech?; “why” my speech?; “how” is my speech? (Oliveira, 2006).

With respect to the modes of subjectivation of Pêcheux (2009), we see the teacher-author as the contra-identification position, as the “bad subject” who questions the prebuilt and resists to the “evidences” of crystallized knowledge in a particular discursive formation. This attitude implies rupture: with simplistic and reductionist conceptions of scientific knowledge and its teaching; with the exclusivity of the written language in class; with the empirical and sensory evidences of the “first approximation truths” (Bachelard, 1978); with the institutionalization of the *authoritarian pedagogic discourse*.

The teacher-author has in view a *polemical pedagogic discourse* and, ultimately, a *founding discourse*, which for Orlandi (2003, p. 24) is “that which installs the conditions for production, affiliating to its own possibility, establishing a whole complex of discursive formations, a region of meanings, a significance site that sets up a process of identification for a culture, a race, a nationality”. The teacher-author promotes the displacement of crystallized knowledge in a discursive formation, breaks with the established, is the mediator and founder of the new conditions of production of meanings, an explorer of interdiscursivity and *polemical pedagogic discourse*.

The teacher-author, mediator, finds new conditions for production of meanings in the scientific significance sites through interdiscursivity, that is, the relationship with other speeches. In teaching practice, the teacher mobilizes meanings according to the inextricable relationship between scientific discourse and pedagogic discourse.

However, the teacher-author is not only the voice that materializes the pedagogic discourse; but he/she appropriates, interferes and reconfigures this discourse, shifting meanings according to the complex didactic movement. By reflecting on/about his/her relationship with practices, languages, discourses, he/she does not become hostage of crystallized discursive knowledge.

By occupying this position, the teacher makes possible the movement of polemical forms of pedagogic discourse on teaching and learning relations, an exercise of teaching discursive *praxis*. In this way, the assumption of authorship implies a contra-identification of the subject with the school prebuilt. Education is not ahistorical, which implies different demands over the years, especially in teaching practice. Multiple languages such as literature, cinema, theater and new technologies are increasingly present in the student’s life, which is a great scope for didactic exploitation. Although the language of written texts is extremely important, its approach may not be devoid of other material forms in which the pedagogic discourse appears.

From the perspective of discursive studies, “say” and “do” have an intimate relationship in which the notion of discourse implies practice. Thus, in the discursive materialism “we consider the discourse in the set of practices that constitute society in history, with the difference that the discursive practice is specified for being a symbolic practice” (Orlandi, 2005, p. 71). The teacher-author historicizes his/her “say-do” and resignifies the teaching practice while producing and moving meanings to scientific knowledge. It is through symbolic work of language — significant and transformative as mediation between the subject and the reality — whose developments occur in the field of social practices from which education is a part. In the society and representative of the plurality of language and its ideological effects, education is a privileged *locus* for the transforming action of the teacher-author.

The education of the teacher-author

The proposal of “education of the teacher-author” only makes sense if we think of a broader conception of the notion of education. In Bachelard’s epistemological line, the ideas of *education* and *authorship* have with each other an intimate relationship because, for the philosopher, the formation of the scientific spirit does not refer to acts of repetition and memorization, but to a creative knowledge, in contact with the imagination and inventiveness. Although Bachelard has not explicitly dedicated to pedagogy, in his works the concept of education implies essentially the formation of the subject.

The notion of education according to the philosopher is much more complete and comprehensive than just education, because it does not bring in its wake the connotations that the latter features, which are derived from the tradition that leads us to understand knowledge as an act of repeating and storing ideas. Bachelard, instead, exalts the creation and invention, showing that the act of knowing is not limited to the monotonous and constant repetition of absolute and immutable truths that once achieved solidify anchoring in the safe haven of memory. For Bachelard, knowing is venturing into the realm of the new and the abrupt, it is establishing new truths by denying prior knowledge and rectification of concepts and ideas that previously seemed solid to us (Barbosa & Bulcão, 2011, pp. 50-51).

Taking the Discourse Analysis as a theoretical reference leads us to think in teacher education through the prism of language, also to worry about language in education, with the awareness that the teacher has on the language itself and the conditions offered so that there may be a teacher-author. Thus, reflecting on the notion of authorship entails bringing out the subjectivity and identity concepts. Notions that involve conscious and unconscious thoughts and emotions that constitute the understanding we have of our self.

In the discourse, knowledge and power are linked, which allows understanding the social positions taken for oneself (the speaker) and the other (the listener), therefore equivalent to conceiving language as constitutive of a network of places and defining the structure of subjects. Therefore, who says something does it from somewhere, reflecting the importance of that speech to another one. We believe that the study of discourses in the classroom can indicate ways to understand the positions occupied by the teacher and the students in the teaching-learning process.

The problem of the pedagogic discourse, usually served at school as the authoritarian type (Orlandi, 2011), is that it points to the centrality of the discourse on the teacher because he/she is who primarily takes the announcer place, and is considered the

subject “authorized” for that because of the appreciation of the meta-language and procedures of access to scientific facts instead of the facts themselves. Those who should be the object of the pedagogic discourse are distanced from the interlocutors. In turn, the teaching materials, instead of being a mediator instrument, receive the status of “object to be known”.

We propose a teacher education that emancipates silenced speeches, that rescues the subjectivity of both the teacher and the student so that each of them takes their position in the pedagogic discourse. If the teacher is imbued with a concern regarding the position of his/her student toward him/her and to knowledge, his/her discourse, and consequently their actions, will be on the search for meanings both for themselves and for the students, allowing teachers to reflect about the language itself.

For this, we believe it is important for the training courses to have discussions related to the subject, i.e. the pedagogic discourse. For example, questions about the teacher’s language in the classroom, considering the nature of language as a mediation that defines social places in the institutions; on learning materials; on students’ reading and writing; on the scientific discourse. Anyway, thinking of the education of science teachers in a perspective that mediation through language becomes the main focus of a job that requires the constitution of subjects authors, both teachers and students. In this way, Coracini (2007, p. 187) makes the following proposition:

Considering the pedagogical acting as a discourse where there is only room for a dynamic view of dialogue and, therefore, of sharing knowledge and experience; in this view, the ‘subjects’, in all their complexity of social beings, with interests, needs, desires and particular expectations (true intentions underlying), ‘produce meaning’, ‘build life’.

To achieve this proposal, it is essential to consider the act of knowing as a complex and dynamic process, an adventure in new areas by subjects immersed in the language game. Knowing is also exploring experiences and mistakes driven by underlays of the subject, which will always allow different cognitive movements and appropriations of multiple effects of meanings. The polemical pedagogic discourse of the teacher-author is, in the language, understanding these characteristics inherent to teaching and learning, a mediation labor in the quest for a complete formation of subjects.

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Authors

Júlio César David Ferreira

Graduated in Physics from the Faculty of Science and Technology of the São Paulo State University (2007) and Master in Education from the Faculty of Science and Technology of the São Paulo State University (2011). PhD in Education from the Federal University of Parana, acting on the following topics: teacher education; language and discourse; culture and multiple languages in science education.

Odisséa Boaventura de Oliveira

Graduated in Biological Sciences, Medical Modality, from the Educational Organization Barão de Mauá (1983), graduated in Science from the Educational Organization Barão de Mauá (1986), graduated in Education from the Pontifical Catholic University of Campinas (1995); specialization in Science, Art and Teaching Practice from the University of Campinas (1997). Master in Education from the State University of Campinas (2001) and PhD in Education from the University of São Paulo (2006), with experience in education, acting on the following topics: teacher education; language and science education.