Interview with Bernard Schneuwly
The language teaching and the teacher's work in the textual genre perspective (research and teacher education)

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1. Firstly, we thank you for your availability to participate in our interview which aims to clarify questions related to the teaching and learning from a genre based-approach perspective, considering the general conceptions of the text organization, the teacher education and the language teaching. Thus, to start our interview, we would like you to tell us how your trajectory in the research works development and the work with language teacher education have been from your intellectual education and professional performance.

Probably, it has some importance that I come from a teacher family: my great-great-grand-father was a teacher, without any training at that time, in the beginning of the 19th century. My great-grand-father was taught when the "Ecole normale" in Fribourg was founded in 1859; my grand-father, my father and my three brothers went to the same school, as 6 of my uncels did. I tried to escape: I decided to study psychology in Fribourg and then in Geneva, with Piaget. Later, I became an assistant of Inhelder, his follower. I then went to Nijmegen in the Max-Planck-Institut of psycholinguistics where I entered in the realm of pragmatics and textlinguistics, studying it from the point of view of oral and written text production. When I came back to Geneva, I had the choice of continuing in the domain of psycholinguistics with Hermine Sinclair, another follower of Piaget, or to become an assistant of Jean-Paul Bronckart, in a domain that was called psychopedagogy of language at this time and what later became didactics of language. As you know, I choose the latter, for many reasons: he began to work on texts, an interest I brought from Nijmegen; we had common references from Marxist psychology in activity theory and already in Vygotski; and probably the family tradition pushed

me towards research in psychopedagogy and didactics. Our first common texts were strongly programmatic, defining the possibility of construing a scientific model of written and oral text production: "Une approche totalitaire du langage" or "Pour une psychologie du langage" where you already can find some principles that Bronckart developed in many of his writings and that I used in my thesis on children's development of written text production. My developmental model already integrated the Vyogtskian idea of the development of higher psychological functions based on the appropriation of linguistic tools like textual organizers, anaphora, but also standardized text structures (the notion of text genre came a bit later). I tried to know what it means that written language is the algebra of language that reorganizes whole system of oral speech production. At this same time, Jean-Paul and me edited the first volume with French translation of some of Vygotsky's texts. And we worked together in a working group called "Pédagogie du text" in which teachers and researchers developed didactic tools, based on our theoretical text production models and their development, to teach written text production, but also reading, with students on the secondary I level. This is the origin of what later was called "didactic sequences". The development of the idea of didactic sequences led us more and more to quit the text typologies and to develop the idea of text genres as the main tool of text production and to think about appropriation of text genres as the main way of developing writing as higher psychological function. This idea was explored in empirical research on text organizers, verb tenses, anaphora in different text genres. This theoretical and empirical framework gave us solid basis for thinking that, since genre is the main tool in language production, it should be the basic unit of language teaching: in our approach thus text genres became the central unit for teaching oral and written text production. Several important research projects were funded by the Swiss National Science Foundation and by the French speaking Swiss cantons. This long lasting phase of "didactic engineering", as we call it, lead to a new phase of research: we were interested in the effects of the new tools of language teaching: were there used, how, by whom? We looked at teaching writing, grammar, reading and teaching literature. If one really wants to transform teaching practices and to educate teachers, knowledge about real teaching practices is essential. Currently, we come back to didactic engineering. We will develop systematic means of teaching reading, of course on the basis of text genres as basic unit, integrating approaches developed by many other researchers referring to systemic-functional approaches, to psychological theories of cognition, to theories of interpretation of literary texts. In parallel to this work, and since my thesis, I was always interested in the history of language teaching. I had worked on the history of teaching writing since the beginning of the 19th century, later on teaching reading, and more generally on the history of the school subject "mother tongue", French first, but also comparatively German. Since ever, I thought that it is impossible to understand what a teacher does in his classroom without knowing what his or her predecessors have invented to teach language to all children, to give all of them access to writing and reading, and also to literature and the understanding of the functioning of this marvelous human instrument, the "language". Is this interest also something like searching the roots of my family ancestors? Who knows…

In relation to the ISD general conceptions:

2. What are the possible articulations between the Socio Discursive Interactionism SDI and other approaches such as Systemic-Functional Linguistics, Socio-Rethorical and the Critical Discourse Analysis?

Socio-Rhetorical Analysis and Critical Discourse Analysis are most interesting approaches that give insights into certain aspects of text interpretation for various social

contexts, with a special focus on the question of ideology and power. As far as I can see, they are not particularly efficient for conceiving the teaching of writing and reading. This is the reason I don't' use these approaches in my own work that is situated in theories that were developed in the framework Bronckart has called "Socio Discursive Interactionism" and that I briefly mentioned in the foregoing paragraph. This does not at all mean that articulations are not possible, but only that I didn't explore them and that therefore I cannot say anything about them. This is very different for the Systemic-Functional Linguistics. I have studied the approach of this linguistic school in detail, have met the main representatives of this approach in Australia. By the way, I used some of their concepts – for instance the ones developed by Gunter Kress – in my thesis already in the Eighties. It is in a certain sense astonishing the we, in our Swiss French context, and they in New South Wales, developed independently from one another, a "Genre Pedagogy", teaching methods based on the unit "text genre". There are many common elements: the way of conceiving the relationship between text and context, the idea of looking at text as combining different layers, the analysis of linguistic units as traces of multidetermined linguistic or psychological operations of speech production or reception. There are of course also important differences. Their definition of text genres is closer to what we would call text types, less strongly related to particular communication situations. And the didactic means for teaching text genres are, in my view, less varied, less based on what we call "elementarization" of the complex psychological activity of producing and understanding/interpreting texts.

3. Based on one of your quotes in which you defend the genre as mega instrument (SCHNEUWLY; DOLZ, 2004, p.28) in affirming that

> *[...] Poderíamos [...] considerar o gênero como um 'megainstrumento', como uma configuração estabilizada de vários subsistemas semióticos (sobretudo linguísticos, mas também paralingüísticos), permitindo agir eficazmente numa classe bem definida de situações de comunicação. Pode-se assim, compará-lo ao megainstrumento em que se constitui uma fábrica: conjunto articulado de instrumentos de produção que contribuem para a produção de objetos de um certo tipo. Esse megainstrumento está inserido num sistema complexo de megainstrumentos que contribuem para a sobrevivência de uma sociedade.*

What is your position about the possibility of a genre be considered a teaching object? What are the reasons for this understanding and the implications of considering the genre as a teaching object or as mega instrument?

As you do in your question, one has to distinguish carefully between on one side the general theoretical idea that a genre is a tool for acting in a given communication situation; an interface between a text producer and interpreter that allows both of them to interact; and on the other side text genre as a teaching object. As such, a text genre is no more a means for acting in a given communication situation. It is an object that has to be learned and mastered. It is in a certain sense a means for transforming one's relationship towards his or her own language. This means first of all that text genres in school are school genres – genres that have been created by school itself like description of dissertation that do almost not exist as autonomous genres outside school; the teacher profession, at a given period, has invented it in order to give access to writing. Or text genres in school are "scholarized genres", genres that are "imported" into school; this means that they are deeply transformed in order to become "teachable" throug a process that is described by the theory of "didactic transposition". Whatever the case may be: text in school is produced in highly "fictionalized" situation. This is of course also the case when one teaches basketball or reading maps in geography.

In this didactic transposition, the idea of genre as a mega instrument is maintained: a text genre is a way of organizing different levels of language in a given way: content, structure, linguistic units, such as words, syntactic organization, text connexion or cohesion, enunciative relationship the writer has to the text and so on. The appropriation of this complex organized whole that allows text production and comprehension/interpretation implies, in order to master it, to transform one's way of producing language. One could take as an example the way a character is constructed in an adventure narrative through different linguistic means, among other anaphorical chains, quite different to the way it would be done in a fairy tale. The appropriation of text genres at the same time offers new ways of language use, the mastering of these new ways being the condition of the mastery of the genre. We find here again, more concretely, Vygotsky's thesis that written language – here certain forms of written language that are systematized, "cristallized" in genres as linguistic forms – reorganize the whole preceding system of language production.

4. We know you are co-responsible by the Research Group on History of Educational Sciences (ERHISE - Equipe de recherche en Histoire des sciences de l'éducation) *and coordinate the research group (GRAFE-LIT - Groupe de recherche pour l'analyse du français enseigné-Lecture et Literature). What are the researches contributions achieved by these groups and what are the articulations of these results with the teacher education, the knowledge to teach and the knowledge for teaching?*

ERHISE was co-directed by Rita Hofstetter and myself (at this time I was president of the Swiss Educational Research Association; I left the co-direction of the first *equipe* 5 years ago – Joelle Droux is now co-director). It has begun its work in the nineties and has conducted several funded research projects on the development of what is called in French (and in many Latin countries) "sciences de l'éducation", sciences of education. We developed a theoretical framework conceptualizing this development as a process of dominantly secondary disciplinarisation. This means that the academic discipline that began to emerge in the end of the 19th century can be understood as built on an already huge corpus of knowledge built by educational professionals, mainly teachers and their associations and journals. This disciplinarisation, which occurs in the context of the ongoing process of professionalization of the teacher profession with proper qualification paths, associations, communication channels, is strongly linked to the institutionalization of teacher education. This secondary disciplinarisation has different forms in different cultural contexts we could observe contrastively in Switzerland that belongs to a German, a French and, for Geneva, to a strongly international culture,

including Anglo-Saxon culture. The empirical framework could therefore be empirically tested through a huge historical research in many archives in Zurich, Basle, Fribourg, Lausanne Geneva and other places. Many publications and our book on the history of educational sciences in Switzerland present this work.

These researches has then been continued on the evolution of what in Europe is called "didactiques des disciplines", "Fachdidaktiken", i.e. domains of scientific research on the social diffusion in different domains of knowledge: mathematics, first and second language, history, physical education and so on. It is still another domain of "secondary disciplinarisation".

We continued our work in a subgroup of the ERHISE, ERHIDIS: *Equipe de recherche sur l'histoire des disciplines scolaires* working, as the name already says, on the history of school subjects. These parallels in a certain sense the foregoing research insofar as the "disciplinarisation" of school knowledge is contemporary to the professionalization of the teacher profession and the disciplinarisation of knowledge on education. This new research project on the transformation of school knowledge from 1830 to 1990 in different school subjects, among others of course as a first and second language again is conducted on the level of Switzerland which allows comparisons between French, German and Italian cultures. As you can see, there is again a process of disciplinarisation of knowledge at stake: the systematic organization of knowledge but not in order to produce new knowledge as in science, but to transmit it, to teach it, to make it learnable. We concretely describe how in the three cultural regions, first language as a school subject called "Français", "Deutsch" or "Italiano" becomes a "discipline", a "Fach" as say the Germans, at the same time at the end of the 19th century, how it develops in phases that are similar. At the same time, we also show that the relationship that school installs in its students are not exactly the same on the German and the French culture of Switzerland: these are very important and interesting facts that allow us to understand much better current practices of teaching. By the way, the phrase "first language" is in itself object of controversy: in the 19th century, the object of teaching was called "mother tongue", a designation that became more and more problematic for its ideological background. Different other phrases were proposed: language of schooling, first language, common language, … I will use "first language" although I know this phrase, like the others, is problematic.

GRAFELect and GRAFELitt are two research groups that continue the work done by GRAFE, namely to try to describe current practices of teaching in the first language teaching in reading and in teaching literature. The first group has produced a thorough description of how teachers in real teaching situation organize reading from the beginning of compulsory school for students aged 6 to 15 years old. GRAFELitt explores how literary texts are studied on different school levels with students aged 12, 15 and 18. Two maximally contrasted texts are proposed to teachers for teaching: the most classical fable by La Fontaine "Le loup et l'agneau", hundreds of thousand times taught in classes of all levels, and a very short story (two and a half pages) by the contemporary Swiss author Jean-Marc Lovay probable never taught before. Our main question: how do the innovations for literature teaching enter everyday teaching practices, the hypotheses are a) that all teaching practices are sedimentation of traditional and innovative approaches, b) that Lovay's quite disturbing text allows and even necessitates to go towards modern forms of teaching; c) already on the primary school level some literary ways of looking at literary texts are introduced by teachers, inaugurating a process of "disciplination" of students that allow them later to study literary texts more and more following "disciplined" ways.

Concerning the teacher education and the language teaching:

5. In relation to the knowledge to teach and the knowledge for teaching, how would you define them and what is the relevance of articulating such knowledges through the didactic device for language teaching in teacher education?

The teacher profession is the only one where knowledge is at the same time a tool for realizing its core activity, namely teaching, and the object of this activity. Physicians need a large amount of knowledge in order to practice their profession. The object of this profession is of course the health of the patients. They need knowledge for healing. So do of course the teachers: they need a huge amount of knowledge for teaching: about how school functions, how students learn, how to manage a class, how to evaluate, how social inequalities are produced and eventually overcome, i.e. something one could call pedagogical knowledge and knowledge coming from educational sciences; but also, of course, what knowledge has to be taught, how it is presented through school curriculum, which method are suited to transmit this or that knowledge, i.e. what in Europe is called didactic knowledge. I would say this knowledge goes far beyond what a physician has to know and I'm sure in hundred years the teacher profession will be the most important, the most desired profession in our societies… But this is not enough. In order teachers can teach what they have to, they have to master the knowledge to teach; not in the sense of the knowledge as it is in the curriculum, but the knowledge as such, in a certain way. Of course, this knowledge they have to master in order to teach is not the same for teachers on primary school or on secondary II school. To teach German as a foreign language in French primary school, they need to be fluent in every day situations; in secondary II school however, they have to master perfectly the German language to have a high level of knowledge of the functioning of the language and a quite thorough knowledge of German literature. Teachers have therefore to have a high level of education for the knowledge they have to teach: at least a finished secondary II level in the different school subjects they have to teach in primary school; at least a master in secondary II schools. In other words: teachers have to be educated for mastering knowledge to teach and to master knowledge for teaching. This latter has itself two components: pedagogical and science of education knowledge and didactic knowledge in the different school subjects. This second one, contrary to the way Shulman for instance looks at it, can not be reduced to a simplified form of scientific knowledge, but it is to a large degree an original product of the school and the teacher profession in order to educate students. This is the result of many studies in the domain, for instance of Chervel in France for first language, and of our own historical research mentioned before.

As you can see, the question of knowledge is the core question of the teacher profession. I would like to add a short remark: when I say "knowledge", I have in mind what Comenius called "scire" in Latin some centuries ago, in explaining that this word refers to things formed by mind, by tongue and by hands, concerning therefore thinking, speaking and doing. And he translates "scire" into German saying that it means "wissen", "knowing" and "können", "knowing how". As you can see, the question of "knowing", of "knowledges" as you say in your question is discussed since a long time. And Comenius insisted on the necessity for teachers to have a very high degree of education.

6. What are the contributions and the challenges of the work based on the perspective of the didactic sequence in relation to the oral understanding and production, which has been used in teacher education and language teaching by the Geneva School?

First of all, I have to clarify what "oral" means in the context of first language teaching. This word has been introduced into the first language curriculum in Europe in the Seventies. It was the application of a linguistic terminology that in fact dichotomized two ways of using

language through the medium of language. It is as if there would be two more or less homogeneous domains that could be, and even should be studied separately. It is interesting to see that in older curricula, there was of course a distinction made between what was called "speaking" on one hand, "writing" on the other; but both were seen much more in strong interaction, with the danger of course of submitting the former to the latter. I say this because I think that it is important to treat the question of teaching speaking not as a homogeneous domain, but from the point of view of text genres in which the relationship between speaking and writing can be very different: one has always to define very precisely the function of each one in the context of the communication situation.

A second remark has to do with the question of what is the role school has to play in relationship to speaking in first language education. Our approach can be described as follows. We refer to Vygotsky who, referring to the seminal work of Iakoubinski, describes the role of school as being to allow the student to progress from "naturel" dialogue to "artificial" monologue, to "monologize" the dialogue, to lead the students towards forms of speaking that are more voluntary and conscious, what, as Iakoubinski says, implies reflection because there are different motifs of action and therefore choice is necessary between them. In other words, school has to give students the opportunity to progress form immediate, everyday forms of oral language production and comprehension to more institutionalized, formal, mediate forms that are regulated from outside by more or less stabilized institutional rules. That is the reason the subtitle of our book on teaching oral language is "Initiation into formal public text genres".

This implies that the text genres we study always need preparation; and this means also that writing plays a role: reading texts, taking notes, noting key words, sometimes even writing small parts of texts or at least interesting expressions, and so on. All these are tools for transforming the relationship to one's own language. Didactic sequences on formal public genres use therefore different forms of writing. But they also always use recording: we have the chance today to have the opportunity of recording speech in very simple ways. This allows of course any student to hear him- or herself, to discuss different ways of speaking, to reflect on it, to train different linguistic forms necessary for mastering a given genre. This also gives way to more conscious production of language, at least to a certain degree: speaking always remains a spontaneous performance, a risky one, the whole person being present, being "on stage" in a certain sense: a very difficult situation teachers have to master.

We work on comprehension of spoken texts in the same way: it is always linked to writing; students are trained to pay attention to different aspects of the spoken word; texts are heard several times in order to ascertain that they have been understood; parts of texts are studied in order to hear how they function. In other words, like in other didactic sequences: the complex activity of understanding a spoken text in a formal situation is systematically studied in elementarizing different capacities necessary to succeed. And these texts are always formal text genres, for instance, the once that function in school, like teacher discourses, a presentation in school, a debate, and so on.

Learning to speak in foreign languages of course follows different paths. It seems as if everyday practices are the object of study. But in fact, these practices are not the real object of teaching, of course, since they are already known and mastered by the students. What is learned is to "play them" in a new language. They are in a certain sense "represented" in a new, more conscious form. That is the reason Vygotski for instance compares this use of language to written language that is the algebra of language, namely a representation of language on another one, in a more conscious level. This also means necessarily that learning another language transforms one's way of looking at the first language, at least when it is learned in situation that are formal and necessarily fictitious as the situations of learning language in school.

7. What is the relationship between working the oral and written understanding and production and the textuality? Are there any differences? And what is the relationship between the work with the textuality, grammar teaching and the teaching through genres as well?

Text is, in our view, the form each verbal action necessarily takes. Texts, in order to be produced and understood, as I have said, are formed following more or less stable patterns concerning their content, structure and linguistic units (syntax, words, cohesion, …), i.e. text genres that are the tools of verbal actions. This of course means that textuality – if I correctly understand what you mean by this, namely the fact that any text follows certain rules on different layers that make that a text is a text and functions sufficiently well in a given situation – is the necessary condition of any verbal (oral or written) production and understanding or comprehension (including interpretation).

If one now looks at the question of teaching, since text genres are the tool for any verbal activity, they have to be the main unit of teaching speaking and writing, listening and reading. Textuality, i.e. the fact that the linguistic form of a genre on the different layers of verbal activity is realized in a given text, is therefore what has to be taught. Of course, any person masters dozen of genres learned spontaneously in everyday situations. School teaches only some of them, mainly written ones and some that are spoken, as I said above.

Grammar is one of layers of textuality, in itself a most complex whole. I define it in a quite restrictive sense as the knowledge about the functioning of language on the sentence and, at least partially, on the intersentence level. But it is also sometimes understood as the functioning itself that doesn't necessarily need any knowledge about itself. If you take it in this latter sense, grammar is part of textuality in the sense as without the functioning on the sentence level, there is no language at all. But there is a certain autonomy of this layer, although one can establish systematic relationships between certain grammatical structures on the sentence and intersentence level and text genres. Teaching grammar means becoming conscious of the functioning of grammatical structures and becoming able to use them more consciously and voluntarily. This can help the mastery of text genres as far as systematic relationships exist between both levels. In other words, there is no possible general answer to the question of the relationship between textuality and grammar teaching. For some grammatical objects, relationships can be established (take for instance the role of relative clauses in certain text genres), for others not.

8. Bezerra (2016) affirms that there is an identification, considered as not pertinent, between the bakhtinian genre approach and the sociodiscursive interactionist approach. Do you agree with this statement?

This is a delicate question. First of all, it is curious that Bezerra doesn't mention at all, not even in a footnote, the most critical study Bronckart has realized with Bota on Bakhtine showing that many of the work published under his name has not been written by him. The idea of text genres for instance is prefigured quite explicitly in Voloshinov's work. In this sense indeed there is no identification possible. But in a quite more important sense there is no identification possible. The idea of text genre as a tool is fully integrated in a complex model of text production. This model is the basis for designing what is defined as didactic models of genres. In other words: the main effort of describing text genres is oriented towards the use for teaching. This is of course perhaps a limited way of looking at text genres, but it is nonetheless in our view an important contribution to the theorizing of genres in general.

These remarks lead back to the beginning of this interview in question two about socio-rhetorical and critical discourse analysis. The domain of our research is not the same; the roots aren't either. This is even more the case concerning Bakthin whose main domain of research was literature. From this point of view Volochinov is also much closer to what we do, notably

for instance through his most interesting considerations on inner speech that allows links with the speech production model Vygotsky has outlined in the seventh chapter of *Language and thought.*

9. Is there a difference among the use of the terms "discursive genre", textual genre" and text genre"? What are the implications of such terminologies for the language teaching?

This question is related to what I have said in responding to question two and eight. Terminologies are never neutral; they result from points of view adopted. Our point of view is clearly first of all the language production process in diverse communication situations. We look at texts and their linguistic units as traces of manifold psychological operations linked to parameters of the context of production, of genre characteristics on different levels, of creating text cohesion, of situating oneself to what is said, and so on. In this sense, we are strongly interested in what can be attested in texts, also because we always have in mind, even when we do the most theoretical work, practical outcomes in the domain of education. This is our motor for developing theory and empirical research on language. The unit "text" as "materialization" considered as a verbal action is in our view the one we need for our work.

Discourse is a unit that is much more sociologic in its general use. It allows us us to ask questions about ideological functions of speech, about how texts can be used in order to influence others, or how they can be interpreted in different ways, and so on. The notions is not oriented so much to how text are produced that how the function in different social domains. This is not necessarily in contradiction with what we do; and in what we do we also take into account question of the social formats in which texts are produced. But these questions are not in the center of our research. In other words, as I said, the terminology is an indicator of the main research problem asked. Of course, in our view, the terminology of "text genres" is clearly more adequate for language teaching since it allows to take more precisely into account the learners.

10. Borges (2012) emphasizes that the paradigm of the SDI, underlying to the PCN-LP (Portuguese Language National Curriculum Guidelines), guided the teaching model leading to small advances in the levels of reading and writing. Thus, the author justifies the need to abandon this paradigm (ISD) and the implementation of new researches and applications from a new paradigm. How would you reply to this criticism?

Borges' 2012 paper doesn't prove anything. It says: the advances in the levels of reading and writing are small. The PCN-LP was introduced several years ago: it isn't responsible for these small advances. Therefore it has to be changed. This conclusions presupposes that the PCN-LP really deeply change the school practices. This is surely not the case. May I make a comparison: the equivalent of the PCN-LP in French speaking Switzerland was changed in about the same sense about ten years ago. Official means based on this approach were created and offered to all teachers of compulsory schools. The evaluations made by independent research institutions were positive. We have then conducted several research projects in order to observe real everyday practices of teaching reading and writing. As we expected, they have changed but didn't correspond to what was proposed in the curricula, or only partially. What happened is, as I said before, that traditional practices and new ones sedimented on each other in very sophisticated ways. Teachers invent their daily practice in a very creative process. Curriculum is only one guideline among many others. The implementation of new ways of teaching takes at least one generation, 25 years, and even then the result is always a mixture of practices. Teacher education is central in this respect, but also more generally research on teacher practice. The question is therefore: is the approach through genres theoretically

interesting, practically possible, open for many forms. And there is no reason to think that only one approach of genres is possible. I think that for instance the systemic-functional approach is in many respects compatible with what we propose in Geneva, as I have shown above.

A second argumentation can be opposed to the Borges' paper. The difficulties of many students to learn reading and writing have to do with the way they have been introduced to the culture of writing at the beginning of their schooling. On this level, genres play a much less important role than late on. So again, what is central is to know as exactly as possible which are the real practices and how to transform them in the direction of more efficient ways of introducing students into the written culture. We are currently developing didactic sequences that allow for instance to learn students to understand a text, something which is by far not so easy for many of them as it appears. And the low achievement in international tests show exactly this, namely that understanding a text is a quite difficult enterprise.

So what is at stake is not a change of paradigm: using genres as the unit of teaching language seems still a very promising path for teaching reading and writing. From the point of view of teaching, the differences of the underlying linguistic paradigms are, in my view, not of central importance. Teaching is not a question of linguistics, but of didactics. The models of genres we have to construct are not linguistic, but didactic models that define what can be taught and why. For constructing such models, linguistics is only one source; others are models of development of writing, models of the process of text production and comprehension, knowledge about teaching practices, reflection on the scopes of teaching, and so on.

So, what we need is research in what we call "didactics", driven by questions about real teachers in real classrooms with real students about real objects of teaching. This research is still poorly developed. Let us work together in this direction.