

## Teaching and learning processes

In this issue, *Education and Research* brings to the public a set of articles that address important and complementary themes from the perspective of understanding, analyzing, and endeavoring to transform contemporary educational processes and to promote the advancement of educational research. From different perspectives, they bring contributions to the fields of teacher education and work, and of the organization and development of pedagogical work and the structuring of school space-time, of the contradictions present in school and in the personal lives of students and their future projects, of school evasion, of gender issues, among others, highlighting new possibilities for reorganizing educational processes, in order to ensure better quality education in the different school systems.

Underlying the set of articles is education quality, an issue that has occupied a prominent place among those who devote to thinking about and contribute to the education of Brazilians. Advancing in this direction requires the analysis of many of us who are present in formative spaces, ranging from universities and colleges to schools, so that opportunities can be created – times and spaces for interlocution – for the constitution of other educational processes, supported by new practices capable of overcoming existing boundaries. In this context, the issue of how to teach and how to learn continues to challenge researchers, teacher educators, and teachers. If teaching is an activity that requires specific knowledge, consolidated through pedagogical education focused on this purpose, and constant updating of approaches to content and of didactic ways to teach it (ALMEIDA, 2012), it is vital to deepen investigations and reflections on how teachers are trained and work. After all, educating people is a very complex activity, and little is known about psychological development and learning processes in adults.

Marcelo Garcia (1995) considers that the education process is sustained in actions aimed at the acquisition of knowledge – know-how to be and know-how. It is a personal development process, an effort to construct oneself, which takes place in close coordination with the social world. Chauí (2003, p. 12) considers education is a relationship over time, because it means “to introduce someone into the past of their culture [...], to awaken someone to the issues that this past engenders in the present, and to encourage the transition from the instituted to the instituting”. Morin (2009) speaks of the relationship between teachers and a pedagogical profession, which can be understood to have the contributions of the fields of pedagogy (such as science of education) and didactics (as theory of teaching).

This understanding of teaching practice is reflected in the understanding of education as a complex phenomenon, as a social practice performed by human beings with human beings, who change by the actions and relationships established between them (PIMENTA;

ANASTASIOU, 2002). It is a perspective opposite to much of what we have seen for decades in education policies and practices. Franco (2010) emphasizes the risk – arising from current policies – of perpetuation of the technicist character which guides teacher education and practice, with the consequent lack of interest in the pedagogical perspectives of teaching. And this risk is examined by Saviani (2007, p. 429), when he characterizes these current guidelines as *pedagogy of exclusion*, because they aim

[...] to prepare individuals by means of a wide variety of successive courses to become more employable, seeking to escape the condition of excluded. And if they fail, the pedagogy of exclusion will have taught them to internalize the responsibility for this condition.

Confronting these mutually exclusionary propositions has been the purpose of the efforts historically undertaken by *Education and Research*. More than ever, it is necessary to invest so that teaching practices

[...] contain extremely important elements such as questionings, the intentionality to find solutions, broadening visions, methodological experimentation, tackling complex teaching situations, more radical, richer and more suggestive attempts of an innovative didactics. (PIMENTA et al., 2010).

It is precisely this perspective that the texts presented to our readers address, hoping to help them situate themselves in the complex universe of the knowledge produced in the field of educational research.

The first set of articles consists of nine texts that address multiple facets of a rather old, but highly relevant theme today – the processes of teaching and learning. Subsequently, four articles deal with equally relevant and current issues. Finally, there is an interview with Professor Kate Vieira, researcher at the English department of the University of Wisconsin-Madison.

The article that opens the first set is authored by Maria Amélia Santoro Franco, and is entitled “Pedagogical practices of teaching-learning: amid resistances and resignations”. The author examines the contradictory but enabler character of the new relations between the subjects involved in the process of teaching-learning, and asks: “Can I plan teaching-learning or only activities that may lead to learning?” Based on the idea that learning “occurs in crooked, slow, dynamic paths of the subjects’ trajectories”, a process that for Deleuze will never be subjected to control or apprehension, Franco discusses the process of teaching-learning using data collected through pedagogical action research developed with primary education teachers and analyzed according to critical hermeneutics. Aiming to discuss the scope and possibilities of pedagogical practice as a space of contradiction and resistance, she also seeks to understand the importance of pedagogy as a science that can clarify and indicate reflections on the resistances inexorably faced by practices, and invests in the possibilities of

pedagogical action research as an instrument of mediation of contradictions and as an educational device in the negotiation of meanings that emerge from praxes. The author defends the thesis that pedagogical practices operate from fertilizing, critical and reflective dialogue established between multiple subjects, between intentionalities and actions, and warns of the risk of impoverishment of educational practice – a disturbing element present in many school settings – when conditions for critical reflection and dialogue are absent.

In a perspective complementary to the first reflection, Gerardo Ramos Serpa and Adriana López Falcón address, in the article “Concept formation: comparing cognitive and cultural-historical approaches”, the issue of concept formation, an essential aspect of educational processes. The authors seek to highlight the logical and gnoseological foundations of the theme and do so from the cognitive perspective of David Ausubel and the cultural-historical perspective of Lev S. Vygotsky. While noting the limitations of the propositions of both authors, Gerardo Serpa and Adriana Falcón seek to emphasize their contributions to deeper understanding of the complex process of concept formation. They point out that developing this capability enables students to capture reality, understand it, and improve it from the perspective of human and collective purposes. And, to this end, they underline the importance of teacher education with regard to the content to teach and the pedagogical and philosophical dimension of their professional doing. They also warn that the concept formation ability is not limited to an intellectual phenomenon, rather, it is above all a human dimension.

In tune with the previous article, Francisco Javier Ruiz Ortega, Oscar Eugenio Tamayo, and Conxita Márquez Bargalló, authors of the article “A model for teaching argumentation in science class”, consider that argumentation in science is a dialogical process and an essential tool for the co-construction of a more meaningful understanding of the concepts worked on in class. This importance justifies that argumentation is present in the processes of teaching and learning science. To do so, they define that the study’s central objective is to propose a model for teaching argumentation in science. To support this purpose, they examine the practices of a teacher who reflects critically on argumentation and on her own performance. As a result, they reaffirm how important it is for teachers to deepen their epistemological, conceptual, and didactic knowledge. And they maintain that the identification of these aspects both in teachers’ thought and practice allows them to advance a proposal for teaching argumentation in science.

Still on the issue of concept formation, Delma Barros Filho and Ana Cecília de Sousa B. Bastos bring us, in the article “Concept formulation by unschooled adults”, the analysis of abstraction in the complex process of formulation of everyday and scientific concepts by illiterate and semi-literate subjects in literate societies. Having as theoretical reference Vygotsky’s proposition that schooling aims centrally to allow the transition from the formulation of everyday concepts to scientific ones, the authors have sought to discuss data from an investigation on the development of conceptual frameworks by subjects outside the school universe who live in

urban centers. The study findings identify firstly that non-schooled adults have displayed a modality of thought that, in developmental terms, does not enable them to use the most sophisticated forms of human thought. And they reaffirm the importance of the school to do so, because, although some of the research subjects reached the level of scientific formulation of concepts, most of them presented more capacity to formulate concepts grounded in everyday life. The school is, thus, the most favorable space for the development of abstraction and theoretical understanding.

In “School time and the encounter with the other: from standard rhythm to simultaneities”, a text authored by Ana Sueli Teixeira de Pinho and Elizeu Clementino de Souza, teaching and learning are seen through the temporal lenses of school, society, or the subjects themselves. From the (auto)biographical narratives of teachers of multigrade schools and subjects living in Bahia state, Brazil, the issue of time was examined with the contributions of Elias, Faraco, Bakhtin, and Levinas, which allowed understanding time as simultaneity, conceived as coexistence and interaction of the difference. For the authors, it was virtually impossible to understand school time without referring to other social times, such as work time, the time of symbolic practices, free time, and the temporalities of the subjects. The contributions of the study indicate that school time needs to be understood by looking closer at other social times which are present at school and in the interactions between subjects in classrooms. In other words, there is a need to think about school time as simultaneity, which requires not the imposition, but the coexistence of multiple times and temporalities, be they individual, social or natural. As the authors state, “school time is an event that occurs in the encounter with the other.”

The article “Teaching art in youth and adult education: an analysis of an experience in Cuiabá city, Brazil”, authored by Gustavo Cunha de Araújo and Ana Arlinda de Oliveira, discusses the practices of arts education in youth and adult education. Through qualitative research, understanding teaching from a constructivist perspective and based on the proposal of triangulation – which aims to bring the real, read it and contextualize it in the classes –, the authors focused on the mediating role of the teacher in the construction of art knowledge. Students were enabled to expand their understanding of art through contact with different artistic expressions in order to acquire the concept of art a human production, which has been part of human life from its beginning. The investigation also allowed realizing that, when students are able to read a work of art, they become competent readers to produce significant interpretations of the world. Finally, the researchers concluded that the concepts and practices in the field of art are important opportunities for the construction of knowledge based on students’ life experiences.

Martha Marandino, a scholar of museums as educational spaces, in the article “Sociological analysis of museum didactics: educational subjects and the dynamics of constitution of exhibition discourse” evidences the recontextualization processes and relations of

power and control over the production of the discourse that appears to the public in exhibitions, as well as the specificities of museum didactics. Having as reference the theoretical propositions of Basil Bernstein, Marandino analyzes the exhibition discourses produced by five science museums. And she does so from interviews with their designers and/or coordinators, document analysis, and observation of the exhibitions. Having as theoretical reference the concepts of *recontextualization* and *recontextualizing* field, she works on exhibition discourse as a modality of pedagogical discourse. Focusing on the details of this analysis, she characterizes the various discourses that constitute an exhibition (the discourses of science, museums, education, and communication), as well as the pedagogical subjects who participate in this movement. And, as it should be, by plunging into this research on the exhibition subjects and their exhibition discourses, Marandino evidences the power relations established between them and between the fields of knowledge involved in these exhibition discourses, which allows approaching and understanding the dynamics of selection and distribution of power in the preparation of museum education activities. This study makes it possible to sustain more clearly the educational actions of the professionals working in museums and hence to qualify the museum education activities.

Maria Isabel Ferraz Festas addresses another facet of the issue of teaching-learning of great evidence today: the contextualization of knowledge, teaching and learning. In the article "Contextualized learning: pedagogical foundations and practices", she researches the pedagogical and psychological foundations of this process. Guided by studies on human cognitive functioning and some results of empirical research, the author investigates some of the principles and practices of the following theoretical assumptions: curricula must be based on student experience; learning needs to start from authentic activities; we must resort to discovery or non-directive methods. Aiming at a critical discussion with these theoretical fields, Festas indicates the limits of cognitive psychology studies, such as that of the *theory of cognitive load*, which do not accept the idea of learning based on authentic activities, because they consider that such learning does not allow the acquisition and automation of knowledge in a specialty area, and does not reduce the cognitive load imposed by tasks either. She also points out that empirical studies reveal that discovery accompanied by guidelines can be an effective means in learning. In conclusion, the author stresses the importance of further studying the two methods and of strengthening the dialogue between different conceptions of education, which will certainly bring innovative contributions to the field.

The authors Marisa Meza, Pilar Cox, and Guillermo Zamora problematize the issue of teaching authority in contemporary world, where the procedures and beliefs valid in other historical contexts do not seem to be able to sustain the authority of teachers in class. The authors acknowledge that "teachers are currently not guaranteed respect, listening, or even recognition by their students." In the article "What and how to observe interactions to understand teachers' educational authority", they propose to address the issue from new theoretical and practical assumptions present in the

education of future teachers. They seek to identify the theoretical and practical challenges arising from the formulation of a “proposal of a protocol of observation of teacher authority”. To this end, they use qualitative methodology which considers both the opinions of experts and the results of a pilot test they applied. They converge on a model of deliberative decision-making, focusing both on teachers and on the interactions with students. The dimension of interactions is significantly important because it allows not only the observation of new forms of legitimation of teacher authority among the young but also overcoming possible biases of observers from another generation.

In another but not less important perspective, the authors Almir Martins Vieira, Octavio Ribeiro de Mendonça Neto, and Maria Thereza Pompa Antunes, in the article “Aspects of resistance in teaching”, discuss the behaviors of higher education professors in the face of institutional management models based on the calculability of teacher performance. Drawing on Foucault’s concepts of *surveillance and control strategies*, and on the contributions of Hodson about the relations between power and resistance in everyday work life, they not only evidence the information and educational management systems which ultimately treat teaching as something “transparent and calculable”, but also meet institutional financial goals, especially in the private sector. They analyze the behaviors of individual and collective resistance of teachers – markedly humor, neglect and dodging work – which express dissatisfaction and discomfort in the face of forms of control and the managerialist discourse, and which are materialized through indiscipline aimed at restoring dignity and autonomy at work. Therefore, they emphasize that professors are not passive agents in the face of the proposals for change in the practices of academic work. However, resistance is regarded as volatile, contextual, and also contradictory because it coexists with acceptance behaviors.

Another perspective of the school problematics – now of the contradictions experienced by those who attend the public school system – is offered by the article “Factors associated with dropout in public secondary education in Minas Gerais”, by Tufi Machado Soares, Neimar da Silva Fernandes, Mariana Calife Nóbrega, and Alexandre Chibebe Nicolella. The study seeks to identify the main risk factors for dropout in secondary education and is structured from data collected through Pesquisa Nacional por Amostra de Domicílios (PNAD) [National Survey by Household Sampling] and through a study conducted in Minas Gerais state, which used interviews with students and dropouts. Based on these data, the authors organized models capable of crossing intra and extracurricular factors with impact on early withdrawal and also on permanence in school. The young most vulnerable to withdrawal from secondary education are the ones in a lower economic condition, who are male and have a previous history of failure, dropout and low academic performance, display disinterest and lack of motivation and participation in school activities, and face special situations, such as early pregnancy. Among the findings are factors such as difficulty in some disciplines, desiring a different school, the perception that it is possible to obtain better job opportunities by continuing studies, and the importance attached to school choice.

In “The subjective dimension of social inequality: future projects of rich and poor young people”, Ana Luisa Masillac Melsert and Ana Mercedes Bahia Bock bring the findings of a study on the subjective dimension of social inequality through the analysis of life projects of rich and poor youth of Sao Paulo city. Taking as its starting point the idea that social inequalities in Brazil are a complex social phenomenon, which should be understood in both its objective and subjective dimensions, the authors chose to focus on subjectivity and to give visibility to subjects who are not merely a consequence of the unequal social reality, but active subjects, who constitute and are constituted by such reality. To this end, they worked on essays of young people in Sao Paulo city about what they think of their future and the future of the youth with a background different from theirs. This material was examined according to the theoretical and methodological propositions of socio-historical psychology in order to provide an analysis of the senses and meanings attributed by the youth to themselves, in relation to other unequals in a society marked by social inequalities. Social inequalities were naturalized by the subjects, who said they are justified by personal efforts and/or family heritage. Meanings that value the elite’s way of life as a model to be achieved stood out, with correlative depreciation of the poorer layers. In addition to the meanings constituted from the discourses of the young, the subjective dimension of social inequality also emerged in the silencing of these subjects when asked to talk about other unequals.

The article by Claudia Pereira Vianna is entitled “The LGBT movement and gender and sexual diversity education policies: losses, gains and challenges”. It addresses the relationship between the state and social movements in the production of public education policies focused on gender and sexual diversity. The sources of this reflection are two investigations previously carried out by the author: one dealt with the introduction of gender and sexual diversity in education policies in Brazil, under President Luiz Inacio Lula da Silva; the other discussed how policies for the curriculum were understood, appropriated, and implemented by public school teachers in São Paulo state. The purpose of this reflection is to analyze the production of these policies from the tensions in the interlocution between the Lula government and the social demands for reduction of inequality and construction of social rights arising from the Lesbian, Gay, Bisexual, Transsexual and Transgender Movement (LGBT). Discussing gains, losses and future challenges, the text highlights the contradictions present in the interlocution between the government and the movement. When the government introduces demands of gender and sexual diversity in education, it seems to value the theme without considering the power relations which determine the traditional parameters that underpin gender relations and teacher identities in everyday school life. In the author’s words, it remains necessary to establish “an educative process for all of us in a society where segregation and strategies of denying inequalities are historical constants that must be overcome also within the spheres of social gender relations”.

And to close this issue of *Education and Research*, we present an interview with Professor Kate Vieira, University of Wisconsin-Madison, conducted by Professor Emerson de Pietri,

Faculdade de Educação, Universidade de Sao Paulo, and Aline Akemi Nagata, a PhD student at the same institution.

The interviewee discusses her trajectory of as a teacher and researcher of literacy across borders arising from migration. Having been raised in a community of Azorean and Lebanese immigrants in Massachusetts, and having worked with different immigrant communities, the subject of her research permeates her own identity. This is how literacy, migration and community came to constitute the background of her studies, which also combine research about the role of technologies in the processes experienced by immigrants, since digital literacy has developed both through letters, e-mails and video chats. In this scenario, Kate's warning is noteworthy: "I want to avoid analyzing this phenomenon as a form of re-colonization narrative". Vieira's reflections are of great importance, especially when one takes into account the 232 million people living outside their birth countries today.

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