

TEACHING PRACTICES AND SCIENCE EDUCATION IN LATIN AMERICA

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The teaching of Natural sciences is a theme of interest for many reasons. Among them, we can highlight the consequences for the technical-scientific development of nations, the increasing need to deal with scientific and technological questions in daily life, and ethical and environmental dilemmas that arise from the utilization of Science and technology. From this, emerges an increasing concern with Scientific and Technological Literacy, both in the more elementary levels of formal education, and in the formation of science teachers (Nunes and Leite, 2022).

Within this context, for years researches have been alerting about how the world crisis is still an overlooked dimension in the teaching of Sciences (Vilches *et al.*, 2004), and investigating how the social representations about the environmental crisis, the environment and sustainability have arrived to science education, specially in the perspective of the teachers and future teachers, like the approach of critical thinking (Porrás Contreras, 2015; Porrás Contreras, Tuay Sigua, e Pérez Mesa, 2015; Porrás, Tuay e Ladino, 2020).

It is still worth highlighting that the many Science-Technology-Society relations have been a constant proposal for facing another crisis, the crisis in scientific education. Many authors have debated how to insert such discussions in the various levels of education (Santos, Amaral e Maciel, 2010; Nunes e Dantas, 2012; Pinto e Maciel, 2014; Nascimento, Rodrigues e Nunes, 2017), since the paradoxical lack of interest of people about Science and Technology may generate profound, negative impacts on society and the environment: the emergence/permanence of technocratic decisions, the lack of participation on decisions about S&T, increasing lack of comprehension of the human impact on the environment, with highlight to climate change and dissemination of fake news.

In parallel with the specific discussions already cited, we have the issue that education itself is a delicate and thought-provoking in Latin America (LA), which looks even more challenging to us than in other regions of the world. In the countries that make up LA, there is a considerable disparity, both in regards to investment, and in the results of the formal education that is offered to these populations. These difficulties and barriers are even more pronounced when thinking about Scientific and Technological Education, which reminds us to the way the S&T policies are financed in LA (Lima, 2009). In this context, there is still much to advance in research and implementation of practices that can contribute to the effectiveness of Scientific and Technological Literacy in the region.



It is in this problematic context that the Investigation on Didactic and Practice in the teaching of science in Latin America has been trying to contribute and propose a dialogue with researchers in other parts of the world. Not forgetting the questions of national scope such as the Brazilian national program of didactic books (Schivani, Souza e Lira 2020).

Thus, it has to be noticed that many Universities and research institutes in the region have produced knowledge about scientific education in with quality and international importance.

The idea to think of Scientific Education in Latin America is not new. Between the days 5 to 15 december,1972, UNESCO held, in Montevideu, a seminar to discuss the situation of Scientific Education in the region, and strategies to promote improvements. After 50 years, some questions are still relevant, such as the necessity to better train the professors, the use of Technology in classrooms, and the introduction of Technology itself as a theme, among others.

Even though there are few studies that aim to understand how Scientific and Technological education is approached in the region as a whole, we believe that it is relevant to discuss it, once we face similar socioeconomical and educational problems, therefore, solutions and innovations might contribute to the social welfare and development of the region as a whole.

The proposal of this dossier is to present researches performed in various parts of Latin America, without the intention to approach the theme in its totality, but to demonstrate the diversity of points of view, methodologies (Santos e Greca, 2013), themes and perspectives that Latin America has in the research on Education in Science and Technology. Above all, it is necessary to highlight that we can understand the contributions of Latin America as a reflex of cooperations such as the Moreno-Rodriguez and Massena (2020) in the formation of professors, or still as a product of the multiple original theoretical relations that emerge from the region.

For the challenge to compose this board, we invited investigators from five countries in Latin America (Argentina, Brazil, Colombia, Peru, Uruguay), who, in their thematic lines, showed relevant contributions that improve and help to qualify the scientific education in Latin America.

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