S-49 – Teaching Science and its History in a Globalized World

Teaching Commission

Organizers:
1) Peter Heering, (Europa-Universität Flensburg, Germany), peter.heering@uni-flensburg.de
2) Andréia Guerra, (Centro Federal de Educação Tecnológica do Rio de Janeiro - CEFET-RJ, Teknê Group, Brazil)
3) Kostas Skordoulis, (National and Kapodistrian University of Athens, Greece), kostas4skordoulis@gmail.com
4) Raffaele Pisano, (University of Lorraine, Nancy, France), pisanoraffaele@iol.it

Abstract:
The contributions in this symposium aim at discussing challenges and perspectives with respect to teaching science through its history as well as teaching history of science in the globalized world. Globalization, considered as an economic, political and cultural process, has seriously affected the societal, economic and cultural significance of science. Science has long ceased to be considered as a privileged body of knowledge. Instead it is increasingly considered and treated as a network of situated and contextualized activities and practices traversing from the metropolis to the periphery, from the local to the global. In this respect, the role of the individual can easily be neglected, thus creating an image of science which is as de-humanized as the classical account of a body of knowledge.
At the same time a new global human being arises, fragmented and integrated simultaneously. Fragmented as a result of multiple identities in terms of race, gender, ethnicity and religion but also integrated on the grounds of digital economy and globalized mass culture.
In this respect, the current stories about the European and North American classical figures from the history of science need to be replaced by different approaches. We hold the opinion that these new approaches are to meet the multicultural and multinational audiences which share no longer a common cultural background but can be characterized in particular through their diversity. Consequently, education needs to take into consideration approaches that enable the individuals in the audiences to see a cognitive as well as an operative relevance in their perspectives on the science as well as its historical origins. There appear to be a variety of options how these challenges might be met: One option could be the emphasis on the role of craftsmen in the production of a certain shared knowledge in context, on analysing social as well as technique-technological and political aspects or material, performative or communicational aspects; theoretical and experimental standpoints. Likewise, looking at science and scientific knowledge productions in the periphery and the transfer of knowledge from and to peripheral regions might be approaches in this respect.
These new perspectives have long started to affect the teaching practices of science and the ways science is communicated but at the same time new questions arise: How can diverse knowledge systems be included in (and not excluded from) science teaching? How can science teaching, and science education at large, contribute to a better understanding of human history?
Welcome are researchers and teachers from both universities as well as schools to meet and share cutting-edge development in the field.
Keywords: Science Education – Teaching – Teaching History of Science – Teaching Science through History – Globalization.

Participants:
- Agustín Adúriz-Bravo
- Elizabeth Cavicchi
- Cibelle Celestino Silva
- Andreia Guerra de Moraes, Andreia Guerra, Cristiano Moura, Tânia Camel
- Ana Paula Bispo da Silva, Winston Gomes Schmiedecke
- Pierre Boulos
- Thais Cyrino de Mello Forato, Francisco Aparecido Cardeira, Hélio Elael Bonini Viana