Science and Culture in Education: A Teacher Training Course

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Abstract

Pre- and in-service teachers highly appreciate science teaching with a strong cultural perspective as it offers them motive and inspiration to learn and teach science in a way that encourages all students to participate in science learning. The “Science and Culture in Education” course is based on the idea that science and culture are interrelated and interact influencing one another. The design of the course is inspired by the history and philosophy of science as history of science provides the background to bring forward and discuss a variety of science and culture interrelations, while philosophy of science offers multiple perspectives to reflect on the cultural origins, effects and aftermaths of science. Each unit of the course has been developed in the context of a three-dimensional cognitive, meta-cognitive and emotional approach of the teaching and learning of science and has a main focus on raising issues concerning the nature of science focusing on: a) scientific events that have influenced culture and have been influenced by culture, b) legends and scientific explanations, c) science and art. The backbone of the course is formed by a set of films (movies from the international cinema, documentary films, cartoons etc.) that state the main issues to be discussed and trigger the involvement of pre- and in-service teachers in this approach of science education. The course is also supported by an educational wiki (atlaswiki.wetpaint.com) that offers the opportunity to attend the course by distance, participate in discussions and develop related projects.