

AESTIT Affordable & Efficient Science Teacher In-service Training

1. Objectives

The aim of the project is the development of an affordable, sustainable and efficient in service training scheme for the Science teacher. This scheme has two main axes: a. face-to-face training courses, and b. online training courses. The face-to-face courses focus on the learning of the recent theoretical paradigms on the Science teaching and the relevant supporting pedagogical principles. The e-learning system to be developed, will be used by Science teachers and specialised scientists in the area of Science Teaching. The focus of the project is on the promotion of the collaboration and cooperation between teachers, schools and institutions involved in the Science teaching and in Science Teaching education. The fundamental philosophy is that learning can be developed and enhanced through the sharing of knowledge and best field practice experience of different groups involved in such activities. A further objective is the establishment of a network of people including scientists, school-teachers and researchers to promote Science and Technology education.

2.1.4 STOCHASMOS Seminar

STOCHASMOS is an online platform (www.stochasmos.org) designed for developing and enacting inquiry oriented teaching and learning environments. The platform is designed to promote open inquiry approaches to problem-centered learning. It involves an online investigation environment where students have access to specially transformed authentic scientific data about the issue to be investigated. It also involves an online Workspace environment where students work collaboratively to construct their own evidence-based explanations and formulate an answer to the problem they are investigating. The Workspace environment is designed to offer inquiry-oriented scaffolding to support students in this process. Students have the opportunity and the tools to select pertinent data from the investigation environment and process, manipulate and analyze this data in order to develop their arguments in the Workspace environment.

This was a pilot seminar that concentrated on examining the problem of why flamingo birds died at a local salt lake with a history of intensive human activities nearby. 14 teachers participated in 8 weekly 3-hour seminars that took place between March and May 2006. They had the opportunity to work on this problem and develop their own evidence-based hypotheses and arguments. For the latter half of the seminar they had the opportunity to work as designers of inquiry-oriented materials using the STOCHASMOS platform to develop their own modules on various topics ranging from traffic system kinematics to the health impacts of electromagnetic radiation.