**The VccSSe Project - Promoting the European Cooperation with the View of Improving the Methods for Science Teaching and Learning Using Virtual Instrumentation**

VccSSe Project – Aim and Objectives:

- Started in October 2006, the VccSSe - Virtual Community Collaborating Space for Science Education (http://www.vccsse.ssa1.valahia.ro) is carried out with the duration of three years, having as main aim to adapt, develop, test, implement and disseminate training modules, teaching methodologies and pedagogical strategies based on the use of virtual instrumentation and to promote the cooperation between different European educational institutions to produce and disseminate training materials that will assure the technical and pedagogical elements with the view of implementing in the classroom of the virtual applications through Information and Communication Technology tools. In this sense, the partnership assumes to build various pedagogical approaches in a virtual space able to offer efficient ways of using specific tools for logical understanding of the fundamental concepts in sciences.

- The overall aim of the project has the following specific objectives:
  - Offering to the in-service teachers a particular technology (based on virtual instruments) that will enhance learning in specific laboratories.
  - Applying the developed teaching methodologies and pedagogical strategies to the teaching process and share them in an easy-accessed learning environment (the Virtual Co-operating e-Space).
  - Improving the research base of knowledge and the implementation to other training areas.
  - Developing European cooperation and awareness.
  - Disseminating all the results at the local, national and European level.

VccSSe Project Partnership:

- **Coordinating institution**: VALAHA UNIVERSITY TARGOVISTE – ROMANIA
- **Partner institutions**:
  - TEACHER TRAINING AND EDUCATIONAL INNOVATION CENTRE VALLADOLID II – SPAIN
  - TEACHERS TRAINING CENTRE OF QUJON – SPAIN
  - WARSOW UNIVERSITY OF TECHNOLOGY – POLAND
  - REGIONAL IN-SERVICE TEACHER TRAINING CENTRE "WOM" IN BIELSKO-BIALA – POLAND
  - UNIVERSITY OF JOENSUU – FINLAND
  - BABES-BOLYAI UNIVERSITY CLUJ NAPoca – ROMANIA
  - UNIVERSITY OF PATRAS – GREECE

VccSSe Project Stages:

- **Creation Stage**: its activities were oriented on identifying, analyzing and selecting of the suitable virtual instrumentation environments, creating the course “Virtual Instrumentation in Science Education”, implementing an e-learning platform (Moodle) to support the course activities and developing the Virtual experiment space (e-Space) – a repository of virtual instruments that were used like examples during the training sessions.

- **Training Stage**: the main activities were focused on in-service teacher training using the materials and instruments developed in the first stage.

- **Implementation Stage**: its activities consisted of designing and introducing by the teachers of the virtual experiments in their lessons. Assessment tools for evaluating the quality of the in-service teacher training process were also developed.

- **Evaluation & Dissemination Stage** (still in progress) - the main activities are oriented on evaluating the project activities and its outputs and also on disseminating the project results through different channels: webpage, leaflets, posters, articles, exhibition, CD edition, web / external dissemination etc.

VccSSe Methodology:

- As the VccSSe project targets to adapt, develop, test, implement and disseminate training modules, teaching methodologies and pedagogical strategies based on the using of the virtual experiments, with the view of their implementation in the classroom through ICT tools, the adopted methodology is based on the supporting of the teachers’ pedagogical use of virtual experiments in the teaching practices and to provide the necessary knowledge on how to organise teaching as learner-kmner oriented, based on emphasizing the social interaction and collaborative learning. At the same time, a way of working based on the constructivist idea of building up the own knowledge was used in the training process.

- At the participants involved in the project gained and share knowledge through the project outputs and also collaborative learning was promoted through Moodle platform which offers special frames for hosting documents and materials, discussion forums etc. which allow the participants not only the attendance of the course but also to have the opportunity to ascertain the progress of their colleagues and to enhance communication with the view of improving their learning experience.

- The learning activities involved tutors who acted as trainers and monitors during the course, in-service Science teachers who attended the course and the pupils who become the indirect beneficiaries of the experiments implementation in the classroom.

VccSSe participants cooperating during the project meetings

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