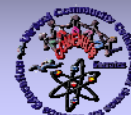


The VccSse Project - Promoting the European Cooperation with the View of Improving the Methodologies for Science Teaching and Learning Using Virtual Instrumentation



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VccSse Project – Aim and Objectives:

Started in October 2006, the Socrates - Comenius 2.1 European Project no. 128989-CP-1-2006-1-RO-COMENIUS-C21 entitled **VccSse - Virtual Community Collaborating Space for Science Education** (<http://www.vccsse.ssai.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 teaching and 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 Cooperative 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 Organisational Aspects:

- ❑ The Project activities and the whole amount of work were allocated appropriately according to the **project partnership institutions' profile**. At the same time, the project activities were implemented according to the partners' experience;
- ❑ The coordinating institution was taking part in all the project activities and had the responsibility for the **fulfilling of the final outputs**. The coordinating institution is also responsible for the **project administrative and financial management**.
- ❑ Since the beginning of the project, the coordinating institution has set up different ways of communication among the partnership. In this respect, ICT became the most important way of communication: beside traditional e-mails, the **phpGroupWare** collaborative platform was installed on the VccSse server, offering the possibility for sharing ideas, work and products in real time inside the partnership. Communication is also ensured through the **VccSse mailing list, project webpage and trans-national coordinating meetings** - the last one as an important activity for taking decisions.
- ❑ In terms of establishing of a collaborative framework among the partner institutions, the coordinator was also responsible for **assuring the trans-national cooperation**. In all the trans-national coordinating meetings, the tasks were distributed among partners and deadlines were established. Those meetings were finalized with **Minutes** which stipulated the agreements and the deadlines for the pending tasks. Beside those documents, the project coordinator kept informed the partners on the project development periodically.
- ❑ As an important rule, the role of the partners has been specified with great accuracy since the first trans-national coordinating meeting. In this respect, two main groups were defined inside the partnership:
 - The **Technical Group** - assured the technical and collaborative work expertise (Valahia University Targoviste, Centro de Formación del Profesorado e Innovación Educativa Valladolid II, Centro del Profesorado y de Recursos de Gijón, Centro de Profesores y Recursos de Zaragoza I and Politechnika Warszawska).
 - The **Evaluation Group (Assessment Commission)** - designed the assessment tools for different aspects of the project and assumes the responsibility for the on-going monitoring and evaluation of every step of the project (Babes Bolyai University Cluj Napoca, Regionalny Ośrodek Doskonalenia Nauczycieli "WOM" w Bielsku-Białej, Joensuu Yliopisto and University of Patras).
- ❑ Every local coordinator has assured the interface between the project coordinator, their cooperating staff and local partners (teachers, schools and other educational institutions). At the same time, the tutors created their own interfaces between them and the in-service teachers, both on the **Moodle platform** and in the frame of the **face-to-face meetings**. In addition, the cooperation between partners from the same countries (with respect to the producing and translating of the outcomes) enhanced the quality of the developed materials as well as making easier the project development.
- ❑ The partnership answered as a whole to all the actions developed in the frame of the VccSse project and all the results were fulfilled with the strong implication of the partners. Finally, **coordination and cooperation / collaboration** represented the **key features** of the project activities organization, essential aspects for the success of the VccSse project).

VccSse Project Partnership:

Coordinating institution:

- ❑ VALAHIA UNIVERSITY TARGOVISTE – ROMANIA

Partner institutions:

- ❑ TEACHER TRAINING AND EDUCATIONAL INNOVATION CENTRE VALLADOLID II – SPAIN
- ❑ TEACHERS TRAINING CENTRE OF GIJON – SPAIN
- ❑ TEACHERS TRAINING CENTRE OF ZARAGOZA 1 – SPAIN
- ❑ WARSAW 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 Team in the Instrumentation World

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.



Collaboration inside the Evaluation Group

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 practice and to provide the necessary knowledge on how to organise teaching as learner-learner 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.

❑ All the participants involved in the project gain 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.



Collaboration inside the Technical Group

VccSse participants cooperating during the project meetings



Acknowledgments

This project has been funded with support from the European Commission, Education and Training, School Education: Socrates: Comenius. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein. Many thanks to all the participants involved in the VccSse Project activities for their endeavor to develop the project outcomes and activities and disseminate them in Europe.

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