A new type of collaborative learning environment
In today’s working environment, employees have to collect, make sense of and use more and more information to keep up with developments in their field. To make the most of this information they need to acquire new knowledge and skills and develop better ways to collaborate with fellow workers based at different locations. The Co-Lab project is designed to develop a learning environment that will give users remote access to a virtual workspace for collaborative inquiry-based learning using experimentation and modelling. Initially Co-Lab will develop demonstration software for the fields of water management and climate control in greenhouses.

Developing a coherent workspace
The objective of the Co-Lab project is to design, develop and evaluate a new system for collaborative, inquiry-based learning. The design of Co-Lab will be tailored to meet the needs of learners and teachers and will include simulations, modelling facilities, local laboratories and electronic whiteboards used to create virtual classrooms and collaborative workspaces accessible via the Web. The work will focus on integrating the various components so learners experience the Co-Lab learning environment as a single coherent workspace. This will require careful design of both the user interface and the technical architecture. In parallel with the technical development of the new virtual learning environment, a comprehensive support system will be developed to help learners in their experimentation, collaboration and modelling activities. In addition, Co-Lab will be designed to be integrated with the curriculum.

The Co-Lab project comprises three main phases:

- Definition of the requirements of learners and teachers;
- Development of the Co-Lab system and its components;
- Evaluation studies.
Learners and developers will be consulted from the start of the project and will be involved throughout, to ensure that the final product meets the needs of potential users of the Co-Lab system. Evaluation studies will be performed to analyse the use of the various Co-Lab applications, to refine their operation and also to generate requirements for new applications. These studies will include the use of mock-ups and testing of prototypes by potential users. During evaluation, the emphasis will be on finding out about the learning process, including important aspects such as ease of use of the modelling language, the structure and operation of the collaborative workspaces and the effectiveness of interfaces to experiments. During the latter part of the project, evaluation activities will also concentrate on making assessments of how much knowledge users are gaining through using Co-Lab.

Open access across Europe

Co-Lab will bring together existing virtual learning software products and European expertise to produce a powerful new integrated tool that will enable learners to collaborate on experimentation and modelling activities in a coherent virtual workspace. Because Co-Lab will provide an open architecture for the exchange of inquiry-based learning material, it will be available to others to develop third party material to integrate with Co-Lab learning environments. This approach will open up possibilities for universities, schools, science museums and publishers to set up their own experiment spaces that can be accessed remotely by learners throughout Europe.

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