

# Introduction to the Global Approaches

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## **Keywords**

Virtual classroom, Web applications

The papers in this section investigate a range of technology-enabled virtual classrooms and discuss the issues these raise and the solutions that have been initiated. One paper focus particularly on World Wide Web based systems while the other describe projects using other technologies as well, including ISDN networked tools for synchronous classroom approaches. All of the writers describe a changing view of education and learning, with technology enabling and initiating new approaches to learning and teaching, often from a more constructivist perspective. Such a perspective does not consider learning as acquiring an unchanging body of knowledge which is disseminated with the use of technology, but perceives learning as a process that requires an innovative interactive environment through the available technologies. This environment allows the learner to develop or construct their own understanding of concepts as they interact with the ideas of their teachers and other learners.

Nicola Henze and W NejdI of the University of Hannover also look to the World Wide Web as a learning environment for applying innovative teaching and learning approaches from a constructivist perspective. Rather than use the web as a lecturing environment, they use constructivist theory to frame their use of a web based environment for the teaching of computer courses.

They describe their development of a learning environment on the web which can provide authentic activities in real world situations with responsibility for performance with the student. Students work in collaborative groups with access to tutor feedback and through project-based learning and goal-based scenarios which emulate real world applications, they are developing an accessible database of student computing projects all managed in a web environment. Their adaptive hyperbook learning environment is available to students in remote locations and is the basis of their virtual learning environment.

The UNED experience of a gradual developing virtual campus is described by Clara Pérez-Molina, J. A. Rodríguez-Criado, C. de Mora, J. Carpio, M. Castro and J. Peire. The importance of using a technology that integrates into their existing Study Centre Network with its successful local support centres where students can use technological facilities, has made the use of synchronous technologies from radio broadcasts to videoconferencing appropriate to their organisation and style of learning and teaching. UNED's electronically networked centres have enabled their involvement in the DEMOS project which combines access to asynchronous resource and administrative use and communication with synchronous teaching in multimedia environments through ISDN lines and LANs. Students and teachers can share screens and computer applications and can have a visual and audio presence through their shared multimedia computers .

They describe the possibilities that the new technologies provide for group learning and more interactive distance learning which also influences approaches to course and material development. The new technologies again changing the teaching and learning approaches of the virtual learning environment.