Introduction

When an Information Laboratory (IL) is designed there are some questions that need to be answered: they concern, for example, the equipment (hardware, operation systems, software...), methodologies (self-education, aided practice, integration between traditional methodologies and new equipment ...) and disciplinary contents to transfer into a Computer Aided Education laboratory.

In consideration of the fact that it appears absolutely necessary to assume equipment and organization together a research is being developed about both the logistic configuration of educational environments and the methodology for education by information medium.

The problem

We think it is not possible to design an IL in function only one education model. In fact, many professors with different education approaches should work in the same IL; for this reason the IL must be easily modifiable and grow up, if necessary, without waste; in two words it must be flexible and integrable. Actually by the application of IT and new technologies it is possible to design a flexible and integrable learning environment, to develop in accordance with education needs.

The possible solution: the Virtual Laboratory (VL)

In this sense we have conceived a single space that can integrate several equipments based on different technologies and conceptual approaches. This space called “Virtual Laboratory” (VL), should allow the experimentation of structures and materials, the connection with experts from other countries, the search and found of information etc., all this in the same environment. We subdivided the VL in eight sectors: 1) Audiovisual Technologies: 1.1 Video Library, 1.2 Video Lesson; 2) Hypermedia Technologies: 2.1 MM Platforms; 3) Instrumental Emulators: 3.1 Technical Instruments; 4) Expert Systems: 4.1 Expert Systems; 5) Connections: 5.1 Teleconference, 5.2 Monitoring, 5.3 Telepresence, 5.4 Internal Links, 5.5 External Links; 6) Application Programs: 6.1 Common Use, 6.2 Advanced Use; 7) VR Technologies: 7.1 Not Immersive, 7.2 Immersive; 8) Internal Library: 8.1 Book, Manuals...

Conclusions

The project of VL is the first step to realize a polyfunctional space where it is possible to experiment new education methodologies and approaches in attempt to concentrate, in a single flexible and integrable environment, several phases of the education process.
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