Learning with Multimedia Technologies: some examples

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This work presents the results of three different educational experiences, which involve High Schools and Universities, where the multimedia technologies play a central role.

First experience is an example of the application of multimedia technologies to support the traditional educational methods. It has been developed for a first-year and a fourth-year undergraduate courses of Mathematics at the Academy of Architecture of Mendrisio, University of Italian Switzerland (Switzerland).

Second activity is an example where the multimedia technologies substitute the traditional tools (e.g. overhead projector or the blackboard) in the field of computer based training. Multimedia modules have been developed for a distance course to introduce the electronic instrumentation and the measurement techniques. Virtual instruments are implemented in order to allow simple simulations of the real instruments during the self-training phase. A client-server system has been designed in order to allow the students to operate on a remote laboratory for experimental training.

Third activity is an example of the use of the multimedia technologies to develop a new learning environment which uses the constructivist approach and the cooperative learning in a High School (a technical Institute in Italy).