Discovering xyAlgebra: Intelligent Interactive Internet Instruction
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Abstract: Passive activities such as watching presentations, listening to explanations of general principles and watching experts solve sample problems are helpful, but peripheral, to the mathematical learning process. For students the indispensable step is solving problems for themselves. Yet most commercial mathematics software still concentrates on presentations and sample problems, while sending students off line to do practice problems on paper without interactive support. Answers are either multiple choice or limited to a single simplified final step. Early Internet courses are even less interactive. In contrast, students using xyAlgebra can enter each step of each problem solution. They enjoy intelligent support at every step as xyAlgebra’s suggested solution strategy changes in response to their steps in simplifying expressions, solving equations and even in setting up and solving verbal problems. The next version of xyAlgebra will support instruction over the Internet, yet the entire package can be downloaded without cost at math0.sci.ccnycuny.edu/xyalgebra.

Problem-based Learning and Flash 4.0: An Experiment in Science Education
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How does one design learning resources that will reach large audiences, capture the imagination, and compete with the game environments that are popular among middle school students? The Reconstructors is a new episodic adventure series, designed for the Web, with a substantive educational message. See http://reconstructors.rice.edu where a student enters a futuristic world in which he or she assumes the role of a "reconstructor." In the interactive mystery format, a student learns science and history relevant to the discovery and use of opiates. Over the course of four episodes or missions, students "solve the problem." The concepts of neurotransmission, the neurobiology underlying drug addiction, drug tolerance, and analgesia, as well as the history of opium use are presented.

On-Line Education Using Video Broadcasting Delivered from Perth Campus, Algonquin College
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As part of the LCN (Lanark Communications Network) TAP project, Algonquin College at Perth Campus engaged in a video broadcast/conferencing pilot to deliver a course, "The History and Philosophy of Architectural Conservation" (ARC9001), simultaneously in 2 modes: lectures with electronic slides and traditional black board work and, in parallel, video broadcasts (IN@SEC VP Broadcaster) with e-mail feedback. This pilot demonstrated successfully that on-line co-delivery allows to teach students simultaneously at different locations employing video, audio and text via a network using relatively inexpensive broadcasting/conferencing software with minimal set-up requirements at the clients' site. Course delivery improved. Students enjoyed the choice of delivery modes to suit their learning styles. Professor appreciated more time for interacting with the students. Re-broadcasting at a later time possible. The delivery model - independent of the specific broadcasting tool - provides a means to reach remote connected students everywhere - be it rural or elsewhere around the world.

TLC : Teachers’ And Learners’ Collaborascope – A Platform For Analysing And Evaluating Online Education
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Millions is being spent on installing networks, computers and assembling distance learning material and ICT (information and communications technology) software. Yet the network technology is not being used to assemble databases which researchers, managers and politicians can "data mine" to guide their investment. In the TLC project we are pioneering techniques for assembling and querying educational data. Our goal is to initiate research into the best methods of rapidly assessing the effectiveness of resources deployed and then interpreting the data to improve our educational performance. We are not trying to reinvent the wheel and produce yet another online learning environment like WebCT or Virtual-U. Instead we are building tools which will work in collaboration with these existing learning environments and provide teachers and students with valuable information about the usage of their learning environment. The TLC project aims to utilise the emerging standards such as those from the IMS project.

The Third Dimension For World Of Knowledge: An Acceptable Way To Get In
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Educational CD-ROMs should be as interesting and attractive for children as computer games. The approach offered by the authors allows to reduce the existing gap between multimedia for education and for entertainment. It is achieved due to the unusual design of 3D interface and by using a special technique of development. As a general metaphor for organisation of multimedia environment the metaphor of theatre with all appropriate attributes was