

UNREALTECHNOLOGIES © A NEW INSTRUCTIONAL MEDIUM

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Most University lecturers use a PowerPoint presentation together with simulations or other examples to help their students learn during lectures. Here we propose a new approach, an *integration* of PowerPoint and the simulations into one medium. These components are placed within the Computer Game Technology, “Unreal Tournament 2004” (UT2004). The lecturer and students may “walk together” in this virtual environment, to discuss and to learn together. We have developed a constructive methodology based on theories of “Concept Maps”, “Experiential Learning Theory”, and “Collaborative Learning” which can help the educator to produce rich learning environments. This paper situates our theory in two domains, the investigation of mathematical models of dynamic systems (e.g., business processes, or physical and biophysical systems), and also within secondary-school physics education. Examples of our software are provided to conference delegates.