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Kameas, A.; Pintelas, P.; Mikropoulos, T.A.; Katsikis, A.; Emvalotis, A.

EIKON: Teaching a high-school technology course with the aid of virtual reality.

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This paper presents EIKON, an integrated open educational environment used to support high-school technology courses. EIKON combines state-of-the-art information technologies, such as virtual reality, hypermedia and networking. Our pedagogical approach is constructivism and collaborative learning. Students using EIKON study the evolution of agricultural technology since the prehistoric times. The environment could be used as a starting point for the exploration of virtual reality microworlds and the discovery of multidisciplinary information, which relates to most of the courses taught in modern high-schools (history, geography, physics, chemistry, biology, environmental care, ecological awareness etc). A case study with a sample of nineteen information technology high-school teachers reports on content, pedagogical, and software quality issues. The results indicate competence of multimedia information, very good instructional design, and very good software quality. Especially for virtual environments, all the teachers declared ease of orientation, but only the 26.3% declared ease in navigation using the navigation controls provided by the software.

Classification: U50

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