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Methodology and Technologies for Online Education

Abstract

Educational process is as old as mankind itself. Education of young generation is a complex task and every suitable tool has been used to improve the process. Nowadays, not only modern approach like student centric model, gamification, personalization, experience based learning, problem based learning, project orientation rather than knowledge acquisition has been introduced, but new technologies like virtual reality (VR), augmented reality (AR), interactive multimedia services offer better experience-based learning, faster education and more durable knowledge. Technology solutions are deeply dependent on economical situation of schools.

One of the open problems of on-line education is distant presence of students and teachers. Telereality is a new keyword and covers research area of full virtual access to distant place with 3D audio and video stream and in specific case with multisensorial experience.

Many projects have been devoted to the online education. Authors have many years experience in online education within dozens of mostly European projects. The results of these projects show that online education is an extremely complex task with multidisciplinary problems. However, the projects show promising results in the topic. Results of the new Horizon 2020 NEWTON will be discussed, too.