

Breathing second life into language teaching

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An international team has developed a wireless virtual reality environment that can help promote language learning and let students practice. The researchers have demonstrated their Collaborative Virtual Reality Environment with Mexican engineering students carrying out listening comprehension practice in English as a foreign language.

Miguel Garcia-Ruiz, Arthur Edwards, and Raul Aquino-Santos of the College of Telematics, at the University of Colima, Mexico, working with Samir El-Seoud of the Princess Sumaya University for Technology, in Amman, Jordan describe their work in detail in a forthcoming issue of the *International Journal of Mobile Learning and Organization*.

Virtual Reality is a computer-generated three-dimensional space that is multisensorial, interactive and engaging. Online virtual reality systems such as Second Life have created a parallel world for entertainment, gaming, learning and even commerce. Garcia-Ruiz and colleagues point out that virtual reality could be useful in learning a new language.

"Virtual reality is today one of the new frontiers in computer-assisted language learning," they explain, "offering a stimuli-rich environment for language students."

There are various collaborative virtual reality software applications. Of particular interest to educators is the open source Distributed Interactive Virtual Environments (DIVE). This system was developed by the Swedish Institute of Computer Science in the 1990s and can be run on a variety of operating systems, including Linux and Microsoft Windows. DIVE allows users to share a virtual environment over a network,

whether that is a local network or the internet.

The system has a three-dimensional graphical interface and users can communicate using voice of internet or text chat with each user represented by a representation of themselves, an "avatar" in the three-dimensional space. Previously, DIVE has been used at the University of Colima to teach medical students about various injuries.

The researchers have created Realtown, a virtual reality environment within a DIVE installation. Realtown has a virtual supermarket, schools, a pharmacy, a bank, etc and background sounds can be enabled to increase the realism. Sounds include traffic noise, children playing, emergency vehicle sirens, and other common environmental noises. "What makes Realtown interesting is that students simultaneously perceive and interpret three different stimuli to help them incorporate their knowledge: visual, auditory and physical," the researchers explain.

Preliminary usability studies have offered positive results for engineering students at Colima practicing their English language comprehension and more detailed assessments are currently underway, the researchers say.

"The potential for the growth of Realtown is substantial," the team concludes, "At present, users only navigate the streets to get from one place to another, as the objective of Realtown is to provide listening comprehension practice and a collaborative platform where users can 'negotiate meaning'. In future, users will be able to enter any of the 40 buildings and interact with intelligent agents, which will provide greater opportunities to actually produce language."

Source: Inderscience Publishers

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