

47. Virtual learning helps people with language problems in societal participation

We have designed a virtual learning environment that supports low-literates and immigrants with language problems to participate in the Dutch society.

In this virtual environment, users can select prototypical situations in which they need information and communication skills in both formal and informal social settings. We have developed four scenarios: online banking, grocery shopping, visiting a service desk and chatting at a bus stop.



The virtual environment uses virtual humanlike characters that graphically appear on a screen. The characters engage in a conversation, show gestures and have facial expressions like real humans. They either conduct conversations with the user or support him in doing participation exercises.

ICT science question

What is the best way to design an effective virtual learning environment? In particular, the learning environment should be able to deal with large differences in the input.

The virtual learning environment should also adapt the offered content and the difficulty level over time.

Application

The primary application of this system is in supporting the societal participation learning of low-literates and immigrants in the Netherlands. Therefore, the system should be able to support each individual user achieving their intended learning objectives taking into account large differences be-



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tween individuals each with different cognitive, affective and social barriers to learning. Practicing in a virtual learning environment will provide users with requisite knowledge and skills, and increase the self-efficacy required to participate.

Currently, our vision is to distribute this system for instance in public libraries and classrooms, so users can use the system regardless of whether or not they own a personal computer.

Alternative Application

Our virtual environment technology can also be used in many other application fields: language and culture learning, distance learning, learning on the job, and entertainment.

New tools can be included that could allow users to create their own content for use in this system. This would give the system the additional role of a lesson creation support tool for teachers, and a method of expression for students.

Quote

“Het ontwikkelen van deze virtuele leeromgeving is volgens mij tamelijk origineel en innovatief.” – Wim Matthijsse, Stichting ABC



Virtual neighbourhood, software that learns how to help people of low literacy and non-native citizens to better take part in local daily life.



Virtual neighbourhood software modelling the social and physical environment to support people of low literacy and non-native citizens in engaging with public and private services in their neighbourhood.



A learning environment software package that employs state-of-the-art didactics, interaction and personalization to provide a lifelike virtual neighbourhood for social participation.



The system provides cognitive, affective, and social learning support using comprehensive user modelling and individualization to teach skills and to improve self-efficacy and motivation.