Adaptive Simulation for Multicultural Dialogue Training

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Abstract

The creation of effective Virtual reality training simulation tools that adapt to trainees' past experiences or preconceptions is extremely challenging. Researchers working on the ImREAL project are aiming at closing the gap between the 'real-world' and the 'virtual-world' by developing a simulated learning environment focusing on simulation systems for interpersonal communication in multicultural environments that responds to users' behaviour and adapt accordingly to the user model.

The proposed paper describes the design of an adaptive dialogue simulator that models real world activities in the field of intercultural competence . Real-life experiences will be gathered and categorisied in micro-activities in order to identify key elements of 'real-world' activities. This will enable to crate a simulation environment based on real-life situations that provides new opportunities for assessment, feedback, and learning in general. The aim is to develop a 'self-growing' adaptive simulation which embeds a 'virtual mentor' helping learners reflect on the experience they work through.

The structure of a branching story conceived for experiential learning (simulation environment) will be enriched and updated with new real-life content that is collected, tagged and sorted in an intelligent way by a set of semantic services in a special dedicated real life experiences collection environment. Additionally the "Intelligent environment" suggest the appropriate add-in place within the branching story. These suggestions will then just have to be accepted or rejected by a human expert. Also, while interacting with the branching story, the user is allowed to add some options in natural language that will also be initially sorted by the intelligent services. The last step of the foreseen development will be to implement intelligent functionalities that allow the system to react in real time to free inputs from the user.