TAPAS: Adapted Personalised Affective Social Skills with Cultural Virtual Agents



human and information environments

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Project summary

- Background: Increase in the number of people with social communication difficulties and social anxiety in schools and workplaces (about 3-13%)
- Approach: Develop an automatic verbal and non-verbal interactive training system for conversation and public speaking in everyday situations
 - Behavioral training: Social Skills Training (SST)
 - Cognitive training: Cognitive Behavioral Therapy (CBT)
- Collaboration: behavior measurement and dialogue system (Japan), virtual agents and behavior measurement (France), joint research with psychiatrists

Objectives to be achieved at the end of CREST research

• Establishment of an interactive training system, virtual agent/audience technology, dynamic adaptation technology, objective evaluation of training effects

Originality and novelty of the proposed research in comparison with similar research in Japan and abroad

Previous studies for job interview training and public speaking with virtual agents using mainly non-verbal signals [Hoque 2013; Tanveer 2015]

[Our proposal]

- SST- and CBT-based training, virtual reality environment, non-verbal/verbal integrated dialogue system
- SST flow: Situation setting -> Modeling -> Role-play -> Feedback
- CBT flow: Situation -> Mood -> Automatic thought -> Adaptive thought -> Mood change
- SST with varying levels of difficulty in one-to-one, one-to-many, and many-to-many situations
- Consideration of cultural differences in social communication between Japan and France

Future prospects for the research

(1) Research plan after the end of the CREST research

- Building a cloud-based real-time system that can be used by many people at the same time, and analyzing its log data for system improvements
- (2) Creation of scientific and technological innovation, acquisition and utilization of intellectual property rights, creation of new industries and social contribution
- Innovation in virtual SST and CBT, acquisition of intellectual property rights for underlying technologies and systems, creation of new industries



