

Towards Language-barrier free Knowledge Co-creation: Enhancing Learners' Willingness To Communicate in English with an Embodied Conversational Agent

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The ability to actively communicate in a second language (L2) might be a significant asset in facilitating knowledge co-creation between people who come from different countries or speak different languages. However, even after studying a L2 for several years, many learners will not spontaneously be willing to engage in conversation in the targeted language. MacIntyre et al.¹ suggested that the key factor to ensure a spontaneous and sustained use of L2 in communicative situations is the willingness to communicate (WTC) in L2. They proposed a heuristic model of variables influencing WTC in which situated antecedents such as anxiety and self-confidence felt by learners are believed to have a direct and substantial impact on one's decision to participate (or not) in an L2 conversation.

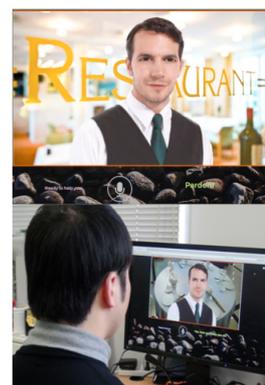


Fig.1 Learner interacting with the conversational agent

The purpose of this research is to develop a computer-based conversational environment that can effectively motivate learners towards active communication in their second language (for example English in Japan). We expect that this study may ultimately contribute in fostering the achievement of language-barrier free fruitful knowledge co-creation between people coming from diverse horizons.

Unlike communication between L1 learners, breakdowns occur more often in L2 communication. Thus, any conversational agent intending to enhance learners' motivation towards such conversations should adopt some specific strategies adapted to help learners overcome such pitfalls. Following our previous work² in which we showed that a dialogue agent based conversational environment might be effective to increase L2 learners' WTC, we propose a dialogue management model based on a set of specific conversational strategies, namely communication strategies and affective backchannels, dedicated to facilitate the implementation of intelligent dialogue agents that are effective in increasing L2 learners' WTC. The originality of our approach lays in the fact that the proposed model takes into consideration both aspects related to communicative breakdowns that occurs very often in L2 learners-agent interactions and those related to affective variables influencing learner's willingness to communicate in L2. Our model aims first, to foster the dialogue agent's ability to autonomously detect and robustly handle recognition errors as well as learners' pitfalls in L2 communication, making possible achievement of more or less smooth interaction between an L2 learner and the dialogue agent. Secondly, it aims to make possible achievement of a WTC friendly interaction where the learner will feel less anxious about L2 communication and progressively get confidence about his/her own linguistic proficiency. Further details about practical implementation of this model as well as its evaluation results will be exposed during the presentation.

References

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