Second Language Tutoring using Social Robots

Project No. 688014

L2TOR

Second Language Tutoring using Social Robots

Grant Agreement Type: Collaborative Project
Grant Agreement Number: 688014

D3.3 L2TOR system

Due Date: **30/12/2017**
Submission Date: **15/01/2018**

Start date of project: **01/01/2016** Duration: **48 months**

Organisation name of lead contractor for this deliverable: **ALD**

Responsible Person: **Jean-Marc Montannier** Revision: **1.0**

Project co-funded by the European Commission within the H2020 Framework Programme		
Dissemination Level		
PU	Public	**PU**
PP	Restricted to other programme participants (including the Commission Service)	
RE	Restricted to a group specified by the consortium (including the Commission Service)	
CO	Confidential, only for members of the consortium (including the Commission Service)	

Contents

Executive Summary

This deliverable is a “demonstrator”. It consists of a prototype composed of software and hardware, which was built to teach children mathematical concepts in a second language.

The functioning of the modules involved is described in the deliverable D3.1 and further updated in deliverable D3.2. We will here briefly present the modifications done since D3.2 as well as the setup used for the large scale evaluation. We will also present the difficulties encountered with the large scale study and the solutions found. Since January 2018, the work presented here represents a total of 195 commits. The system is in a stable state since the end of March (the commits produced since then are relative to the analysis of the results). The two modules concentrating most of the commits (73%) are the Output Manager and the Interaction Manager.

Output Manager: The modifications to the Output Manager are mainly relative to the production of the gesture outputs by the robot. Moreover a number of small issues have been corrected. For example, closing this module is now less cumbersome, which in turns provide a better experience for the user of the complete system. Finally, a number of small modifications have been made to improve the general experience, e.g. correction of the sound output, use the child’s name when an answer is requested.

Interaction Manager: The interaction manager has been modified to save regularly the state of an experiments (lesson currently passed by the child, results obtained etc …). These information can then be passed on to the experimenter for further use, e.g. to evaluate the usefulness of gestures in language teaching. The interaction manager has been put under heavy stress by the large scale real world experiments which has leads to various smaller improvements e.g. more reactive touch sensing, snapping objects in place, improve handling of pause and resume.

Other modules: The modifications to the other modules are mainly due to fixing minor bugs found when children were using the system. Minor graphical changes have been also brought to the system as a results of our tests.

Running the experiment and analysing the results has result in a large number of messages exchanged in Slack -- more than 33.000 messages, mainly in private channels. This burst of activity reached its pick at the end of March with 21 active users (users posting a message within the week). Since then, the activity remains high due to the synchronisation necessary for the analysis of the experiments.

Results

The setup has not been modified since the video produced for the D3.2 (https://protolab.aldebaran.com/l2tor_downloads/demo_l2tor-space_21_02_2018.mp4). The results obtained thanks to the developed system can be found in the other deliverables produced by the project.

Principal Contributors

Jean-Marc Montanier
Fotios Papadopoulos
Christopher Wallbridghe
Mirjam de Haas
Thorsten Schodde
Jan de Wit
Bram Willemsen
Daniel Hernandez
Tony Belpaeme

Revision History

Version 1.0 (JMM 15/01/2018)
First version.