Does a robot tutee increase children’s engagement in a learning-by-teaching situation?

Published: August, 2017

Category: Conference paper
Series: LNCS (Lecture Notes in Computer Science), Vol. 10498
Publisher: Springer, Cham

DOI: https://doi.org/10.1007/978-3-319-67401-8_31

Authors: Markus Lindberg (1), Kristian Månsson (1), Birger Johansson (1), Agneta Gulz1 (1), and Christian Balkenius (1)

(1) Lund University Cognitive Science, Lund, Sweden

Abstract

This paper presents initial attempts to combine a humanoid robot with the teachable agent approach. Several design choices are discussed, including the decision to use a robot instead of a virtual agent and which behaviours to implement in the robot. A pilot study explored how the interaction with a robot seemed to influence children’s engagement as well as their attribution of mental states to a robot and to a virtual agent. Eight children participated and the interaction was measured via an observational protocol and a conversational interview. A main outcome was large individual differences between the children’s interaction with the robot compared to the virtual agent.

Keywords
Learning-by-teaching, Virtual agent, robot