Robot gestures lead to better learning performance in children learning a second language

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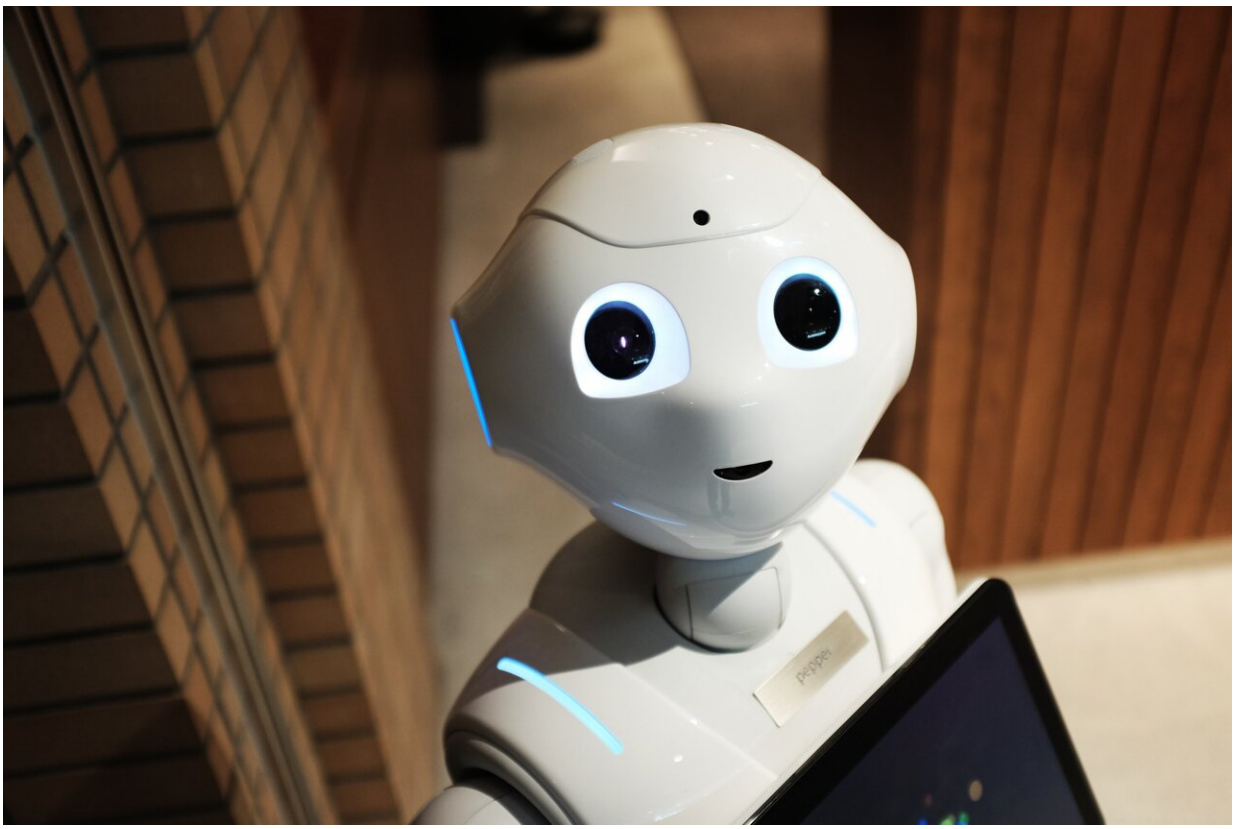

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Social robots can support teachers in, for example, individual second language lessons where gestures increase children's engagement and

promote learning. They can thus relieve the pressure on overloaded classrooms. Robots, unlike other technological education, have the additional advantage of being physically present where the teaching takes place. Researcher Jan de Wit, of the Tilburg School of Humanities and Digital Sciences, defends this research for his Ph.D. on 28 January.

Jan de Wit explains how he came up with the idea for his research: "For my research on robotics and language I saw one of the participating girls playing. She jumped up and moved her arms elegantly as if to fly. She was imitating the robot's gestures. And then I realized how these gestures can contribute to communication and learning with robots."

The study was conducted as part of the L2TOR project, in which scientists are investigating if a social robot can be successfully used to teach words a second language to children from four to six years old.

More fun and engagement

De Wit: "We developed a number of educational interactions, in which the robot and the child play games together or work together on a tablet to learn English words. The results showed that robot gestures lead to better learning performance in children as young as six years old. The gestures also increase engagement with and enjoyment of the interaction of children and the robot. They are able to help perform collaborative tasks (including educational tasks). And stimulate the robot's communication with people with special needs, such as autistic children."

In doing so, this dissertation contributes to understanding the role that robots can have in second language education, and how we can make use of their physical presence in the environment where education takes place through hand gestures.

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