Adaptive Second Language Tutoring Using Generative AI and a Social Robot

Technology can help alleviate limited funding and a shortage of teachers. Language learning is inherently social, and embodiment allows for social interaction. Generative AI allows for adaptation of content and difficulty in real-time.

**The resulting game**
- Five images appear on a screen
- The robot says a description of one of the images in the foreign language
- The user chooses an image
- The correct and incorrect images remain, with the vocabulary word written above it

**Implementation**

**Results**
- There is a significant increase in scores for all students
- No difference between robot and tablet group is found
- The quality of the generated data allows for learning, but improvements are possible

Learning was driven by the game, not the embodiment

**Future work**
- Extending beyond vocabulary
- More controlled generation
- Open ended conversation

**User Study**
- 21 high school students
- Dutch speaking
- Ten minutes of practice
- Two groups: Furhat or tablet

Los guantes son para mantener las manos calientes.