

PRESS RELEASE

“I want to tell you a joke. Are you ready?”

Joke-making software helps non-speaking children to beat language barriers

Children who have to speak through computerised aids can construct and tell their own jokes, thanks to new software which provides them with a language playground. Researchers at the Universities of Aberdeen, Dundee and Edinburgh have developed STANDUP, a software package for children who use speech technology like that used by the physicist Stephen Hawking.

Research shows that computerised speech aids, although very helpful, can restrict the development of a child's language skills, as his or her speech tends to stick to absolute essentials and lack spontaneity. Speaking children typically use humour to experiment with words and improve their social skills, but those who speak through voice output communication aids are often denied these forms of fun. Research suggests that limiting communication in this way means the child does not become as fluent, nor as adept at conversation, as children who have no language limitations.

The STANDUP project - "System To Augment Non-speakers' Dialogue Using Puns" – has created software which allows children to generate novel puns. These puns are not prestored, but are created by the software, using dictionaries and information about words, plus simple rules about the structure of puns. The system was developed with the help of teachers, therapists and adults who use voice output communication aids.

STANDUP has been evaluated with eight young people at the Capability Scotland's Corseford School near Glasgow. The young people, who used the system over a ten-week period, regaled their peers, staff, family and neighbours with jokes such as: "What do you call a spicy missile? A hot shot!" Their joy and enthusiasm at entertaining others was inspirational. The children's use of STANDUP also had a beneficial impact on their use of their own communication systems as they were all more eager to communicate generally.

Dr Graeme Ritchie, at the Department of Computing Science at the University of Aberdeen, said: "The STANDUP software makes simple puns by looking for suitable patterns in the words and phrases which are available to it. In this project, the computer acts as a helper to the child, by letting them browse through joke forms, and try out words and phrases. "

Dr Annalu Waller, at the School of Computing at the University of Dundee, added: "Many people who use communication aids tend to be passive communicators, responding to questions with one or two word answers. This research shows the importance of providing individuals with novel language. It has been wonderful to see young people with complex communication needs taking ownership of puns and using them to take control of communication."

The three-year project, funded by the Engineering and Physical Sciences Research Council, is holding a two-day workshop in Dundee on Friday and Saturday (25/26 August) to showcase the STANDUP project. Teachers and therapists from all over Scotland and England will also learn about other research in which children use computers to play with language, from teams at Glasgow Caledonian University, Sussex University and the Danish University of Education.

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