New computer program aids understanding of English

The issue

Research has shown that Asian students in particular have difficulty with differentiating sounds at the beginning and end of spoken English words e.g. *tin* vs *thin* and *rope* vs *robe*. This can make continuous speech difficult for them to follow as misunderstanding just one word can potentially change the whole interpretation of a sentence.

These difficulties can be magnified in day to day situations; for example, if the person is speaking on the telephone or is in a shopping centre where there is a lot of ambient noise.

The solution

Researchers from the Schools of Psychology, Education, and English at the University of Nottingham set out to tackle the problem by developing a unique computer program. Led by Drs Nikki Pitchford and Walter van Heuven, the program’s purpose was to help Asian students improve their understanding of accented English and to hear and understand the language better when in noisy environments. The Spoken English Discrimination (SED) training program was trialled with Chinese speakers who were learning English at the University. With the help of SED, students showed significant improvement in detecting differences in regional accents and speech sounds when conditions were less than ideal.
Aware of the commercial potential for SED, the research team undertook further development work with funding initially secured through the European Regional Development Fund (ERDF) Innovation Fellowship Scheme. Following preliminary market research conducted in the Far East, Nikki and Walter applied for a Hermes Fellowship to refine and explore the commercial potential for SED closer to home.

Working in conjunction with an external consultant funded by the Hermes scheme, they were able to identify and articulate the key benefits and uniqueness of their program, an approach that opened the doors to a number of different companies operating in complementary market sectors. These included English language teaching schemes where recognising specific cultural elements, regional accents and background noise is not taken into account when learning the language.

The interest shown has subsequently led to visits to our UK campus, and the discussions surrounding a variety of related methodologies is currently being pursued with a view to the adoption of the system and potentially of other university-developed protocols in the near future.

**The benefits and future**

Commenting on the outcomes Nikki said: “Our findings have shown that SED training really does have a significant impact in enabling Asian students to differentiate between sounds.

“There has already been interest in the program from government organisations as well as a major Chinese mobile phone company who is interested in developing it into an educational phone app. In China alone, over 300 million people are involved in learning and teaching English, so we are very excited about the potential for the SED program.”

Of its future potential, Walter van Heuven said: “The aim of our work is to help as many people as possible through the program. We are very interested in talking to or partnering with people who feel that they can work with us to develop the market and new applications for this unique tool.”