

Thinking out of the box to help dyslexic pupils

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These 3D-printed, machine-learning cubes make use of facial recognition, vibrations and LED panels to help dyslexic pupils to learn to spell.

In July, the cubes – and their creators from Nanyang Polytechnic (NYP) – will be in Seattle for one of the most prestigious competitions for young developers, the Microsoft Imagine Cup 2018 World Finals.

Called the ProCubeX, it is developed by NYP student Eugene Lee, and alumni Guo

Xihuang and Sun Yetong, both 23.

Team 7x, as they call themselves, was second runner-up at the Asia Pacific finals on Thursday in Kuala Lumpur, taking home US\$1,000 (S\$1,300).

Mr Lee, 21, told The New Paper: “Current teaching aids are too generic and don’t stimulate different parts of the brain through multi-sensory learning.”

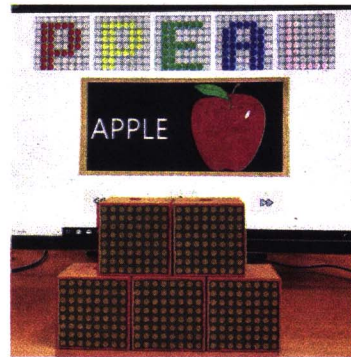
The team consulted the Dyslexia Association of Singapore (DAS) in the hope of improving current teaching aids.

Within five months, they created the ProCubeX, which makes use of a four-level difficulty system and hints to guide children aged six to eight to use the plastic blocks to spell words shown on-screen.

NEXT LEVEL

On a correct answer, children will move to the next level, with fewer hints and more difficult words.

An app linked to the cube uses of facial recognition to detect pupils’ faces to download their learning profile, allowing them



The ProCubeX uses facial recognition software to allow dyslexic students to learn at their own pace. PHOTO: **EUGENE LEE**

to learn at their own pace.

Ms Deborah Hewes, head of publicity and publications at DAS, said the ProCubeX would

be a valuable product to add to the teaching resources for preschool learners struggling with literacy.

“In class, children are taught phonics, the sound to letter relationship, and this teaching resource will help with the multi-sensory approach to teaching and learning, while also adding a sense of fun and providing good sensory feedback for achievements in literacy,” she said.

Said Mr Liaw Sze Wong, senior lecturer from NYP: “While competition will be stiff, I believe Team 7x is on a level playing field with the rest of them.”

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