Unlike alphabetic languages, being able to read Chinese is more reliant on writing skills than on listening ability, according to a study that could affect the way the language is taught. *Will Clem* reports

**Learning to write is key to reading**

*Photo: Steve Cray*
learning to read Chinese, and had ramifications for people looking into the underlying causes of dyslexia among Chinese children.

"Previously people have made the assumption that there is a common root cause of dyslexia, irrespective of language or culture," Dr. Sook said. "But we have shown that there are some fundamental biological differences involved. This further supports the theory that reading Chinese and English involves different processes."

This variation stemmed from the different ways in which the written languages were structured, she said. The phonetic element in alphabetic writing produces a linear thought process from script to sound to meaning. But the prevalence of words with similar sounds and structures in Chinese means that the phonetic element is not as important. Instead, the meaning can be conveyed through the visual aspect of the characters.

"I think that any study should look at reading in Chinese as a whole," Dr. Sook said. "But we have to look at this from a cross-cultural perspective."

The research also showed that when children with dyslexia could help children learn to read, they did better. By writing Chinese characters and children learned to break down their structure. Repeating the movement of the stroke could also develop long-term motor memories that aided character recognition.

There were similar implications for people learning a second language. They may have to apply a different method of learning Chinese in script in a different way to the mother tongue, Dr. Sook said.

"If you want to learn Chinese, you may have to write more," she said.

Dr. Sook said more research was needed into the best way to use writing to help children learn to read. This might mean the traditional method of copying individual characters 20 times, copying groups of two or three characters that formed compound words, or writing longer phrases.

But she noted that the current system used in local schools was far from perfect.

The local education system still doesn't have a good system, she said. "We have yet to find the best way to teach and motivate students."

"Simply writing without connecting to the phonetic element may not be very effective," she said.

When coupled with the neuromaging results, the findings suggested that different strategies to those employed in the west would be required to combat dyslexia and other similar conditions in Chinese children, she said.

The psychological methods used by many people in Hong Kong might not be effective, she said.

"For children with dyslexia, the implication is the same as with normal children," Dr. Sook said. "If we ask them to write more it may help remediation."

The study's findings regarding drawing abilities also suggested that encouraging children to draw the particularly simple symbols could have a positive effect, and Dr. Sook said more research was needed to develop task-based therapies.

Professor Catherine McBride-Chang, at the Chinese University of Hong Kong's Department of Psychology, was also critical of aspects of the study's findings.

"Children can often read more than they can write. This is certainly true for children learning to read Chinese as well as other languages. Therefore, simply demonstrating that children's ability to copy figures or pseudocounters is associated with writing does not necessarily suggest that writing causes reading," she said.

"Indeed, for very young children who doubt that reading skills are the main cause of good reading in Chinese," she said.

A clearer picture would only emerge once research had been done on children in a wider age range. It is also clearly true that writing and reading are strongly associated as children progress in school, so it is logical that these findings were correlated in the study just published," she said. "However, we need to be careful about cause and effect in these types of studies."

Dr. Ho agreed, saying many people had failed to link these findings to a correlational study, not a causal study. Although it established a link between reading and writing skills, it did not determine whether one caused the other.

"Even if the two are associated," she said, "that does not mean they don't have some underlying factor such as orthographical skills that predicts reading ability. It is not necessarily causing the other."

Dr. Ho also took issue with the researchers' claims relating to children with learning difficulties.

"They have mentioned dyslexia and poor readers, but the particip-
tants in the study were not poor readers, they were normal read-
ers," Dr. Ho said. "We should be careful in generalizing these findings to dyslexic readers and poor readers."

But she agreed that the symptoms shown by dyslexic children varied between cultures.

In her own work with dyslexia sufferers, Dr. Ho and her colleagues had identified three tasks that created specific difficulties for Chinese readers, such as dyslexical skills and random automatic naming (identifying single symbols in rapid sequence).

"These are important parameters for those who fail to learn to read Chinese," she said.

However, Canadian-based academic dyslexia expert Dr. Liao, said she generally agreed with the study's findings. There were several important contributions in the work, said Dr. Liao, an honorary professor at the University of Saskatchewan's Department of Educational Psychology, and Special Education.

The most significant point was the theory that reading Chinese script involved the analysis of a number of characters, he said. This highlighted a fulfilling in the local education system.

What is 'wrong in schools in Hong Kong is that children are self-helped to analyse and synthesise the different components of the phonetic or sound level and the semantic components of the characters and the reason for their being put together is that the rules are different," Dr. Liao said.

As a result, children tended to learn by rote, and lacked analytical skills.

Dr. Sook-Sam, an associate professor at HKU's Faculty of Edu-
cation, said that while he welcomed the study's findings, they should be treated with caution.

"This is good research," said Dr. Sook-Sam, who has pioneered ways of teaching Chinese literacy using rhymes to help young children recognize complex characters before they have to write them. "But we must always agree to be careful how these findings are used."

He said he worried the suggestion that writing could help reading would prompt parents to give their children too many writing exercises.

"We are not opposed to the use of copying, but care should be taken over how much you ask students to do. You do not need to copy every single character hundreds of times."