

# School of Optometry

## School Seminar

Mr Chan Ka-ho Paco

BSc (Hons) Optom

Resident Optometrist, School of Optometry  
The Hong Kong Polytechnic University

## Investigation of the impact of visual and perceptual skills on Chinese and English reading performance in Hong Kong children

**Date** : Wednesday 3 July 2013

**Time** : 1:00pm – 2:00pm

**Venue** : Room BC215, The Hong Kong Polytechnic University

### Abstract

Reading being one of the most important skills in learning has been extensively researched in western countries. Previous studies have found that deficit in phonological processing is the core cognitive skill leading to disability in reading English which is a phonological system. Other cognitive skills, such as visual processing skills and rapid naming processing skills may also play significant roles in English reading. Unlike English, Chinese uses a logographic system, which may require different cognitive skills for proficient reading. Yet, little is known about how different cognitive skills affect Chinese reading performance.

This study examined how the *visual processing skills* measured by visual sequential memory (VSM), visual spatial relationship (VSR) and a customized 39-item Chinese Homophone Discrimination Test (CHD), and the *rapid naming processing skills* measured by DEM affected the Chinese and English reading performance in 31 normally developed Hong Kong children. Reading performance in terms of maximum reading speed (MRS) was measured by the PolyU Chinese acuity charts and English MNRead acuity charts.

Hierarchical regression model showed that VSM, CHD and reading time (RT) of DEM were significant predictors of Chinese MRS ( $p < 0.01$ ), while VSM, VSR and RT of DEM were significant predictors of English MRS ( $p < 0.01$ ) after controlling age. When considering all cognitive skills, only RT of DEM provided a significant and unique contribution in predicting Chinese and English MRS, explaining 7.9% and 9.2% of the variances in Chinese and English reading speed after controlling age and visual processing skills. Our results showed that that similar cognitive skill - *rapid naming processing skills* was one of the important skills in proficient reading for both English and Chinese.

*Please note that no CPD hours will be counted for this talk.*

*For enquiry, please contact Ms Winnie Hui at 2766 4323 or by email [sowinnie@polyu.edu.hk](mailto:sowinnie@polyu.edu.hk).*

