

# Professional Learning Seminar by Bilingualism SIG

Date: 25 August 2021

Time: 3 – 4pm

Venue: Interactive Webinar via Zoom

## The Bilingual Reading Networks: Neurocognitive Evidence and Implications for Learning

### Abstract

As a cultural invention, the acquisition of reading is postulated to be capable of shaping the functions and structures of the human brain. The process can be influenced by several linguistic, cognitive, experiential, and neural factors. However, how these multiple factors contribute to the process of reading in bilinguals is less established. To better characterise the development of the reading networks, it requires a multimodal approach including a neurobiological analysis. In this webinar, Dr. Wu will present how we can gain insights into the bilingual reading networks using the science of learning approach. With this approach, neuroimaging techniques (e.g., magnetic resonance imaging) in combination with behavioural measures allow us to investigate how the brain adapts to reading different scripts in bilinguals. She will also share how the research framework is extended to study bilingual and biliteracy development in early childhood. To conclude, some challenges of the approach and the implications for reading intervention will be discussed.

### Biography

**Dr. Wu Chiao-Yi** is a Research Scientist in the Centre for Research in Child Development at the National Institute of Education (NIE). She received her Ph.D. in Psychology from Nanyang Technological University (NTU) and had her postdoctoral research training at the Max Planck Institute for Human Cognitive and Brain Sciences. Before joining NIE, she was a Research Scientist in the Centre for Research and Development in Learning at NTU. Dr. Wu's research revolves around the neurobiology of language, reading, and mathematics, as well as their implications for learning and education. Taking the science of learning approach, she investigates typical and atypical development of literacy and numeracy skills. Her recent research focuses on the neurocognitive mechanisms underlying bilingual and biliteracy development in early childhood.

**Dr. Viniti Vaish** is an Associate Professor at the English Language & Literature Academic Group, National Institute of Education. Her major interests are exploring the documentation, measurement and enhancement of bilingualism and biliteracy in early learners. She has a Ph.D. from the University of Pennsylvania's Graduate School of Education. Her latest book, *Translanguaging in Multilingual Contexts: An Asian Perspective and Contexts*, was published by Springer in 2020.



### Speaker

**Dr. Wu Chiao-Yi**  
Research Scientist  
Centre for Research  
in Child Development,  
OER, NIE



### Moderator

**Dr. Viniti Vaish**  
Associate Professor  
English Language &  
Literature Academic  
Group, NIE

This event is organised and curated by Bilingualism Special Interest Group and supported by the Research Programme Management Unit (RPMU) of Office of Education Research (OER). Please direct all enquiries to [oer.rpmu@nie.edu.sg](mailto:oer.rpmu@nie.edu.sg)

Please click [here](#) to register for the event by 23 August 2021.



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