

FED Lunch Research Series 2015

Cognitive Foundations for Early Arithmetic Learning: A Representational Perspective

Date & Time: 15 May 2015, 13:00 – 14:00 (Light lunch begins at 12:30pm)

Venue: Room G021, Faculty of Education (E33)

Language: English

Audience: UM Staff / Postgraduate Students

Enquiries & Registration: Mr. Brendan Lei (FED_Event@umac.mo); Tel: 8822-4120

** Complementary light lunch will be provided.*

Abstract

In this talk, Dr. Zhang will discuss a research-based theoretical model for understanding the cognitive underpinnings of early arithmetic learning. The model is based on a domain-general account of number learning as an internal representational system and integrates evidence from developmental and neuroimaging research. It includes four basic cognitive skills: oral symbolic, visual symbolic, spatial, and executive functions. Using longitudinal data from Finland and Hong Kong, Dr. Zhang found that these cognitive skills related differentially to children's performance on various domains of arithmetic. Finally, Dr. Zhang will discuss directions for future research and implications for early mathematics education.

Speaker

ZHANG Xiao, Ph.D., is Assistant Professor in the Department of Early Childhood Education at the Hong Kong Institute of Education. He began his academic career in 2009 as Assistant Professor in School of Psychology at Beijing Normal University. He then moved to Finland in 2010 and received his post-doctoral training from the Finnish Center of Excellence in Learning and Motivation Research, where he became interested in children's arithmetic learning and development. His research in this area has used information from various sources, including longitudinal data of typically developing children, research with children who have developmental dyscalculia, and cross-cultural studies of Chinese and Finnish children. Zhang is also interested in young children's social development or the process of early socialization.

