



Departmental Seminar (Via Zoom)

Children's Patterning Skills and their Roles in Mathematics Learning

12:00noon – 1:00p.m. | February 09, 2021 (Tuesday)



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Abstract

Patterning skills, the ability to detect the regularities, are referred as fundamental to early mathematic learning according to prior studies. Yet, it remains elusive about the association between different aspects of patterning ability and specific mathematics abilities, the cognitive mechanisms of how patterning skills support mathematics learning, and the role of home factors in the development of early patterning skills.

The speaker will present three studies which aimed to provide a broader picture of patterning development and its contribution to mathematics learning. Study 1 investigated the longitudinal links between different patterning skills and different mathematics abilities, and the role of spatial skills in these links. Study 2 examined the contribution of home factors on children's patterning skills. Study 3 was a cross-cultural study which evaluated the association between patterning skills, spatial skills, number line estimation ability, and various mathematics abilities among elementary school students in Hong Kong and Montreal.

Collectively, results showed that patterning skills contribute uniquely to both kindergarteners' and elementary children's mathematics achievement via different cognitive mechanisms. The present findings provide implications for considering patterning skills as a key construct in learning and teaching mathematics before and during formal schooling.

About the Speaker

Michelle Kong is in the final year of the PhD with a specialization in Educational Psychology programme. Her research investigates the role of patterning skills in mathematics learning.

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~All are Welcome~