

# The highs and lows of mathematical ability: Shared and distinct longitudinal predictors of mathematical ability grouping

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Stanley Cheng a\*, Rebecca Bull a, Emma C. Burns a, David Munez b

a Macquarie School of Education, Macquarie University, Sydney, Australia

b National Institute of Education, Nanyang Technological University, Singapore

\*stanley.cheng@hdr.mq.edu.au; scheng.psyc@gmail.com

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## Research Questions

- What early childhood (in kindergarten) factors predict maths outcomes in primary 1 and primary 6 (high and low groups)?
- Are the predictors the same/different for future high and low maths achievement groups?
- Do the strengths of the predictors change at different developmental stages/maths domains (i.e., primary 1 vs primary 6 hi and low groups)?

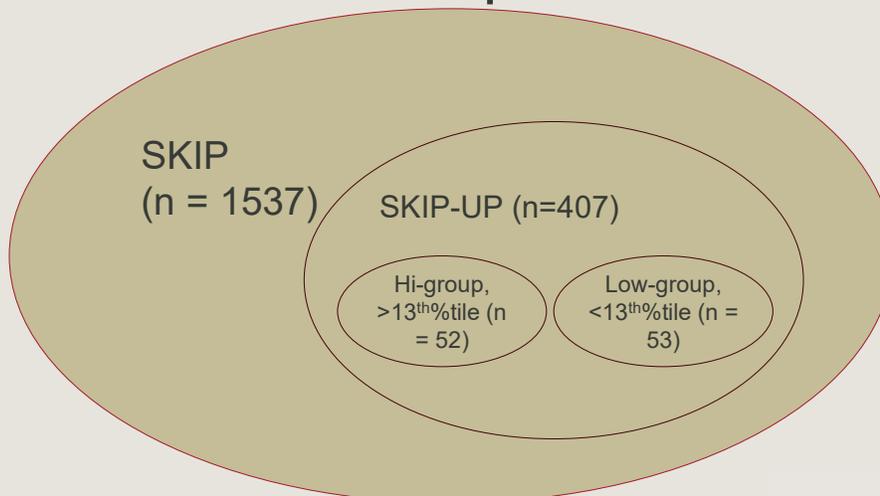
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## Singapore Kindergarten Impact Project (SKIP) & Singapore Kindergarten Impact Project – Follow Up (SKIP-UP)

- The SKIP and SKIP-UP are longitudinal datasets exploring the early (kinder/ year 1) and concurrent predictors of key skills and well-being outcomes for children in middle childhood (about Primary 5/6), in the areas of academic skills, executive functioning, self-regulation, mindset, resilience, and school engagement.

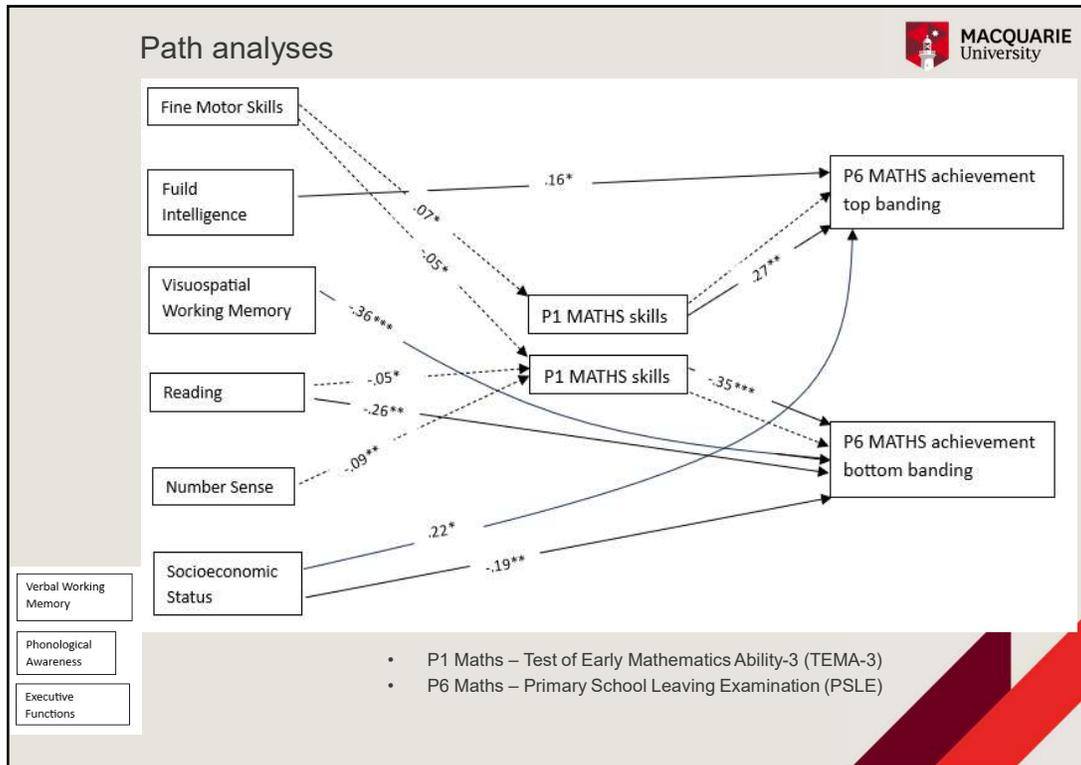
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## Participants

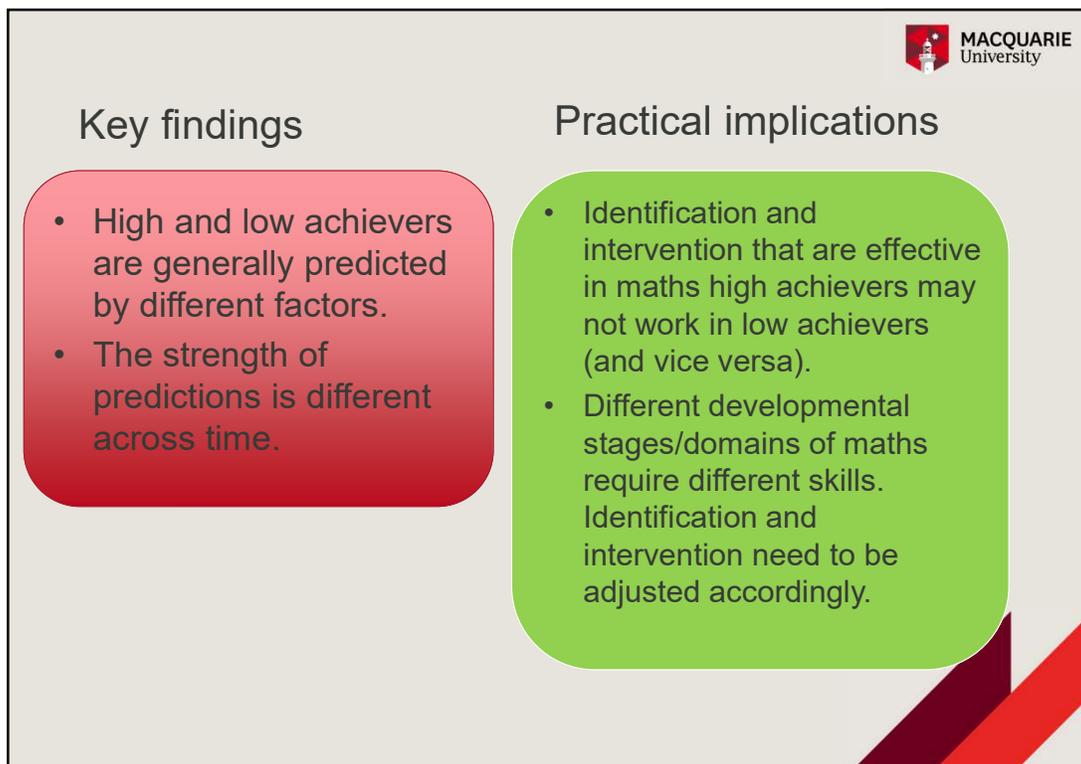


P6 Maths – Primary School Leaving Examination (PSLE),  
Top Band: Exam Raw Score  $\geq 90$ , Bottom Band: Score  $\leq 44$  (out of 100)

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## References

- Cheng, S., Bull, R., Burns, E. C. & Muñoz, D. (2024) The highs and lows of mathematical ability: shared and distinct longitudinal predictors of mathematical ability grouping. *Learning and Individual Differences*. 116. <https://doi.org/10.1016/j.lindif.2024.102570>

## Contact

- Stanley.cheng@hdr.mq.edu.au; scheng.psyc@gmail.com

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- The SKIP-Up study team consists of Khng Kiat Hui Fannie (NIE; PI); NIE Co-I's: Ng Ee Lynn, Kenneth Poon, Sun He Sabrina, Beth O'Brien, David Munez, Michael Chia; External Co-I's: Rebecca Bull (Macquarie University), Kerry Lee (Education University of Hong Kong), Stella Tsotsi (University of Oslo); Collaborators: Goh Kok Yew Shaun (NIE), Melvin Chan (NIE), Jessie Cheang (MOE).