

# INVESTIGATING QUANTITATIVE SKILL PREPAREDNESS WHEN TRANSITIONING FROM STAGE 6 SCIENCE TO TERTIARY SCIENCE STUDIES

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Quantitative skills (QS) are considered a key 21<sup>st</sup> century skill that drives developments in an increasingly digital and data-saturated world (Tout, 2020). Although there is an increased demand for QS competency in science graduates, mathematical ambivalence and avoidance of higher levels of mathematics during the Higher School Certificate (HSC) result in mathematical knowledge discrepancies when studying science-based degrees at university (Belward, 2011; Oo, 2017). Further, the removal of higher-level mathematics pre-requisites for science-based degrees at the University of Sydney prompts questions on how QS should be taught to students at a tertiary level (The University of Sydney, 2024).

The aim of this study was to examine how Stage 6 science subjects in New South Wales (NSW) contribute to the preparedness of QS when transitioning into tertiary science studies, with preparedness referring to level of readiness as defined by competence and confidence. To examine preparedness of QS from a confidence perspective, an online questionnaire was conducted involving first-year science students at the University of Sydney. Semi-structured interviews, conducted as a follow-up to the questionnaire, aimed to assess QS competency and engage in deeper conversations on student confidence in QS. Key findings revealed that despite students' exposure to data processing software such as Excel, they did not feel prepared to employ these within first-year science subjects. Additionally, students indicated that there were disciplinary differences for opportunities to practice and refine QS at the Stage 6 level.

## REFERENCES

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