

# MEASURING THE ASSOCIATION BETWEEN STUDENT PERFORMANCE AND MATHEMATICS SUPPORT

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**KEYWORDS:** mathematics support, student success, quantitative analysis

## BACKGROUND

Many universities in Australia provide learning support in mathematics and statistics in response to student needs. Western Sydney University (WSU) provides this via a centrally organised unit, the Mathematics Education Support Hub (MESH). In order for mathematics support to improve available support and to justify such support, the impacts on students' performance should to be examined.

## AIMS

We aim to understand the association between the use of mathematics support services and students' performance. Students' mathematical backgrounds, engagement level with the support services and performance data are studied with the aim of understanding the impact of the support. Outcomes from such research inform staff who can provide more targeted support and can be used to justify funding such support.

## DESIGN AND METHODS

MESH obtained data on each student's drop-in consultation and workshop attendance from a total of 3500 students and WSU recorded data for all students' mathematical backgrounds and performance in their mathematics/statistics subjects from 2016-2018. Students were grouped according to their engagement level with the MESH services and mathematical backgrounds. Association between the engagement level and students' performance is tested for at different levels of mathematical background.

## RESULTS

Students' level of engagement with MESH services is found to be associated with students' performance. Students with poor mathematical backgrounds form the majority of the students who use MESH services. Of those who have poor mathematical backgrounds, engagement level is related to passing the unit.

## CONCLUSIONS

Students who take advantage of learning support in mathematics and statistics range over all levels of abilities in mathematics. MESH tries to increase student success for all students. It is shown that learning support services can help students to improve their performance in mathematics and statistics regardless of their mathematical background.

Proceedings of the Australian Conference on Science and Mathematics Education, The University of Sydney and University of Technology Sydney, 2 - 4 October 2019, page 47, ISBN Number 978-0-9871834-8-4