

DESIGNING AND EXPANDING MATHS AND SCIENCE SUPPORT FOR OPTIMAL STUDENT LEARNING EXPERIENCES IN A CHANGING ENVIRONMENT

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KEYWORDS: mathematics support, statistics support, science support, coding support, mathematical skills, multi-disciplinary support

The changing educational environment has not only necessitated a relook at, and redirection of, how we deliver materials, but how we provide relevant and tailored support. Quality support is increasingly becoming a welcome resource for students who are now regularly relying on it to enhance their learning experiences. Students seek support for many reasons: to catch up, particularly when disrupted by work, illness, or other commitments; for background refreshment, particularly for mature age or under prepared students; for prompt answers to questions; for motivation and confidence; for successful outcomes. A Maths Skills for Chemistry Program began in 2010 and its success initiated a suite of programs for other disciplines for students updating or learning mathematical skills. Currently 20 programs cover a variety of disciplines and evaluations show positive outcomes (Jackson, 2021; 2022; Jackson et al., 2014; Jackson & Johnson, 2013). The Maths Hub began in semester one 2018 to provide subject support for those utilising mathematics and/or statistics in their subject/s as well as background skills support. The Maths Skills Programs were updated and integrated into the Maths Hub site and renamed Maths Hub Modules. The Chemistry Hub was introduced in semester two 2018 and renamed the Science Hub in 2019 when more subjects joined. The Coding Hub was piloted in semester two 2019, with a full roll out in semester one 2020. Each Hub has an online site where students access help sessions and resources. Support is tailored for effectiveness and Hub coordinators liaise with subject coordinators to accommodate needs.

This presentation outlines La Trobe's support development and its impact. An Ethics approved study (La Trobe Ethics HEC 18043) analyses quantitative and qualitative data. Attendances and surveys inform us of student engagement and perceptions. Pre and post Maths Hub Module surveys provide insight into why students engage and how effective this is. Analysis of subject results shows groups of students within a subject who visit a Hub and/or engage in a Maths Hub Module have higher pass rates in their subject than those who do not, in almost all cases. Although students who attend support centres are often thought to be highly motivated or high achieving, we have evidence that students engaging in our Maths Hub Modules are mainly those with weaker mathematical backgrounds. This makes our results for module engagement pass rates even more compelling. Student feedback also tells us how helpful the Hubs have been to them, particularly for those struggling with their subjects.

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Proceedings of the Australian Conference on Science and Mathematics Education, The University of Tasmania, 30 August – 1 September 2023, page 40, ISSN 2653-0481.