



CAMBRIDGE ASSESSMENT

Students' perceptions of A-level Further Mathematics as preparation for Mathematics degrees

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Abstract

As part of a large project involving over 4000 STEM and social science undergraduates, undergraduate mathematicians who had taken a minimum of AS-level Further Mathematics (N=928) took part in an online questionnaire. Participants were surveyed regarding their experiences of studying Further Mathematics, motivations for doing so, and the extent to which A-level study had prepared them for their undergraduate course. Those who had taken 'extension papers' such as STEP and AEA were also asked to 'review' those as means of preparation for undergraduate Mathematics.

Unsurprisingly, participants were positive about Further Mathematics, describing it more favourably as preparation for undergraduate study than the A-level Mathematics. When considering Further Pure Mathematics, Mechanics, Statistics and Discrete Mathematics units, participants were by far most positive about Further Pure as preparation for their degree. Similar proportions of those who had done Mechanics and Statistics described those units as useful, although only one-quarter described either module as *very* useful preparation. Few were positive about Discrete Mathematics. Additionally, 81% of those who had done STEP described it as good preparation for their degree, compared to only 42% of those who had done AEA.

Consequently, this research suggests that admissions tutors and schools should consider at least *encouraging* prospective undergraduate mathematicians to take A-level Further Mathematics and STEP even if they are not requirements for entry to their chosen universities in order that they can be better-prepared for future study.

Informal Proceedings

A paper has been published in the informal proceedings of this BSRLM conference. It is available [online](#).

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