Diverse cohorts: A'Levels and Degrees in the Ocean Sciences
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BACKGROUND / ANECDOATAL ROOTS OF THE STUDY

Chances of success in higher education are biased by a range of socio-economic factors from before birth... what can we do?

Many studies look at the predictive power of A'Levels to aid student selection. The Ocean Sciences programmes at Plymouth require pass in ALevel Geography and grade C in GCSE Maths. This study asked firstly whether, with the relatively low entry requirements, we observe a significant echo of school and childhood history in degree results as found elsewhere. In addition, we ask whether, given that oceanography is an applied science not taught in school, A'Level subject choices act as a potential advantage/disadvantage with the cohort. If so, how can this be mitigated?

MOTIVATION

We have no clear a priori indicator that a student needs additional subject-specific support YET some students perform better at quantative tasks. Can we do more? We quizzed staff & students...

RESULTS #1

Is there a significant correlation between A'Level results and degree class? No (but weak positive trend)

Is there a significant link between A'Level subject choice and degree class? No

p >> 0.05, standardised degree class, dichotomous A'level (presence, absence)

Is there a significant relationship between A'level grades, by subject, and degree class? No

p >> 0.05, standardised degree class, A'levels converted to % grade

Is there a significant relationship between A'level subject category and degree class? No

p >> 0.05, standardised degree class, dichotomous A'level groups


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NEXT STEP

Preliminary questionnaires have highlighted the application of trigonometry to oceanographic scenarios as a key skill that polarises our cohorts. This lends itself to simple assessment methods such as online quizzes. Materials are being assembled / created to test the efficacy of a) self-motivated online study; b) assessed written exercises and c) assessed online experimentation to address this gap.

KEY PAPERS


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