

Final Year undergraduate research projects in the Biosciences: Student and staff expectations, outcomes and impact on career choices and employability

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Background and Aims: Final year research projects provide a key element of research-based learning within undergraduate degree programmes in the Biosciences; a requirement of QAA Benchmark Statements¹. However, many Bioscience graduates do not go onto research careers and therefore the provision of non-traditional formats of research projects (e.g. educational, service-learning or commercial projects), which provide the opportunity for students to gain real-life work experience and skills more closely matched to their final career destinations, are becoming increasingly more common. There are no published evaluations of these different project formats and therefore the aim of this study was to “investigate student and staff expectations for final year undergraduate research projects in the Biosciences, the outcomes, and their impact on career choices and employability”

Summary of work and outcomes: Surveys were undertaken of Level 5 and 6 Bioscience students (n= 989 & 545) at 16 UK universities, which collectively represent the cross-section of UK HEIs. A survey of UK Bioscience academic staff (n= 392) was also undertaken. Student and staff expectations for projects differed; students viewed them as an opportunity to gain new knowledge and understanding, whilst staff saw them as a means for students primarily to gain research experience, and to develop both research and employability skills. Whilst students and staff were open to accepting both traditional and non-traditional formats of projects, there is a disparity between student wishes and what is currently provided. Students seek more team-based laboratory/fieldwork and non-traditional projects, and less literature projects. Reflecting on their experiences upon completing their projects, they viewed them as challenging, hard-work yet fun, an opportunity to gain research experience and to develop their employability skills. However, they struggled with identifying the skills developed. Projects provided an opportunity to gain real-life work experience (71%), informed career choices (86%) and opened students eyes to different career pathways (33%).

Discussion and conclusion: This study has demonstrated that projects should be more than just an opportunity for students to participate in a programme of research. They should be their “Capstone educational experience”: an opportunity for them to apply previous knowledge, skills and understanding, to develop personally and professionally, and enhance their employability. There is a need for the sector to reflect on, and re-think, its provision of undergraduate projects, to update learning outcomes, and the range of projects offered, in order to address student needs and career aspirations.

References:

1. Quality Assurance Agency www.qaa.ac.uk/en/Publications/Documents/SBS-Biosciences-15.pdf