



UK CENTRE FOR

bioscience

Teaching Development Fund Final Report

Project Leader	Dr Mark Goodwin
Project Title	Engaging students, staff and employers in a collaborative attempt to develop the employability of bioscience graduates
Report Date	31 July 2011

Abstract

This project has evaluated and developed biosciences courses and transition support at the University of Leicester using a two-pronged approach. First, questionnaires were used to link information about student intentions before graduation with student destinations after graduation. This information was then combined with matched reports on aspects of employability from staff, students and employers. The result has been an analysis that is being used to develop the curriculum, promote links with employers, and monitor and improve the transition from study to work.

Project timetable

Key activity	Start	Completion	Status
Project start	Mar 2010		
Develop questionnaires/ surveys from existing models: Intentions and destinations Student–Intentions Student–Destinations (DHLE) Employability Student–Employability Staff–Employability Employer engagement Employers–Employability	Mar 2010	Apr 2011	Complete Questionnaires designed with critical feedback from critical friends and internal project partners
Project workshop: project team and internal partners (design)	Apr 2010	Apr 2010	Complete
Student–Intentions sampling	Dec 2010	Jan 2011	Complete Survey expanded to cover students in all three undergraduate years on Biological Sciences (BS), Medical Biochemistry (MB), Medical Genetics (MG) and Medical Physiology (MP) programmes Response (overall) = 366 of 540 = 68% Year 1 = 156 of 224 = 70% Year 2 = 104 of 153 = 68% Year 3 = 106 of 163 = 65%

Student–Destinations sampling	Jan 2011	Feb 2011	Complete Survey expanded to cover the last three years for which DHLE data were available: 2006–2007 2007–2008 2008–2009 Survey also expanded to compare University of Leicester with national biosciences data
Student–Employability survey	Mar 2011	Apr 2011	Complete Survey sent to all final-year students on BS, MB, MG and MP programmes Response = 118 of 163 = 72%
Staff–Employability survey	Apr 2011	May 2011	Complete Survey sent to all staff involved in teaching programmes and/or as personal tutors Response = 48 of 96 = 50%
Employers–Employability survey	May 2011	Jul 2011→	Ongoing: The response to the initial survey was low, so it has been repeated. A blanket email is supplemented by targeted contacts with known employers. This forms part of an ongoing process of employer engagement.
Data analysis	Jan 2011	Jun 2011	Complete (Analysis of the results of the Employers–Employability survey is ongoing.)
Project workshop: project team and partners (preliminary results)	Apr 2011		Complete The workshop was expanded to include staff from across the College of Medicine, Biological Sciences and Psychology
Production of interim report	Apr 2011	Apr 2011	Complete Interim report submitted 7 April 2011
Employability workshop: School of Biological Sciences, University of Leicester	Superseded The original plan for a final employability workshop has been superseded by the establishment of a six-month Strategic Review of Teaching Programmes in the School of Biological Sciences (see below).		
Outputs: Intentions and destinations Student–Intentions Student–Destinations (DHLE) Employability Student–Employability Staff–Employability Curriculum developments: content and delivery (from Employability survey) Employer engagement Employers–Employability	Complete – and on-going: Intentions and destinations Student–Intentions survey completed and data analysed: paper in preparation Matching Student–Destinations data collected and analysed for 2006–2007, 2007–2008 and 2008–2009 Employability Student–Employability and Staff–Employability surveys completed and matching data analysed to produce a report identifying the strengths and weaknesses of current provision with suggestions for improvements: paper in preparation Curriculum developments The results of the Employability surveys will form part of a six-month Strategic Review of Teaching Programmes in the School of Biological Sciences (to report in October 2011) Employer engagement This survey is separate from the other elements of the project, and now forms part of a continuous process of employer engagement.		
Output: Transferrable employability methodology: documentation and processes	Ongoing An outline of the methodology is available on the project website at http://heabiowiki.leeds.ac.uk/projects/index.php/Main_Page . Negotiations are ongoing with the Centre for Bioscience and Higher Education Statistics Agency (HESA) for permission to publish the adapted questionnaires on the project website.		

Paper/conference presentation (for example, HEA Annual Conference)	Complete Presentation at UK CfB Conference – Effective Learning in the Biosciences, 30 June 2011: Mark Goodwin and Kirsty Lawrence 'Identifying and developing student aspirations: the role of the personal tutor'
Final report and project completion	Complete Report submitted 27 July 2011

Tangible outcomes

The project consisted of three separate – though linked – projects.

1) Student intentions and student destinations

The linked Student–Intentions and Student–Destinations analyses have produced a detailed picture of the motivations of biosciences students in coming to specific biosciences programmes at the University of Leicester; their career intentions, and how they change over three years of undergraduate study; and the extent to which those intentions are realised as they move from study to work. It has also highlighted the graduate destinations of our students, and changes in the destinations of our bioscience graduates over the past three years.

The main output has been information for Admissions Tutors, Personal Tutors and Careers Tutors about the motivations and career aspirations of existing undergraduates allied to matched information about the destinations of recent graduates.

2) Employability

The Student–Employability and Staff–Employability surveys have identified the perceptions of students and staff about aspects of employability in terms of how well they are covered and how important they are. This analysis will be fed into a six-month Strategic Review of Teaching Programmes in the School of Biological Sciences at UoL (to report in October 2011).

3) Employer engagement

The Employers–Employability survey is an ongoing attempt to establish links with employers, engage them in the development of transition support, and identify that factors that they look for in graduate applicants (and how these need to be supported with appropriate evidence). The intention is to develop a continually evolving database of employers, including identifying those individuals or organisations willing to become involved in aspects of University of Leicester biosciences programmes. This information will also be used to support the Careers after Biological Sciences (CABS) events managed by Chris Willmott.

Dissemination

- Presentations

- 15 March 2011: School of Biological Sciences Pedagogical Research Group (PedR Group). Kirsty Lawrence: 'Student intentions and student destinations'

- 25 March 2011: University of Leicester TULIP Workshop. Kirsty Lawrence: 'The CfB Employability Project'

- 8 April 2011: College of Medicine, Biological Science and Psychology: Research and Scholarship Underpinning Teaching and Learning (ReSULT) Workshop. Mark Goodwin: 'Employability and the biosciences graduate'

- 30 July 2011: UK CfB Conference – Effective Learning in the Biosciences 2011. Mark Goodwin and Kirsty Lawrence: 'Identifying and developing student aspirations: the role of the personal tutor'

- Website

See the project's WikiMedia project page: http://heabiowiki.leeds.ac.uk/projects/index.php/Main_Page

- Papers

Two papers are in preparation.

- One paper will use the linked data about student intentions and student destinations to argue that information about student destinations can be interpreted only in the light of data about student intentions. This is especially topical given the consultation about the Key Information Set (KIS).

- A second paper will look at the Employability work as a method of analysing – and improving – aspects of the content and delivery of curricula. It will also explore what the survey tells us about the perceptions of staff and students about the important elements in terms of employability and transition (including the role of the personal tutor).

- General media interest

Following conversations with Jeevan Vasagar, Education Editor of *The Guardian*, some details of the Student–Intentions and Student–Destinations work have been passed to Lucy Tobin – a journalist on *The Guardian*. As yet, nothing has been published.

Changes to original plan

- TULIP intern

The project was successful in obtaining a full-time six month internship under the University of Leicester's Internship Programme (TULIP). This allowed us to expand the original scope of the project, as well as providing valuable experience of the research process for a recent biosciences graduate. The successful candidate – Kirsty Lawrence – was employed from 25 October 2010 to 24 April 2011, and the expenses were met through £2,000 from the project finances, £1,000 from the Student Support and Development Service at the University of Leicester, and £3,000 match funding from the TULIP programme. (The internship included a structured set of development activities alongside the project work.)

- Student Support and Development Service

The original project plan was devised to promote a closer working relationship between the School of Biological Sciences (SoBS) and the Student Support and Development Service (SSDS). The intention was to use the results of the Employability surveys to identify weaknesses in the curriculum that could be addressed by embedding elements of SSDS employability/transition support into specific teaching sessions. This process would occur at a employability workshop involving module leaders from SoBS and staff from SSDS. There were two advantages to this approach: (a) the changes would be a response to weaknesses identified as important by students and staff, and (b) it would expose students to support that is under-used when provided centrally. Unfortunately, the analysis of the Employability surveys coincided with the loss of two key members of the project team: Paul Jackson, the Director of SSDS, in April 2011; and Martin Pennington, the Executive Administrator in SSDS and key project partner, in May 2011. Mark Goodwin is meeting with the Acting Head of the Careers Service in SSDS in August 2011 to discuss the future involvement of SSDS in the project.

- Data sensitivity

The sensitive nature of some of the data regarding student destinations and student/staff feedback on University of Leicester biosciences programmes has meant that many of the project's results have had to be reserved for internal use. However, some of the findings will be published (see Dissemination above).

Evaluation

Students

An unexpected impact of the study has been that the process of doing the surveys has informed students about the existing employability and transition support available in the School of Biological Sciences and the University of Leicester. It has also involved them in wide-ranging discussions about the curriculum and the opportunities available to them after graduation. The information about student destinations has given them realistic information about where recent bioscience graduates have found employment, and widened their sense of the options available.

Teaching staff / personal tutors

In a similar way, the project had developed a discussion about employability and transition involving module convenors and personal tutors, including a debate about what should be embedded in the teaching curriculum and what should be provided centrally (by, for example, the Student Support and Development Service). On a more practical level, the project has identified the need for personal tutors to engage with the intentions of undergraduates from that start of their degree programmes. Too often, employability and discussions about destinations are reserved for the third year. It has also identified the fact that, for many students at the University of Leicester, their immediate career intention is further study not paid employment, and that tutors need to engage with that aspiration in what is an increasingly competitive market for postgraduate programmes. All of this will feed into the current Strategic Review of Teaching Programmes and an ongoing – university wide – project to develop the role of the personal tutor.

The project team

The project has started a process of closer collaboration between the School of Biological Sciences and the Student Support and Development Service. Although the loss of some key staff has delayed the process of embedding aspects of SSDS's provision into the existing teaching programmes, the intention is to continue to build this relationship.

Mark Goodwin, in part as a consequence of the project, has taken on the role of Admissions Tutor for Biological Sciences, joined the Board of Studies, and is part of the Strategic Review of Teaching Programmes. These roles will allow him to use the project results to improve the student experience from admission to graduation and beyond.

The School of Biological Sciences

The project has provided the School of Biological Sciences with information linking the publicly available destinations data to information about student intentions. In the current climate HEIs have to engage with this information, and be seen to be doing so. For example, one outcome has been a recognition that (a) employability and transition support should start in the first year, (b) the role of the personal tutor is crucial, and (c) the process is as much about being successful in competing for postgraduate study and it is about finding graduate-level employment.

Similarly, the Employability surveys will allow us to develop the curriculum as a collaboration between staff and students, and engage employers and other HEIs in the process of identifying to what extent it equips our students to be successful in moving on to work or future study.

Project Partners and Critical Friends

Please comment on the contribution to this project from project partners/critical friends.

The project was also supported by a number of internal members of the project team and project partners:

Critical friends:

Femi Bola, Head of Employability, External & Strategic Development Services, University of East London
Dr Karen Gresty, Senior Lecturer in Biological Sciences, School of Biomedical and Biological Sciences, University of Plymouth

Dr Mark Huxham, Reader in Environmental Biology, School of Life Sciences, Edinburgh Napier University

Project team:

Dr Mark Goodwin, Teaching Fellow, GENIE CETL, Department of Genetics

Martin Pennington, Executive Administrator in SSDS and Board Director for the Association of Graduate Careers Advisory Services (AGCAS)

Geraldine Barker, Destination and Information Manager in SSDS

Kirsty Lawrence, TULIP Intern

Internal project partners

Professor Annette Cashmore, Sub Dean Medicine and Biological Sciences, Director of GENIE CETL, Chair of Working Group on Student Employability

Dr Jon Scott, Director of Biological Studies, School of Biological Sciences

Dr Chris Willmott, Senior Lecturer, Department of Biochemistry

Richard Wilcock, Career Development Manager in SSDS

All three external critical friends – Mark Huxham, Karen Gresty and Femi Bola – played an active part in the project design and the development of the project questionnaires. The majority of the contact was by email, although Mark Goodwin met Mark Huxham at Napier University in Edinburgh on 19 August 2010 to discuss the project approach. The sensitivity of the data generated by the surveys limited their involvement in the data analysis process, which was reserved for the internal project team and project partners.

The future

The project will continue in a number of ways.

Publication

The intention is to publish two papers in the autumn.

Dissemination

The full methodology – including questionnaires – will be made available online as soon as the necessary permissions have been negotiated.

Employer engagement

The Employer–Employability survey will continue beyond the end of the project as part of an ongoing project to develop a database of bioscience employers and involve willing participants in aspects of transition support.

Future research

The project has provided a snapshot of the intentions of bioscience undergraduates, and of destinations over the past three years. It has also provided information about the support provided by the current undergraduate programmes in moving from study to work. The next step is to develop a longitudinal approach that will follow a volunteer cohort of undergraduates as they move through their degree courses and on into further study or paid employment.

It would also be interesting to try the approach in a different context, to get some sense of how the pattern in the biosciences differs from that observed in other disciplines.

Feedback

I have been extremely happy with the support received from the Centre for Bioscience throughout the course of the project, not just in managing the funding but also in making some substantial and pertinent suggestions about the project design. In this connection, I should single out the particular help and advice provided by Dr Katherine Clark throughout the past year.

Finally, it is appropriate to note my gratitude to the Centre for Bioscience for all their support and assistance over the years. It is very difficult to measure the wider impact of the work done by the CfB, but I for one have found their support and materials invaluable in my work as a biosciences teacher in higher education.

Mark Goodwin, 27 July 2011