Employability

Higher education institutions engaging with employers
A guide to international best practice in engaging
employers in the curriculum

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Contents

Preface

The approach to quality and standards in Scotland is enhancement-led and learner-centred. It brings together a partnership of the Scottish Higher Education Funding Council (SHEFC), Universities Scotland, the National Union of Students in Scotland (NUS Scotland), the Higher Education Academy and the Quality Assurance Agency for Higher Education (QAA) Scotland. The enhancement themes are a key element of a five part framework which has been designed to provide an integrated approach to quality assurance and enhancement, supporting learners and staff at all levels in enhancing higher education in Scotland drawing on developing, innovative practice within the UK and internationally.

The five elements of the framework are:
- a comprehensive programme of subject level reviews undertaken by the higher education institutions themselves; guidance on internal reviews is published by SHEFC (www.shefc.ac.uk)
- enhancement-led institutional review (ELIR) run by QAA Scotland (www.qaa.ac.uk/reviews/ELIR)
- improved forms of public information about quality; guidance on the information to be published by higher education institutions is provided by SHEFC (www.shefc.ac.uk)
- a greater voice for students in institutional quality systems, supported by a national development service - student participation in quality scotland (sparqs) (www.sparqs.org.uk)
- a national programme of enhancement themes aimed at developing and sharing good practice to enhance the student learning experience, which are facilitated by QAA Scotland (www.enhancementthemes.ac.uk).

The topics for the themes are identified through consultation with the sector and implemented by steering committees whose members are drawn from the sector and the student body. The steering committees have the task of developing a programme of development activities, which draw upon national and international good practice. Publications emerging from each theme are intended to provide important reference points for higher education institutions in the ongoing strategic enhancement of their teaching and learning provision. Full details of each theme, its Steering Committee, the range of research and development activities, and the outcomes are published on the enhancement themes website (www.enhancementthemes.ac.uk).

To further support the implementation and embedding of a quality enhancement culture within the sector, including taking forward the outcomes of the various enhancement themes, a new overarching committee has been established, chaired by Professor Kenneth Miller (Vice-Principal, University of Strathclyde). It has the important dual role of keeping the five-year rolling plan of enhancement themes under review and ensuring that the themes are taken forward in ways that can best support institutional enhancement strategies. We very much hope that the new committee, working with the individual topic-based themes' steering committees, will provide a powerful vehicle for the progression of the enhancement-led approach to quality and standards in Scottish higher education.

Norman Sharp
Director, QAA Scotland

Summary

This guide provides a resource to aid higher education institutions (HEIs) in engaging employers in the curriculum. The authors surveyed UK, mainland European, North American, Australasian and South African universities and related websites to identify employers' engagement in HEI curricula to the benefit of students' employability. Suitable examples satisfying these criteria were further evaluated through correspondence with key staff involved in such programmes and by investigating additional references, where provided. The overall findings were analysed and categorised into nine different types of employer engagement in the curriculum. In the guide, examples proven as sustainable are grouped under these types and summarised as case studies, together with general principles of good practice in enhancing students' employability.

Two particularly well-established case-study examples are then further analysed, side by side. They show key features and critical success factors that could be applied to any proposed Scottish HEI/employer partnership programme as a means of assessing risk and evaluating the progress of such initiatives.

The guide's general conclusions and recommendations are followed by a substantial set of checked website references. This is to facilitate the investigations of staff in Scottish HEIs intending to engage employers in the curriculum to enhance students' employability. Readers should note that this guide focuses specifically on employers' engagement in the curriculum. They should be aware that many excellent examples of best practice in enhancing employability in related ways are provided in publications found on the Enhancement Themes website[1].

Acknowledgements

1 Introduction to the guide

1.1 Aims and context for the guide

In producing this guide, the authors have assembled a resource for the higher education sector to aid institutions in engaging employers in the curriculum, thereby enhancing the quality of student employability initiatives within those institutions.

This guide is not intended to provide a detailed survey of international activity in the area of HEI engagement with employers. Rather, it is designed to present an overview of best practice, including case studies that illustrate various effective and sustainable ways of engaging employers in the curriculum.

1.2 Intended readership

The guide will be of interest to:

- support services staff in HEIs, including careers services, educational development units, student associations and enterprise services
- senior HEI managers
- academic staff in HEIs
- HEI students.

1.3 Purposes of the guide

HEIs can use the guide to:

- strengthen existing links with employers
- develop new links at
    institutional level
    faculty/school level
    departmental level.

1.4 Types of engagement with employers

The ways in which employers can engage with the HEI curriculum
are very diverse, so in order to define particular approaches nine
discrete types of engagement have been identified. These can be
used to pinpoint an area or areas that a Scottish HEI might wish to
further enhance, or to address known shortcomings or weaknesses.
The nine types are as follows:

- work-based learning
- work-related learning
- industry in the lecture room
- industry advising the curriculum
- business mentoring relationships
- accreditation programmes
- simulation of working conditions
- employability modules
- sponsorship.

2   Case studies

2.1 Introduction

This section of the guide identifies and details 28 case studies under
the nine categories listed above, on the basis that they:

- engage employers with the HEI curriculum
- are particularly innovative, or
- are unique instances of best practice.

Some general principles of best practice were identified during the
collection and analysis of case-study examples. These are illustrated
in the following four examples. The endnote markers refer to
websites (listed in Section 5) where more information can be found.

2.1.1 University of Abertay Dundee[2]

The University of Abertay Dundee communicates clearly the elements of each undergraduate and postgraduate course with an overt recognition of employability. Course descriptions on the University's website follow a set pattern detailing:

- information about the course, what students study, how they learn and how they are assessed
- core themes to the course
- any specialist facilities that might be available
- career opportunities
- entry routes
- transferable skills gained through following the course
- teamwork and the importance of working with others.

2.1.2 University of South Australia[3]

At the University of South Australia (UniSA) the strapline 'Experience. The Difference.' is used in all university course marketing. Course brochures start with the statement:

> At UniSA we understand that theory can only take you so far. We understand that to be truly educated and informed about your field of study you need to get out of the lecture theatre and into the real world. That's why at UniSA we aim to provide our students with as much industry and professional experience as possible.
>
> Our programs are developed in close consultation with community, industry and professional bodies and provide students with opportunities to undertake industry fieldwork, participate in professional work placements, work on industry driven projects, and even travel and study overseas.

2.1.3 Swinburne University, Australia, Office of Industry Liaison[4]

At Swinburne, all activities with a business and industry focus are coordinated through the well-established Office of Industry Liaison. The Office works across the University to facilitate increased industry-linked research and commercial activity, and to improve planning and systems that enhance relationships with industry. The Office also coordinates one of the largest industry-based learning (IBL) programmes in Australia, with about 300 registered employers and about 500 student placements in 2003. Swinburne's IBL/cooperative education scheme has operated since 1963. The careers and employment service also falls within the Office of Industry Liaison.

Swinburne is launching (2005) an industry fellowship scheme to develop and enhance mutually beneficial relationships with industry partners. The scheme will enable selected faculty staff to undertake up to three months of full-time industry release. The aim is to strengthen collaboration between the University and industry for teaching and learning, industry and regional collaboration, business development and research collaboration.

Other initiatives of note at Swinburne include the curriculum framework project, where two of the stated six objectives - to provide career-oriented learning and real-world learning - will be achieved through increased industry input.

2.1.4 Victoria University, Australia, Learning in the Workplace[5]

The University's Teaching and Learning Support service provides assistance to faculty staff in developing Learning in the Workplace (LiW) components of their courses. Victoria University is committed to providing all its students with an integrated LiW-based experience as part of their studies. LiW approaches are directly implied in four of the five strategic areas identified by the University.

Teaching staff interested in developing LiW elements in their courses can use the resource website as a starting point for selecting models of LiW suitable for their students' purposes. Seven different types of

LiW are identified, with case-study examples provided. Further support is offered to staff through workshops and other forums.

Small grants (up to AUS $10,000) are available to staff to assist in developing and implementing LiW components in their courses. The LiW initiative falls under the responsibility of the Student Careers Service.

2.1.5 Case studies

The case-study examples that follow in Sections 2.2-2.10 are illustrations of engagement between HEIs and employers. They detail 28 distinctive, successful programmes and projects where students, HEIs and employers have interacted in ways that have maximised learning and enhanced students' employability. One example (see 2.10.2, Deakin University's Bachelor of Business Information Technology (BBIT)) provides a diagram that summarises the effective relationships generated by engaging employers in the curriculum. It can usefully be applied to the general theme of this guide (Figure 2.1).
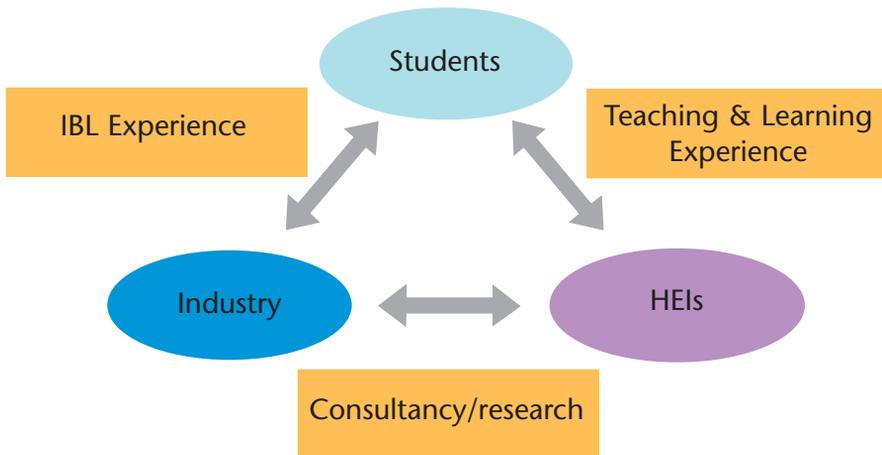

Figure 2.1: Relationships between HEIs, industry and students

2.2   Work-based learning

Work-based learning focuses on learning in the workplace and derives from work undertaken in paid or unpaid work. It involves gaining competences and knowledge in the workplace.

2.2.1 University of Bath, School of Management[6]

The University of Bath's BSc (Hons) Business Administration (four-year course) contains two distinct elements of work-based learning that are mandatory, credit-bearing components of the degree programme.

All students undertake two separate six-month industrial placements, at the end of year one and halfway through year three. Students are ultimately responsible for finding their own placements, but are supported by a dedicated Placements Office. The Placements Office manages relationships with potential employers and oversees the recruitment process. Students apply for placements on a competitive basis, with the Placements Office providing coaching and support in CV writing, completing applications and interview practice. A member of academic staff and an employer representative supervise placements. Students are required to complete assignments prior to each placement in order to examine their expected and actual development. Companies also produce appraisal forms on students' performance.

During their final year of study, students work one day a week in teams of four or five on a real-life project. Employers provide the projects, which have real commercial use and value. Projects often involve visiting employers' sites and interacting with staff. The results are presented to the employer's staff and to a university panel. These processes test students' skills in teamwork, communication, time management, negotiation, research analysis and the ability to come up with practical, creative solutions to a live business problem - all key transferable skills that employers look for in graduates.

The University of Bath's BSc (Hons) International Management and Modern Languages programme offers similar opportunities for work-based learning. The programme features a 12-month placement with an overseas employer, operating in the chosen specialist language of French, Spanish or German.

2.2.2 University of Limerick, Eire, Cooperative Education Programme[7]

The Cooperative Education Programme at the University of Limerick has been a core element of all undergraduate degrees since the University was established in 1972. All students, regardless of degree discipline, undertake a period of relevant work experience, usually for eight months. The nature and timing of placements depend entirely on degree discipline, but usually take place during the second or third year of study. Placements are a formal, accredited part of each degree programme.

The University's programme is one of the largest cooperative education programmes in the European Union (EU). On average, 2,000 students per year go on coop placements with up to 1,600 employers. Up to 30 per cent of placements might be international, and can be subsidised through EU programmes where local salary levels are particularly low. Some 75 per cent of participating employers regularly employ Limerick students after graduation, and employers are increasingly using the programme as part of their graduate recruitment strategy.

Full-time staff based in the Cooperative Education and Careers Division support the programme. Coop education managers and placement officers assist students in preparing standardised CVs, applying for placements and preparing for interviews, many of which take place on campus. All students write a final coop report and are evaluated by their employer during the placement, with supervisory visits from a faculty member.

The Cooperative Education and Careers Division also maintains ongoing relationships with all coop employers and provides a seamless service, whether they are seeking a placement student or a long-term recruit.

2.2.3 Glasgow Caledonian University, Computing and Mathematical Sciences[8]

The School of Computing and Mathematical Sciences recognises that work placements can provide students with knowledge and skills that are difficult to obtain in a university environment. All programmes offered by the School are designed to provide students with a balance of academic study and industry-required, practical skills. Most of the programmes have an industrial placement as an integral part of the course structure, and in some courses it is mandatory.

Placements are of either six or 12 months' duration. The School uses some support from the University's careers service in coaching students in CV preparation, interview skills and report writing. Early in the placement, students submit a Learning Contract which specifies the work to be undertaken, the tools needed and the skills that will be developed. The Learning Contract is similar to terms of reference, providing valuable focus and establishing clear commitment from all parties.

Students submit a 5,000-word final report which describes the work they have undertaken and their particular role in any projects, reflecting on the learning achieved in the placement. Students are also required to make a presentation detailing their work and reflective views. The Learning Contract, report and presentation are all assessed elements of the placement.

2.2.4 Business Bridge, University of Liverpool, Liverpool John Moores University and Liverpool Hope University[9]

The Business Bridge project was set up 10 years ago as a partnership venture between three Liverpool HEIs and the precursor of the North

West Regional Development Agency. Funding originally came from the European Reconstruction and Development Fund.

Business Bridge is an integral part of the Liverpool HEIs' careers services and finds work opportunities for undergraduate and postgraduate students with regional employers. Some students use Business Bridge to help in securing work placements that are a mandatory part of their course, or to identify companies on which they can base required project work. Others use Business Bridge to secure exposure to work in areas relevant to their study in order to enhance their experience and employability.

2.2.5 Drexel University, Philadelphia, USA, Cooperative Education Programme[10]

At Drexel University, the Plan of Cooperative Education enables undergraduate students to balance classroom theory with practical experience prior to graduation. Participation in cooperative education is a degree requirement for all majors in design arts, engineering, computer science, information science and technology, and for those students electing for the five or four-year coop option in arts and sciences, and business and administration.

A pioneer in cooperative education since 1919, Drexel operates one of the largest cooperative education programmes in the United States (in terms of students placed annually). Over 1,500 business, industrial, government and other institutions located in 27 states and 12 foreign countries cooperate with Drexel in offering students the opportunity to acquire practical experience in employment related to their college studies.

Cooperative education at Drexel emphasises career management through experiential learning as an integral part of the educational process. Drexel's coop education is based on paid employment in practical positions related to students' majors, consistent with the interests, abilities and aptitudes of students.

Under the Drexel Plan, students attend classes at Drexel University full-time for the entire first year. Thereafter they alternate periods of full-time classroom studies and full-time employment with university-approved employers, timings being dependent on their major. The Drexel academic year is based on four terms of three months' duration, to accommodate coop placements more easily.

Coordinators based in the Steinbright Career Development Centre support students. The coordinators assist with CV writing and interview practice, act as a point of contact for employers and students during placements, and work with students after their placements to review and evaluate their experiences. They also manage employer relationships and develop placement opportunities.

Students use the Employment Summary and Planner to evaluate their coop experience, formulate goals for their next placement, and develop their longer-term career plans as they approach graduation. Once this is completed and reviewed with the coordinator, students are awarded academic credit for the placement.

2.2.6 Auckland University of Technology, New Zealand, Faculty of Business[11]

Cooperative education has been an integral part of the Bachelor of Business degree at Auckland University of Technology (AUT) for 12 years. The concept was developed in response to employers' feedback to a survey in which the University asked 'how can AUT make graduates better?'. The need for hands-on practical application of knowledge acquired during study was a common response.

Students undertake 12 weeks of full-time work placement and also complete academic studies at the same time, outside working hours. Most students do their placement (which equates to four papers) during their final year, and it is common for students to work longer term at their workplace. Approximately 80 per cent of students with an accounting major receive job offers during or following coop; the percentage is only slightly lower for other majors.

Students are responsible for finding their own placement, with support from a qualified career practitioner who works closely with faculty staff and employers. Many employers use the programme as an integral part of their staffing and recruitment processes.

The Bachelor of Business degree also has an advisory committee which includes representatives from the business community. The advisory committee provides regular input into the ongoing development of the course.

2.2.7 CHN University, Institute of International Hospitality Management, the Netherlands[12][13]

At CHN in the Netherlands, most courses are highly vocational and include both work-based and work-related learning opportunities. Two features of the programmes provide employability elements for students. Primarily, the curriculum achieves highly practical training through regular placements for students in the hotel or restaurants owned by the Institute itself, or sometimes where necessary with external employers.

Secondly, much of the classroom teaching is delivered using a problem-based learning approach. Students work regularly in small groups studying both realistic and real-life projects, discussing and analysing them to devise potential solutions as a group. Students still attend some lectures and workshops, but nowhere near as many as they would in a traditional university education.

2.2.8 Supélec, Paris, Electrical Engineering and Computer Science[14]

Supélec is a grande école specialising in electrical engineering and computer science. Students following the engineering degree course must undertake three periods of work-based learning as an integral part of their studies. Each one is designed to deepen their exposure to the world of work, as follows:

- a practical training period of at least one month between the first and second years, to provide their first taste of industry
- a student engineer training period of two months (which can be extended to a sandwich-style year-long placement) between the second and third years, designed for students to put knowledge gained into practice and to develop their interpersonal skills
- an end-of-studies training period of five months integrated into the third year of study, where students work as operational engineers; results of this final training period are taken into account in final degree assessments.

Some students work in university laboratories, others in industry and some overseas.

2.3   Work-related learning

Work-related learning is learning from study or experiences in, or related to, the world or work. Students are usually encouraged to reflect and report on the work-relevant skills they have developed (for example in work experience placements).

2.3.1 University of Leeds School of Geography, Context case studies[15]

In a project partly funded by the Learning and Teaching Support Network and the Enhancing Student Employability Coordination Team, the School of Geography at Leeds has set up Context to promote the use of case materials in higher education and employment. Context case materials are based as closely as possible on real work situations and issues identified in business, government and the voluntary sector. Some have been developed with employer funding, for instance from the Environment Agency.

The case studies are designed to give students work experience without going to the workplace. They are freely available on the Context and Higher Education Academy websites and are being used across a range of HEIs.

2.3.2 Aalborg University, Denmark, Engineering and Science[16]

The Faculty of Engineering and Science at Aalborg University offers over 20 master's programmes. From day one until graduation, students work on projects in groups. Every semester, groups of up to six students carry out major projects, each requiring analysis, definition in engineering terms, problem-solving and documentation in terms of a report or scientific paper. Industry sponsors of students on the course provide some projects for analysis.

These problem-based learning methods of study mean that students develop strong skills in problem-solving, cooperation and project management.

2.4   Industry in the lecture room

Industry in the lecture room describes instances where employers are engaged to deliver aspects of the curriculum directly to students. This activity frequently involves the use of case studies provided by employers, and work-related interpretation of the curriculum by the presenting employer.

2.4.1 Cardiff University, Accounting and Finance[17]

Cardiff University's Accounting Department and the Cardiff office of PricewaterhouseCoopers (PwC) have a longstanding relationship. PwC provides a newly qualified accountant to act as a tutor for the second-year Management Accounting module. Students attend the academic lecture programme, which is supported by fortnightly tutorial sessions with the accountant. The accountant devises supporting material to examine the syllabus in more depth and can add practical experience to the learning. The programme also affords students the opportunity to discuss with a recent graduate the realities of working in the profession.

2.4.2 University of Notre Dame, USA, Integrated Engineering and Business Practices Programme[18]

Notre Dame's Integrated Engineering and Business Practices Programme is a two-course sequence designed to help engineering students to develop an understanding of the dynamics of corporate operations. The aim is to make students more effective in the workplace, better preparing them for managerial or technical leadership roles in the corporate environment.

During the course of the programme, students acquire a working knowledge of the fundamental processes of business, gain an appreciation of the various functional areas of a corporation, establish an ethical perspective of the role of engineering in business, and begin to build the interpersonal, team and managerial skills required to make significant contributions to a business enterprise.

The courses began in 2001 and are led by staff who have had significant careers in industry. The staff bring real-life expertise and current management thinking to the lecture room. In addition, there are regular guest speakers, many of whom are engineers working as managers in high-level corporate positions. The course is the result of collaboration between the Engineering School and Mendoza College of Business. Teaching methods include lectures, business simulation and case-study projects.

The course leaders have developed numerous industry partners who provide speakers, case materials and field trips. The College of Engineering's Industry Advisory Council and the Notre Dame alumni network are also important sources of industry support for the courses.

2.4.3 Deakin University, Australia, School of Information Systems[19]

The School of Information Systems has developed a close relationship with GS1 Australia (formerly EAN), a non-profit-making organisation which has developed and manufactured an internationally accepted bar-coding system. This system has widespread uses in supply chain

management. Two courses available on Deakin's undergraduate and postgraduate programmes - e-Commerce Systems for Business and e-Commerce Business Processes - are based around the supply chain management system provided by GS1. GS1 provides regular guest lecturers for the programme and all students visit the GS1 Knowledge Centre for a hands-on discovery session.

GS1 also sponsors scholarships for students wishing to study the Graduate Certificate in Supply Chain Management at Deakin.

2.4.4 Institut Français du Pétrole, Paris[20]

The Institut Français du Pétrole in Paris is a postgraduate school for specialised programmes preparing students to work in the oil industry. The School considers itself to be fully industrially integrated, with the following features:

- 500 experts from industry lecturing at the School
- 50 companies sponsoring students each year, with over 60 per cent of students being directly sponsored by industry
- study programmes updated by steering committees composed of representatives from European industry
- opportunity for work placements
- many theses written in collaboration with industry.

The end result is that students are operationally effective on graduation from the School, and rates of recruitment on graduation run at 99 per cent.

2.5   Industry advising the curriculum

Industry advising the curriculum refers to representatives of relevant employers' organisations advising staff and departments on the content and delivery of the curriculum.

2.5.1 Johnson and Wales University, USA[21][22]

The use of industry to inform the curriculum can be extensive, as demonstrated by Johnson and Wales University in the USA. Johnson and Wales has been engaged in a curriculum development process called DACUM (Developing a Curriculum), managed by the Training Resource Centre at Eastern Kentucky University. Courses at Johnson and Wales are highly career focused and the DACUM methodology for occupational analysis is highly relevant to this environment.

The DACUM process involves assembling a panel of eight to 10 expert workers identified as best in their category by their employer. The panel is usually assembled on-campus for two days, and two facilitators trained in the DACUM process are assigned to work with the panel during this time. The team identifies the duties and tasks for their position, along with the general knowledge, skills and worker behaviours that are needed. A chart is produced which is then sent out to more than 100 other similar workers for verification.

Once verified the faculty receives the chart and compares the courses being taught with the skills needed, in order to determine if they are missing anything in the curriculum, or if they need to expand the time dedicated or the depth of subject matter. This process is extremely effective for the many courses at the University with highly vocational elements.

2.5.2 McMaster University, Canada, Engineering[23]

At McMaster University in Canada the Engineering Advisory Board's members from industry provide input to the curriculum on a semi-annual basis. In addition, the Engineering Alumni Advisory Committee has an important role to play in encouraging alumni to volunteer as industry speakers and as mentors to undergraduates through the student/alumni mentoring programme. This ensures that up-to-date industrial knowledge is accessible to students, with the enhancement of industry experts having a natural affinity with McMaster students. Gaining commitment from alumni is often easier than making random approaches to industry.

These advisory panels are also important in supporting the faculty to market a well-established cooperative education programme through which about 25 per cent of students undertake an industrial placement during their degree studies.

2.5.3 University of Abertay Dundee, School of Computing and Creative Technologies[24][25]

The University of Abertay Dundee uses its International Centre for Computing and Virtual Entertainment (IC-CAVE) to ensure that undergraduate and postgraduate courses in the School of Computing and Creative Technologies remain directly relevant to potential employers and the games industry.

Some computer arts students work part-time for IC-CAVE, which attracts visiting fellows in games, audio, arts, multimedia and virtual reality from around the world.

IC-CAVE also arranges master classes for games companies. These give the opportunity for final-year students to meet prospective employers, as well as providing cutting-edge ideas for research and final-year projects.

2.5.4 Edith Cowan University, Australia, Regional Professional Studies[26][26a]

At Edith Cowan University in Western Australia, the Faculty of Regional Professional Studies has undertaken a curriculum development project with three intended outcomes:

- to contribute to regional capacity-building by providing regionally relevant professionals
- to enhance student employability
- to enhance the retention of regional professionals

Consultation with relevant industries has been incorporated into the curriculum development process through the formation of faculty-based Industry Consultative Committees (ICCs). The ICCs have been crucial to building into the programmes the multiskilling

required within specific rural and regional workplaces. While urban workers can demonstrate a high degree of specialisation, this is not always possible for workers in rural or regional bases, who need to be able to demonstrate a wide range of skills to be of real value in their workplace.

A strong example of the outcomes of the project is the development of a new four-year Bachelor of Education degree. This degree prepares new teachers specifically for working in a regional or rural context, where classes may often be of mixed age groups and may well cross the traditional primary/secondary divide.

2.6   Business mentoring relationships

Business mentoring relationships enhance the curriculum through employers' engagement with individual students or groups of students, giving them access to relevant professional expertise and guidance.

2.6.1 University of Newcastle upon Tyne, Business Enterprise Module[27]

The Business Enterprise module at the University of Newcastle upon Tyne was designed by the Careers Service and the Business School in 1999 and is available to all students studying at the University. It aims to give students an insight into the real world of work and how to run a business.

Over the course of a year, students set up a company, trade, work with industry-based mentors, present an annual report to investors and finally wind up the company. The module runs with support from the Graduate Programme (a higher education element of the Young Enterprise scheme). During the set-up and trading phases, each company is supported by an outside businessperson who acts as a mentor. Further specialist advice comes from a second group of mentors from banking, public relations, sales and legal firms who contribute their knowledge to the course.

Completion of the module entitles students to an award recognised by the small business sector, which in turn informs the curriculum, ensuring that the module remains flexible as business changes

Some students choose to continue running their companies after completion of the course, and some have entered self-employment through this route.

2.6.2 Robert Gordon University, Human Resource Management, Aberdeen Business School[28 28a 28b]

The Aberdeen Business School at Robert Gordon University runs a full-time, one-year postgraduate course in Human Resource Management (HRM) which is fully accredited by the Chartered Institute of Personnel and Development (CIPD). As well as including a very successful placement scheme where students gain exposure to real human resources practice during the course, the HRM programme offers students the opportunity to participate in a mentoring scheme using experienced human resources practitioners.

The aim of the scheme is to ease the transition for students from study to working in a professional human resources role. The scheme has operated since 2002 with support from the local CIPD branch, which assists in identifying potential mentors. Participation is voluntary and allocation to mentors is largely random. Mentoring relationships give students access to real case studies and allow them to share real business knowledge and experience.

Mentors and mentees both attend separate briefing and induction sessions to assist them in gaining the maximum benefit from the scheme. At their first meeting they sign a mentoring agreement clarifying their roles and commitment. They then meet a further four times (minimum) during the academic year, although in reality they generally meet more often than this and meetings are supplemented by regular email communication. A scheme coordinator offers support to participants and monitors how the relationships are developing, helping to ensure that both parties gain maximum benefit from the initiative.

Mentors often offer students advice on CV and interview preparation and job hunting, and regularly provide real-life case studies for course assignments.

2.7 Accreditation programmes

Accreditation programmes involve academic partnerships with relevant professional bodies to align the curriculum with the requirements of professional syllabuses and examinations.

2.7.1 Heriot-Watt University, electrical, electronic and computer engineering[29]

The Institution of Electronic Engineers accredits master's degree programmes where students take up industry placement options during the latter stages of their study. Placements are salaried and last for five months. Heriot Watt's programme is run with the close cooperation of a variety of companies that provide opportunities for practical experience and contribute to course planning through a steering committee.

2.7.2 University of Newcastle upon Tyne, Flying Start programme[30 31 32]

The BA (Hons) Business Accounting and Finance four-year degree programme has been set up as a partnership between the University of Newcastle upon Tyne, PwC LLP and the Institute of Chartered Accountants in England and Wales (ICAEW). The programme enrolled its first group of students in autumn 2002 and demand remains extremely high.

The programme offers students the opportunity over a four-year period to obtain their business and accounting degree, undertake a series of paid work placements with PwC and accelerate their qualification with the ICAEW. The ICAEW has accredited some academic elements of the course, and the work experience with PwC contributes to the practical experience requirements laid down by the ICAEW.

The work placements fall in the spring terms of years two, three and four of the course. This is to correlate with the peak workloads of PwC and ensure that students obtain maximum benefit from their work experience. Student performance, both academically and on placement, is reviewed regularly throughout the programme.

A similar accreditation partnership is being established between Lancaster University Management School, Ernst and Young and the Institute of Chartered Accountants of Scotland.33 The first intake of students will start the new degree programme, a BSc (Hons) in Accounting, Auditing and Finance, in 2006.

2.8   Simulation of working conditions

Simulation of working conditions involves curriculum design to replicate real workplace facilities and experience. It usually involves significant interaction with employers, for instance regarding teaching, placements and mock clients.

2.8.1 Cardiff University, Postgraduate Diploma in Newspaper Journalism[34]

The one-year Postgraduate Diploma in Newspaper Journalism at Cardiff is designed to equip students for an entry-level position in newspaper journalism, and to ensure that they are immediately able to be productive in the regional and national press. The course is run by tutors who are journalists with experience of all areas of the newspaper industry.

The course is highly practical and to a large extent seeks to simulate the working conditions of a newspaper. Students are treated as working journalists from day one. Each student is allocated a 'new patch' and is expected to produce regular stories from their patch during the course of the year.

Students are taught using the most up-to-date publishing technology, and master sub-editing, layout and design skills in page make-up. During the second term, students work as in real life to

produce a bi-weekly newspaper, bringing all these skills together and adhering to real-life deadlines.

Over Easter, students complete industrial placements with national and regional newspapers to test and apply their experience in the real world. They receive support from the Department in seeking placements, including CV writing, how to draft an effective covering letter and how to use their networks to seek work. Placements are usually unpaid. Employment rates for students coming off the course are extremely high, mainly because of the thoroughly practical nature of the training.

2.8.2 Swinburne University, Australia, Faculty of Design[35]

The Faculty of Design at Swinburne operates a Design Centre which is run as part of an honours programme. The Centre operates as a professional design and research consultancy, with fees earned offsetting programme delivery costs. The Centre takes in design projects from a wide variety of clients, including large corporations, government agencies and start-up businesses. Students are required to work on all aspects of professional design, taking different roles within design teams over the course of the year of study.

2.9   Employability modules

Employability modules identify key transferable skills and attributes from the curriculum through a bespoke module, designed in conjunction with relevant employers.

2.9.1 Royal Academy of Music;[36] Royal Scottish Academy of Music and Drama[37]

The Royal Academy of Music acknowledges the need for contemporary musicians to have a solid grasp of basic business skills and techniques across a number of diverse professional contexts. To address this need, the Academy has designed and integrated into the undergraduate curriculum two distinct modules: Music in the Community and Business for Musicians.

Music in the Community provides students with the opportunity to devise and execute professional education projects through real professional partnerships with community organisations. The Business for Musicians module covers every element of business administration, geared specifically towards the needs of a performing artist - for example, tax and law for the musician, design and production of business plans, basic computer literacy and how to organise a concert.

The Royal Scottish Academy of Music and Drama is also working on a number of similar employability initiatives. The Music Department is currently developing a programme entitled Career and Enterprise Skills, involving seminars and workshops with external speakers as well as academy staff. Students are also being given the opportunity to employ their skills within the community.

The Drama Department has a strand of professional practice units running throughout the undergraduate years. These cover areas specific to actors, such as audition technique, tax, Equity, marketing and fundraising. Potential employers are invited to teach and direct on the course, and in the final year some students might undertake professional engagements that are assessed and accredited as contributing to their degree.

2.9.2 University of Wollongong, Australia, Arts Internships[38]

Since 2003, BA students at Wollongong have been able to take an Arts Internship module in their third year. This module comprises a work placement supervised by an academic member of staff, and is integrated into the curriculum through on-campus seminars and a research project. It provides an opportunity at the end of the degree for students to reflect on and develop strategies for using the knowledge and skills they have developed through their arts studies in the world of work and in the pursuit of career goals.

The programme was established with three main aims:

- to place students with an employer as part of the course
- to show employers that BA students have a diverse range of skills, critical to the operations of a wide range of workplaces, which go beyond the traditional views of a BA degree
- to provide BA students with an opportunity to see how the skills and knowledge acquired by them throughout their degree can be applied in the workplace.

Many students are placed within the media and public relations sectors, with local councils and government and in commercial enterprises. The programme is offered in conjunction with the careers service.

2.10 Sponsorship

Sponsorship is the provision of any combination of funding, employment opportunities or teaching materials to students/modules/departments/faculties in order to support and promote students' exposure to workplace practice relevant to the curriculum.

2.10.1 RMIT University, Melbourne, Australia, School of Applied Communication[39]

RMIT programmes in the School of Applied Communication link with both industry and community through programme development committees, which facilitate contributions to academic programmes from industry experts.

Each year a number of prizes are awarded to students who have achieved outstanding results. Some are financial awards, but others are industry attachments with broadcasters and other media outlets. This is an innovative way of offering students practical, high-quality exposure to industry expertise.

2.10.2 Deakin University, Australia, Bachelor of Business Information Technology[40]

The recently established BBIT at Deakin is a collaboration between the Faculty of Business and Law and the Faculty of Science and Technology. The course has been developed in conjunction with industry to provide students with the information technology (IT) and business skills they need for the challenging and diverse career options available to them. It is also a direct response to the worldwide demand for professional expertise in IT. The BBIT offers students the opportunity to study IT and also to work in industry.

The Australian Computer Society, in allowing graduates to be eligible for membership, accredits the BBIT at the highest level. Incorporated into the course are two periods of industry-based learning. Students spend approximately 34 weeks (two 17-week placements) working in industry, developing an understanding of IT in a business environment.

The BBIT is sponsored by a number of IT industry partners, which have agreed to award scholarships to most students for a period of three years. The sponsoring partners also provide the industry placements and many project case studies for students on the programme.

3   Case study analyses

The case studies in Section 2 illustrate various ways in which employers can be engaged in the curriculum. When assessing the potential for collaboration with employers' organisations, there are critical considerations that - if heeded and met - are more likely to result in a successful venture. Further analysis of two of the case studies provided tables of features and critical factors for the success and sustainability of the programmes concerned. These tables are presented below.

3.1 Features of employer engagement

The two case studies deconstructed in this manner were the Cooperative Education Programme at the University of Limerick (see Section 2.2.2) and the Flying Start programme at the University of Newcastle upon Tyne (see Section 2.7.2). Both of these institutions have engaged with employers' organisations and other external partners to deliver sustainable programmes that have influenced the academic curriculum and enhanced student employability. The features of both programmes are summarised in Table 3.1.

Table 3.1

Feature	Limerick	Newcastle upon Tyne
Stakeholders	The University; the Irish State; regional employers	The University; the professional body, Institute of Chartered Accountants in England and Wales; the employer, PWC LLP
Objectives	To establish a new university that is relevant to the times and to the nation's needs, and to provide students with education to the highest levels in the application as well as the acquisition of knowledge	The University: to develop a highly innovative and valued degree programme that offers students an enhanced qualification and business-based training, satisfying the academic requirements of both the University and the ICAEW.
Funding	World Bank European Investment Bank University of Limerick Foundation	The ICAEW: to provide innovative training routes to obtaining qualification PwC: to attract top students to the firm at undergraduate stage, provide professionally recognised work experience as part of an academic programme, and enhance resourcing options during peak periods

Feature	Limerick	Newcastle upon Tyne
Timing	From agreement at the establishment of the University	Two-year lead time, including university approval, UCAS code, student applications, selection and admissions for course commencing September 2002; recruitment of Course Director
Key components	The University (registry) The University (Cooperative Education and Careers Division) The University (all faculties) Regional employers Coop students	The University (registry) The University (Department of Accounting and Finance) ICAEW Education and Training (syllabus) PwC professional education PwC Graduate Resourcing PwC Newcastle partnership Newcastle students
Beneficiaries	The University, Limerick students and graduates, regional economy, regional employers	Newcastle students, PwC UK partnership, PwC Graduate Resourcing, university department, faculty and leadership

3.2 Critical success factors

The two programmes were evaluated against critical success factors. The findings, including a commentary on the contribution made to the successful programmes, are given in Table 3.2. Use of this approach is recommended when assessing the viability and sustainability of any proposed venture between HEIs and employers' organisations with the aim of contributing to or influencing the academic curriculum. If any factor produces a 'no' response at the initial planning stage or during a review evaluation, immediate investigation and adjustment should be completed.

Table 3.2: Critical success factors for collaborative programmes

Factor	Contribution	Yes?	No?
Timing	Have you identified an implementation date, working backwards and recognising constraints on all partners?		
Clarity	Do you understand what you are seeking to achieve and can you explain this concisely to others?		
Deal makers	Can you understand partners' values and establish a common set of objectives?		
Will to succeed	Just how much do you need to do this? Is it a number one priority? How important is it for your intended partners?		
Win-win	Do all partners stand to gain from the proposed collaboration?		
Funding	What will be the demand on funding streams? Is this realistic and achievable?		
Resources	In addition to funding, are there enough hours for your team to engage and deliver the project?		
Critical input	Key team strengths - do you have them? Do your intended partners have them?		
Adaptability	Can your plan adapt to the possible changing requirements of your proposed partners?		
Cultural alignment	Do you have adequate understanding of the cultures that will need to blend in order for the programme to succeed?		
Top-down	Do institutional leaders not only approve but actively support and champion the proposals?		
Critical path/ review	Are all the key interactions and related timings understood? Are suitable evaluation steps in place?		

4   Conclusions and recommendations

● Information

Research in preparation for this publication identified that the majority of information available on employability is highly academic in nature and lacks reference to practical applications.

● Progressiveness

Australian, Canadian, UK and USA HEIs are more progressive in employer engagement than mainland European institutions.

● Integration and reflective learning

Placement and cooperative education programmes are the most popular and common means of employer engagement. There is, however, a need for integration and reflective learning within the curriculum to ensure that maximum benefits are derived. Such programmes are too often non-mandatory or not credit-bearing and consequently compare unfavourably with best practice in this area (see Section 2.2). All such programmes require adequate student support, for example in placement search and application processes, pre-placement briefings, academic contact while on placement and reflective debriefing on return to full academic programmes. Failure to deliver these steps will minimise the potential enhancement of student employability through these types of programmes.

● Consolidation

Enhancement of student employability is greatly assisted by the use of written methods to consolidate reflective learning, such as diaries or personal development plans.

● Motivation

It is essential that HEIs identify commercial motivations for potential industrial partners - or equivalent factors for public or not-for-profit sectors - when seeking to involve them in the curriculum. This will maximise potential approaches and increase the chances of positive responses.

- Contact point

Many HEIs lack a central point of contact for employers' organisations/industry. Swinburne University's Office of Industry Liaison is an example of best practice in this function (see Section 2.1.3).

- Overt recognition

The course outline material available to students and employers often contains too little reference to employers' engagement. Examples of HEIs with good practice in this area are the University of Abertay Dundee and the UniSA (see Sections 2.1.1 and 2.1.2).

- Explicit funding

There is a general lack of explicit funding to explore and implement employability-related elements in course design. An example of best practice in this area is Victoria University's LiW programme (see Section 2.1.4).

5   References

5.1   Specific websites (related to case-study examples in Section 2)

1 www.enhancementthemes.ac.uk/
2 www.abertay.ac.uk/
3 www.unisa.edu.au/
4 www.swin.edu.au/corporate/ili/
5 www.tls.vu.edu.au/SCS/LiW/
6 www.bath.ac.uk/management/courses/undergraduate/
7 www.ul.ie/coop/
8 www.gcal.ac.uk/cms/
9 www.business-bridge.org.uk/
10 www.drexel.edu/scdc/
11 www.aut.ac.nz/schools/business/co-operative_education/
12 www.chn.nl/

13 www.studyeurope.hobsons.com/14 www.supelec.fr/
15 www.geog.leeds.ac.uk/courses/other/casestudies/ and
     www.heacademy.ac.uk/938.htm
16 www.auc.dk/
17 www.cardiff.ac.uk/
18 www.nd/edu/~engineer/engbiz/
19 www.gs1au.org/education/
20 www.ifp-school.com/
21 www.dacum.org/
22 www.jwu.edu/
23 www.eng.mcmaster.ca/
24 www.ic-cave.com/
25 www.abertay.ac.uk/schools/CAT/
26 www.southwest.ecu.edu.au/
26a Hatton E and Haines T Enhancing Student Employability through
Regional Capacity Building, Australia: Edith Cowan University,
Department of Regional Professional Studies
27 www.ncl.ac.uk/teachingexcellence/teaching/modules/business/
28 www.rgu.ac.uk/abs/postgraduate/
28a Harvey L, Locke W and Morey A (2002) Enhancing
employability, recognising diversity, London: Universities UK and CSU
28b Macfarlane-Dick D and Roy A (eds) (2005) Enhancing Student
Employability: Innovative Projects from across the Curriculum,
Glasgow: Scottish QAA
29 www.ece.eps.hw.ac.uk/courses/ug/ee/
30 www.ncl.ac.uk/flyingstart/
31 www.pwc.com/uk/eng/car-inexp/schools/index.html
32 www.icaew.co.uk/careers/
33 www.lums.lancs.ac.uk/Departments/Accounting/UgProg/eydegree/
34 www.cardiff.ac.uk/jomec/
35 www.hed.swin.edu.au/design/designcentre/
36 www.ram.ac.uk/
37 www.rsamd.ac.uk/
38 www.uow.edu.au/arts/

39 www.rmit.edu.au/appliedcommunication/
40 www.deakin.edu.au/bbit/

5.2 Related websites

ASET - www.aset.ac.uk/

Association of Graduate Careers Advisory Services - www.agcas.org.uk/

Association of Graduate Recruiters - www.agr.org.uk/

Australian Association of Graduate Employers Ltd - www.aage.com.au/

Australian Universities Quality Forum - www.auqa.edu.au/

Canadian Association of Career Educators and Employers - www.cacee.com/

Canadian Association for Internship Programs - www.cafip.ca/

Careers Research and Advisory Centre - www.crac.org.uk/

Council for Industry and Higher Education - www.cihe-uk.com/

Department for Education and Skills - www.dfes.gov.uk/

Enhancement Themes - www.enhancementthemes.ac.uk/

Exchange magazine - www.exchange.ac.uk/

Forum Européen de l'Orientation Académique - www.fedora.eu.org/

Higher Education Academy - www.heacademy.ac.uk/

Higher Education Careers Service Unit - www.hecsu.ac.uk

Hobsons - www.hobsons.com/

National Association of Colleges and Employers - www.naceweb.org/

National Council for Work Experience - www.work-experience.org/

Petrus Communications - www.petruscommunications.com/

Prospects - www.prospects.ac.uk/

Quality Research International - www.qualityresearchinternational.com/

South African Graduate Recruiters Association - www.sagra.org.za/

Universities Scotland - www.universities-scotland.ac.uk/

Universities UK - www.universitiesuk.ac.uk/

5.3   Related publications

Williamson G and Mannion M Enhancing Employability via Placement: a Longitudinal Perspective, Glasgow: Glasgow Caledonian University, School of Computing and Mathematical Sciences

Enhancing Student Employability: Higher Education and Workforce Development - Ninth Higher Education International Seminar, January 2005, Birmingham

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Hobsons (2003) Study Europe Guide, Hobsons

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