University of the Arts London
HEIF Funded Project 2007 – 2008
Professional Development and Enterprise in the Curriculum

'Bold resourcefulness:'

re-defining employability and entrepreneurial learning

Stage 1 Report – Overview and Executive Summary

An investigation into the provision of professional development and entrepreneurial learning in UAL's curriculum

What the graduates say:

'I feel I wasn't at all prepared for the professional world. Most of the time, I feel that I am lacking the skills to do the work that is expected of me.'

'Being in education is easy because you can put off the real world for so long and then finally we're at the point now where it's… OK, what are you going to do? I feel anxiety about the whole thing….'

'It was that moment…..in my third year, when I realised: we are the next generation.'

Prepared by: Linda Ball, Senior Research Fellow, Centre for Learning and Teaching in Art and Design (CLTAD), May 2008.

'Bold resourcefulness:'
re-defining employability and entrepreneurial learning

Stage 1 Report – Overview

EXECUTIVE SUMMARY

❑ This two-year investigation into the provision and quality of professional development, **employability and enterprise (e&e)** learning in UAL's curriculum aims to stimulate debate about how students are prepared for the workplace, the wider benefits of a creative education and the key issues for emerging graduates in a changing world. The findings will lead to improvements in the key areas of: **student satisfaction** and **graduate employment** and contribute to a University-wide **employability strategy**.

❑ Whilst the University produces many high-achieving graduates in the arts and creative industries, **overall its graduate destinations profile is weaker than for comparable institutions.[1]** There is more work to be done to **prepare students for a successful and confident transition from their courses**.

❑ An extensive mapping exercise of the provision of **e&e** learning at UAL was undertaken during 2007-8, together with a literature survey, and provides the underpinning rationale, a review of pedagogic models and exemplars of practice to inform priorities and recommendations. These are presented in a series of Papers, signposted in downloadable format from CLTAD website.

❑ **Broader definitions for entrepreneurial learning in society** – **'bold resourcefulness'** extend beyond a business model, to embrace attributes required to engage with the complexities and demands of life in an uncertain world.

❑ UAL's vibrant curriculum offers well-established opportunities and support for venture creation and the development of **e&e** learning, yet there are problems relating to **student confidence and articulation of achievement**.

❑ The **pedagogies of art and design** higher education provide a rich experience for students with **experiential learning at the heart of the curriculum**, and UAL presents many exemplars of good practice, but valuable opportunities can be missed through shared critical reflection, to articulate and make connections between learning and its impact on students' career development and aspirations.

❑ The study identified key areas for development and consultation:
- building on and celebrating the strengths of the curriculum and exemplars of practice
- involving staff and students in developing a common language for **e&e** and PPD, debating its importance in relation to subject specific creative practice, where it occurs, what learning underpins it and how it might be clearly valued
- improving information about graduate career paths and wider opportunities to feed into courses
- research into **e&e** learning to explore student experiences of creative practice in relation to aspirations and career patterns.

❑ Preliminary recommendations include a UAL **e&e** award at the point of graduation, in recognition for specific accumulated learning from work placements, live projects, commissions, external projects and work-related learning of all kinds, in which students reflect on and articulate the value of achievements and experiences in relation to career aspirations.

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[1] Dodd K (2007) Destination data of graduates from University of the Arts London, Creative Careers.

1 AIMS AND RATIONALE

1.1 This two-year investigation into the provision and quality of **professional development, employability and enterprise learning** in UAL's curriculum aims to stimulate debate about how students are prepared for the workplace, the wider benefits of a creative education and the key issues for emerging graduates in a changing world. The findings will contribute to **UAL's employability strategy** and improvements in the student experience, to prepare graduates for their working lives. The work is being undertaken by Linda Ball, Senior Research Fellow in CLTAD on a 0.6 contract.

1.2 Reasons for the study

Among UAL's graduate successes, many creative professionals have achieved international standing and recognition in the arts and creative industries, but the University's profile in relation to graduate destinations overall is weaker than for comparable institutions.[2] Further emphasis is needed on the development and success of the majority of graduates.

The University believes that all its graduates should have the opportunity to reach their potential and realises that there is more work to be done to strengthen the curriculum and the impact of Personal and Professional Development (PPD) to improve students' capacity for successful employment and self-employment.

1.3 What's the problem – why aren't they successful?

Research into creative graduates' early career experiences reveals a number of inhibiting factors:

- ❑ 'Slow to get started' in their careers, and tendency for an erratic transition into work – for a variety of reasons, not the least being the fragmented nature of the creative industries[3]
- ❑ The prevalence of freelance and portfolio working patterns makes it hard for new graduates to see entry points
- ❑ Graduate debt, leading to deferral of 'professional' career decisions, hinders the transformation from student to professional mindset
- ❑ The less successful have a tendency to measure themselves against those who quickly achieve recognition in their subject related fields
- ❑ Students lack confidence in identifying and explaining their strengths and achievements, and making a connection between what they have learned and where they might fit in, in the world of work
- ❑ Students are not always aware of the wider opportunities open to them, which means that they may limit themselves in their job search.[4]

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[2] HESA (2007) 'Destinations of Leavers in Higher Education'.

[3] Harvey & Blackwell (1999) 'Destinations and Reflections: careers of British art, craft and design graduates', CRQ, UCE.

[4] Findings relating to graduate working patterns are summarised from sources in Stage 1 literature review and preliminary work (see Bibliography).

1.4 The current context

The foreground for this study is an examination of definitions and exemplars of practice for **entrepreneurial and employability (e&e)** learning and teaching in the curriculum,[5] in relation to the current context for higher education, the creative industries and wider economy, and the career patterns and aspirations for graduates in creative subjects.

A literature review and preliminary research reveals common ground between the concepts of professional development, **enterprise and employability learning (e&e)**.

Employability *'is having the skills and abilities to practice professionally. Life skills which include: emotional intelligence, self-efficacy; confidence, team-working, communication; being enterprising – a way of doing that enables students to act in the world.'*[6] **Enterprise** involves the additional assets of being able to spot and act on opportunities, being resourceful, proactive, having a vision; project management, networking and financial acumen.

A broader definition for **entrepreneurial learning in society** – **'bold resourcefulness'** - extends beyond a 'business' model, providing *'an opportunity for individuals and organisations of all kinds and in all walks of life to cope with, provoke, and perhaps enjoy, an increasingly complex and uncertain world.'*[7] - something that every one of us might subscribe to and benefit from.

2 KEY FINDINGS

For Stage 1, an extensive mapping exercise was undertaken during 2007-8, and provides the underpinning rationale, informed by a literature survey, a review of pedagogic models and exemplars of practice at UAL to inform priorities and recommendations.   These are presented in a series of Papers, signposted in downloadable format from CLTAD website.

2.1 Strengths of the University's provision

Creativity and its transfer are key for the growth of the creative industries, and UAL has well-established models for collaborative working to create a bridge between higher education and the creative and cultural sectors, and in the wider community.

The University's vibrant curriculum[8] offers a mixed economy of opportunities for **e&e** learning and professional development, many involving industry partners in **key areas**:

❑ The attributes and behaviours of **e&e** learning are found to be naturally located in **creative practice, in well-established pedagogic models, with experiential learning at the core.** An evolving curriculum allows for updating and new initiatives in response to changing needs of industry, students and academic priorities, with a wealth of live projects, competitions, commissions and 'entrepreneurial' experiences.

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[5] Presented in 5 Working Papers for those who wish to gain a fuller understanding of theoretical and contextual issues in these areas, downloadable from the CLTAD website.
[6] UAL Professional Development network
[7] Gibb A (2005) '*Towards the Entrepreneurial University: Entrepreneurship Education as the Level for Change,*' NGCE Policy Paper 3, NGCE Birmingham.
[8] The key contributors to entrepreneurial learning in the University, the range of models of practice, and specific examples of learning activities and opportunities within the University's courses are presented in some detail in a series of 4 Working Papers, p 00..

- **Personal and Professional Development (PPD)** is articulated and integrated into course design and delivery and ranges from embedded and core units of study in all courses to ad-hoc events and activities, both accredited and non-accredited. Courses re-interpret PPD outcomes for their own subject disciplines and often with specific reference to employer sector requirements. **Personal Development Planning** is represented in a range of models across the Colleges and courses.

- **Venture creation, knowledge transfer and graduate enterprise** are areas in which considerable progress has been made through **creative collaborations** of all kinds, directly involving students and industry professionals, within courses and in extra-curricular activity and consultancy relationships; and seed funding for staff and students to develop creative ventures. These initiatives are highly valued by students.

- **Committed academic staff and teacher-practitioners** provide the most powerful contribution to **e&e** learning, and take every opportunity to enhance the curriculum, often supported by the **CLIP-CETL** project funds and **CLTAD** professional development programmes**.**

- **Industrial placements and work-related learning** provide a professional context for students to apply their learning, with a well-developed programme of opportunities across all Colleges, Professional Development Diplomas and related activities, including peer mentoring and volunteering.

- **Dedicated Centres such as ECCA and CSM Innovation** support enterprise, industry collaborations and provide training and events before and after graduation. Student and graduate support via **Creative Careers** provides career guidance, resources and on-line employability tools.

- Well-established provision for **postgraduate study** and **Continuing Professional Development**; networking opportunities, alumni association, web-based resources, recruitment services and portals.

2.2 Exemplars of practice

The findings of Stage 1 include case studies drawn from the University's courses, all with common features that exemplify **good practice in experiential learning**. They provide:

- **Progressive learning activities** that help develop the foundations for effective learning: self-management, research and investigative skills, evaluation of self and practice, presentation and promotion.

- Opportunities for the development of **e&e skills and attributes through creative practice**

- **Contexts and sites for learning** that involve **peer and multi-disciplinary learning**, and **collaborations with professionals**, to encourage **'creative transfer.'**

An example is The Young Design Programme, a collaboration between UAL and The Sorrell Foundation:

What they learned...

'...the language of design and translating it out again...'
'...how to present simple things to others...'

The Young Design Programme
An HE and Schools collaborative project, that brings a design team of undergraduate students together with a client team of school pupils to address a design brief connected with the school environment. Each student design team is mentored by a dedicated professional practitioner.

The programme is available to all students in the University and focuses on building 'transferable skills' such as communication, presentation, problem solving, negotiation and team working, in addition to their design skills.

Students spend around half the academic year on the programme, which is formally assessed. It was developed collaboratively by University of the Arts, London and The Sorrell Foundation's 'joinedupdesignforschools'. Over two terms, students receive training and support from the Sorrell Foundation, and are supported by their university course tutors. The students' learning on the projects is assessed by course tutors through existing course guidelines, in most cases using a 40 credit, second stage professional practice unit.
Link: http://www.thesorrellfoundation.com

Features...

complex
challenging
creative practice development
transfer creative process
collaborative design

adding value
understanding client needs
working towards a goal
teamwork
multi-disciplinary

communication
critical thinking
interpretation
negotiation
analysis

evaluation
celebration

2.3 Barriers and pedagogic issues

Considering the strengths and the good practice identified, why are our graduates not more employable or successful?   The findings recognize that there are difficulties in offering consistent student experience across a large and complex institution, and barriers of a structural and linguistic nature are identified that can inhibit students' ability to make connections between different elements of their courses:

- Lack of a shared language for **(e&e)** learning and opportunity for reflection between staff, staff and students, student and student
- Academic language and bureaucratization of learning
- Segregation and separation of PPD and subject specific teaching

The **pedagogies of art and design higher education** provide a rich experience for students with **experiential learning** at the heart of the curriculum, and UAL presents many exemplars of good practice, but valuable opportunities can be missed to make connections between learning and its impact on students' career development and aspirations.

'The UK's powerful art and design school tradition needs to be celebrated, nurtured and developed.'[9]

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[9] Hutton, W (2007) *Staying ahead: the economic performance of the UK's Creative Industries: Overview,* The Work Foundation, p.23.)

Sometimes, the crowded curriculum allows little time for reflection on **e&e learning**, or it may not be done in a way that indicates to students that it is valued. For example, a review of competences, in which students are required to list skills and PPD attributes removes **e&e** learning from the creative process and reduces it to a checklist audit.

A more holistic and expansive expression of learning on a range of dimensions through creative practice: 'What has been learned as a result of the course activity?' 'How might this relate to students' aspirations (for their practice, or for their careers)?' addresses **creative practice development in relation to personal goals and ideas.** In this way, the **creative practice itself provides the context** for enhancing students' intellectual capabilities and **encouraging confidence.**

Student confidence and articulation of achievement can be further enhanced by **shared critical reflection** between all of those involved in course activities – staff, students, peers and professionals. It is this last shared articulation, as an important part of the experiential learning cycle, that is not always valued or planned for in relation to the demands of the teaching and assessment timetable, yet it would contribute to **increased student satisfaction with feedback,** one of the University's current concerns, and give added value to the rich learning experiences course activities already provide.

2.4 Areas for development
Change in these areas is difficult to manage because of initiative overload for staff, added to which centralised initiatives can be at odds with the fact that **the most innovative aspects of the curriculum are developed at course and College level**. The challenge is how to create more space for improving articulation of learning without making added demands on staff and students and the learning, teaching and assessment timetables.

Any proposed **recommendations need to be realistic**, involve staff at course level, and be a natural part of a progressive cycle of course development, validation and quality assurance timetables.

Clearly there is more work to be done to **prepare students for a successful and confident transition from their courses.** Inter-related priorities for further development and research fall into two groups:

The creative curriculum
❑ Celebrate the strengths of the curriculum and exemplars of good practice
❑ Encourage greater articulation of learning through creative practice
❑ Develop staff to facilitate a more holistic expression of learning linked to students' career aspirations
❑ Foster independent learning and articulation of achievement through Personal Development Planning and e-portfolios
❑ Value work-related learning and extra-curricular activity

Improved information about graduate career paths and opportunities
❑ Prepare students for the transition with improved information about opportunities and career possibilities
❑ Research the destinations of UAL graduates and their career patterns to inform both students and staff
❑ Improve co-ordination of enterprise support for all and initiate new entry possibilities

The truly 'entrepreneurial curriculum' will be one that creates learning opportunities for students (and staff) to take the creative process into different contexts and reflect on the result.

These and other priorities are discussed in more detail in *Paper 9: Emerging issues and priorities* and *10: Recommendations.* A progressive strategy for addressing these priorities will contribute towards **enhancing students' potential and raise the profile and importance of employability.**

3 CONSULTATION AND ACTION

From Autumn 2008, a transitional period of **consultation**, planned activities and further research will inform the **Stage 2 Report to be presented early in 2009**.   The resulting reflections and responses from UAL staff at all levels will contribute to future strategies for both Employability and Enterprise.

3.1 Consultation
For the academic year 2008 – 2009, the first step is for **dissemination of the findings of this study and wider consultation** within the University to promote a common language for **e&e** and PPD, debate its importance in relation to subject specific creative practice, where it occurs, and what learning underpins it.

This will be achieved in two specific ways:
a. **The University Learning and Teaching Conference** in January 2009 will focus on employability.   This presents an opportunity for a great debate involving all stakeholders staff, students, graduates and industry professionals; the celebration and sharing of good practice in **e&e**, particularly the **wealth of case studies and projects** supported by the **CLIP/CETL;** and for consultation around the findings of this study.
b. **The University-wide PPD network** in its meetings for 2008-9 will act as a 'think-tank' to debate key issues and make recommendations.
This work will also inform the **University's Employability Strategy**.

3.2 Improved gathering and use of information about graduate destinations

❑ Academic Development and Quality Pro-Rectorate have already initiated discussions about how **First Destination data (DLHE)** is gathered by the University, how it is resourced, how the data is classified (related and unrelated work), how it is used to inform courses. New ways of improving the response rate might involve more persistent and personalised gathering of information, such as employing alumni or students to follow up recent graduates by phone or email.

❑ **'Creative Graduates – Creative Futures'** In 2008 – 2009 the University is leading a UK-wide longitudinal study of graduate career patterns (project funding: £260,000) involving collaboration between 26 HEIs and a sample of more than 25,000 graduates up to six years after graduation.   The research is being undertaken by the Institute for Employment Studies, and the results will provide evidence of the enduring contribution of art, design and media education to creative and cultural capital and to all walks of life. The resulting report will inform staff, students, graduates and employers about the differentiated career progression and satisfactions of creative graduates.   The results will be collated with other studies, e.g. study of fine artists' professional development and contribution to innovation, NESTA/CSM Innovation, 2008.

3.3 Research into (e&e) learning (autumn 2008 – spring 2010)
Further case studies, projects and investigations into valuing **e&e** learning will inform the Stage 2 Report and final Recommendations.

These include forthcoming papers:
❑ Case Studies that illustrate (a) **Aspirations and student learning through creative practice**; (b) **'real' careers exploring graduate aspirations and career paths**,

how they are articulating their learning, strengths of courses and perceived gaps in learning. (Autumn 2008)

❑ A Pilot Inquiry to investigate key **issues for valuing extra-curricular and student-led activities'** such as volunteering and mentoring (Autumn 2008).

Externally funded project:

❑ **Creative interventions: valuing and assessing creativity in student work-related learning in the public and not-for-profit sectors** (successful bid for £200,000 from HEA National Teaching Fellow Project Fund). This is a direct off-shoot of the HEIF Project. This research will investigate the value of a creative education in developing entrepreneurial learning; and examine the student experience of creative learning in work-related activity in educational, cultural, community and not-for-profit settings. It will explore how such activities contribute to students' employability skills, how these are identified by students and how they are currently assessed. Partners include: HEA National Teaching Fellowship Scheme; Arts Institute at Bournemouth and the Surrey Centre for Excellence in Professional Training and Education (SCEPTrE).

3.4 An employability-enterprise (e&e) award

A University **e&e** Award for each student is something that UAL may want to consider as a common element for all UAL courses, awarded on graduation. This will provide specific recognition for specific accumulated learning from work placements, live projects, commissions, external projects, and work related learning, drawing on course-based and extra-curricular experiences. It will provide a vehicle for students to articulate their learning, and important material to draw on or refer to when approaching employers. The award will make our graduates more attractive to employers, as graduates' **e&e** learning will be clearly presented.

How this may be put in place and resourced, building on existing practice in learning, teaching and assessment and how it may be supported are important areas for debate. Reflection on the value of experiences in relation to **e&e** and career aspirations may be evidenced in the context of creative practice in students' **Personal Development Plans** (visual/text-based/other formats) and/or archived in their **e-portfolio** as part of their Higher Education Academic Record.

'it is more about using PDP to somehow structure or objectify the creative process. If we assume that all art and design practices position creativity – as innovation, invention, imaginative flair or even dreaming – as something that is quintessential to all activities, then PDP allows for a kind of detached reflective position to be established that should not restrict the dynamic of the creative act but assists in the making of judgments about the level and direction of the process'[10]

The professional development of academic staff and teacher-practitioners is key to preparing students for their working lives, together with improved understanding that creative graduates take time to establish themselves and require support for the transition into the work-place. As part of this process, the value of a creative education in its broadest sense needs to be re-affirmed.

Linda Ball, Senior Research Fellow and Project Manager
HEIF Project: Professional Development and Enterprise in the Curriculum

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[10] *Jackson N (2006) PDP and the development of students' creative potential: Summary of a Survey of Practitioner Views, Centre for Recording Achievement.)*

'Bold Resourcefulness'
– redefining employability and entrepreneurial learning

The Stage 1 Report – Overview is available to download from the CLTAD website.

Introduction and aims of the project

A THE CONTEXT FOR PROFESSIONAL DEVELOPMENT AND ENTERPRISE

Paper 1: The context: new models for creative higher education and work

Paper 2: 'Bold resourcefulness' – re-defining entrepreneurship

Paper 3: Entrepreneurship through creative practice

Paper 4: Research into professional development needs

Paper 5: Models of practice

B PROFESSIONAL DEVELOPMENT AND ENTERPRISE AT THE UNIVERSITY OF THE ARTS, LONDON

Paper 6: University of the Arts London – an enterprising university

Paper 7: The creative curriculum at UAL

Paper 8: The student and graduate voice

Paper 9: Emerging issues and priorities

Paper 10: Recommendations

Paper 11: Bibliography and references

Appendix 1
A Framework for Entrepreneurship Education

Appendix 2
National Employability Profiles for creative subjects

Appendix 3
Examples of models of practice for Personal and Professional Development in the University's courses at each College

Professional Development and Enterprise in the Curriculum
HEIF Funded Project: 2007-2008

STAGE 1 REPORT – OVERVIEW

See separate pdf for Part B

B PROFESSIONAL DEVELOPMENT AND ENTERPRISE AT THE
UNIVERSITY OF THE ARTS, LONDON

6: University of the Arts London – an enterprising university

7: The creative curriculum at UAL

8: The student and graduate voice

9: Emerging issues and priorities

10: Recommendations

11: Bibliography and references

See separate pdf for Appendices

Appendix 1
A Framework for Entrepreneurship Education

Appendix 2
National Employability Profiles for creative subjects

Appendix 3
Examples of models of practice for Personal and Professional Development in
the University's courses at each College

HEIF funded project: Professional Development and Enterprise in the Curriculum

Introduction and aims of the Project
This two year investigation into PPD, PDP and enterprise in the curriculum in the University's courses, aims to stimulate debate about how students are prepared for their working lives, the wider benefits of a creative education and the key issues for emerging graduates in a changing world.

The University wants all its graduates to reach their potential and believes that there is more work to be done to:
- Ensure all students have opportunities to experience and develop employability and entrepreneurial skills and knowledge
- Improve capacity for successful employment and self-employment
- Identify and build on existing good practice
- Increase the impact of PPD on all students

The Project will be informed by the current context for higher education, debates about the relationship between higher education and the creative industries, and models for professional development and encouraging creative entrepreneurship. The research methodology will identify and build on existing good practice, and encourage debate through collaborative enquiry, with the intention of increasing the impact of PPD and enterprise on all students, and making recommendations for the University's credit framework.

Stage 1 Report (Autumn 2007)
This report is in the form of a series of papers, resulting from contextual desk research, literature review, visits to other HEIs and primary investigations within the University - the Orientation Phase of the Project. Meetings with 40+ key people across the University for initial discussions informed the approach and research methodology, combined with an examination of course and quality assurance documentation, and pilot studies to explore initial assumptions. The resulting papers:

- Explore definitions and terminology around ppd/pdp/employability and enterprise
- Provide an update on good practice in these areas in relation to changes in HE, graduate employment experiences, industry needs and the way people work in the creative industries
- Review the key factors contributing to entrepreneurial learning in the University, models of practice for the curriculum, and examples of formal and informal course activities and opportunities that encourage professional development and entrepreneurial learning
- Present the results of pilot studies exploring student/graduate aspirations and experiences, and the language they are using to describe what and how they are learning from course activities.
- Draw together the key issues and priorities for strengthening and embedding professional development and enterprise in the University's curriculum.

The proposed steps and outcomes for **Stage 2** of the project are presented in **9. Emerging issues and priorities.**

PART A

The Context for Professional Development and Enterprise

1. The Context: New Models for Creative Higher Education and Work

This short paper sets out to encapsulate the key issues for graduate employability and entrepreneurial learning and their relationship to changes in higher education and the work-place.

Changing working patterns

Working lives are changing, bringing new possibilities – in an economy which no longer has an industrial base and in which global economics dictate that manufacturing is taken where labour is cheapest – more recently to India, China and the Pacific rim. For our economy to flourish, the Government says it wants people with good ideas – people who are creative – people who can innovate, come up with solutions to problems and create enterprises for new services and products in a 'knowledge-based' economy. Regional agendas rely on the encouragement of 'knowledge transfer' and retention of talent and look to Universities to provide this.

The notion of a 'graduate job' and a linear career path are no longer realistic expectations for the 21st century student in any subject as graduates engage with a diversity of work, many in smaller enterprises or on a freelance basis. In the modern workplace, the prevalence of short-term contracts and temporary work is the result of companies wanting to maintain a flexible workforce and reduce overheads in an increasingly competitive economy. The rise of the 'portfolio' career is becoming an important feature of the workplace in all sectors.

The rise of the creative industries

Over the past five years, the creative industries has maintained its position as the fastest growing sector of the economy, and it is clear that graduates in creative subjects are playing an important part in this. Recent policy for the arts recognises the contribution that creative professionals make to social and community agendas, to cultural activity and to economic regeneration; and the need for a co-ordinated strategy for supporting the growth of this young industry. This signals the importance of nurturing and supporting creativity throughout education and into work, by encouraging autonomy, independence and a pro-active approach – important survival skills in an uncertain world.

It is generally understood that the job market and patterns of work in the creative industries sector are fragmented, with graduates taking time to establish their career paths. 'Conventional' employment is not a clear option in some sectors of creative practice, where freelance work is the predominant work-style – for example in film, illustration or conservation.

Graduates are required to be work-ready and have good discipline specific knowledge, skills and aptitudes. Opportunities for paid work experience are limited, because the sector is made up of SMEs. Therefore, other imaginative ways of providing students with work-based learning need to be encouraged.

The sector relies heavily on an unstable, yet flexible workforce of freelance and contract workers (also considered to be one of the strengths of the sector) yet this is a disadvantaged group in terms of pay levels, working conditions and Government support. Inevitably, professional development is acquired on the job, and practitioners have to manage their own career progression.

The expansion of higher education
Higher education is attracting a larger and more diverse student body. Social inclusion initiatives are raising young people's aspirations, providing more flexible and attractive

courses and qualifications designed to meet employers' needs. For many new undergraduates, vocational considerations are important and the value of a university education seems to be no longer the most important reason for subject choice. However, creative subjects have continued to be popular, with increases of 18% in full-time and 20% in part-time degree registrations over the three year period 2002-2005.[1]

Creative graduates

Studies of the career paths of graduates in creative subjects indicate a multi-tracking 'portfolio' approach to working, often combining freelance with employment, short-term contracts, professional development activities and training (sometimes of a voluntary nature to gain experience), work in unrelated fields to fund creative practice, and spells out of work. This may not be planned as such, as many graduates leave with an expectation of finding full-time paid employment.

The transition from higher education continues to be the main concern, together with staff and student aspirations, the realities after graduation, and redefining what makes a successful graduate.   We need to know more about how they live and work and what they value from their educational experiences. The career experiences of creative graduates feature:

- Erratic, slow to get started working patterns
- Deferral of professional career on graduation, taking any job to pay off immediate student debts
- Lack of awareness of the wide range of opportunities open to graduates in the creative sector and in other areas, and how to access them
- Difficulties in progressing from student to professional mindset
- Lack of confidence in explaining what they can do as a result of their educational experiences
- Poor professional and career management skills, such as project management, networking and self-promotion

Surveys show that, although they take time to establish their career paths, on a more positive note, graduates in creative subjects have a tendency towards more creative-related work as their careers progress.[2]

Their approach to formulating and solving problems within a critical framework develops high-level intellectual skills and has enormous potential. Creative graduates are known to value opportunity for creative input over financial gain in terms of job satisfaction, apply creativity in a rich diversity of work, work collaboratively, are flexible, adaptable, and adept at creating opportunities and constructing their own future scenarios. Increasingly, students are motivated by ethical considerations, such as 'green' issues and social responsibility, and have a predisposition for work in education, community and the not-for-profit sectors.

There are concerns about 'over-supply' of graduates in certain creative subjects, with a mismatch between numbers of emerging graduates with 'directly related' job opportunities.

It is clear that students need to understand that their degrees can lead to a wide range of opportunities in which they can use the valuable learning they gain from creative practice, and that these processes are highly transferable into other settings and work sectors.   Yet there are problems of confidence and articulation in this area. These attributes need to be made more explicit in the curriculum, so that students can see how they can transfer the creative process to problems in the workplace. The benefits of the creative curriculum need to be communicated to students, staff and employers.

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[1] HESA statistics
[2] Harvey L and Blackwell A (1999)

Creative practice is preparation for life

New thinking on employability and entrepreneurial learning challenges the perceived tension in the academic environment between the pursuit of creative practice for its intrinsic value and the preparation of graduates for work. Indeed, the creative curriculum is rich in employability experiences and in encouraging risk-taking, problem solving and other entrepreneurial characteristics. A creative education is important preparation for life and contributes to a balanced society – producing socially, culturally and aesthetically aware citizens. There is a need for further debate about providing for skill and industry needs and the wider learning value of a creative education for its own sake.

Universities and enterprise

With creativity at the core, a new paradigm for creative higher education is emerging that removes barriers between teaching, learning, research, needs of industry and the employability of graduates. Funding through HEIF and regional development for innovative higher education projects encourages collaboration to enable 'knowledge transfer' and indirectly supports employability learning.

The responsive and entrepreneurial university offers a curriculum that encourages underpinning attributes: autonomy, independence and a pro-active approach, with appropriate learning and teaching methods and course activities that develop students' confidence in themselves and their creative practice, so they are equipped to position themselves in creative or related work, or to take advantage of other opportunities after graduation.

In the entrepreneurial university, clear pathways of progression for graduates are visible and thought through, including at pre-degree level, with opportunities for accredited work placements, work experience, related learning and internships of all kinds. The relationship of professional support continues with the student post-graduation with graduate apprenticeships and internships, postgraduate study and industry-linked research opportunities such as Knowledge Transfer Partnerships (KTP). Graduates can continue to update their practice with ongoing opportunities for continuing professional development and short courses.

Universities are setting up businesses themselves to harness the intellectual property of teaching and research staff and students, and in-house agencies and design practices to foster and manage collaborations. Enterprise centres and joint ventures with Regional Development Agencies provide resources, information and training, and support for venture creation through incubation and innovation units with business start up and mentoring – to be part of the curriculum or accessed on demand by the student or graduate.

A particular characteristic of the truly entrepreneurial university is that it encourages and fosters local initiatives and extra-curricular activities, such as work experience, volunteering and personal development with opportunities for awarding credit for part-time, term-time/vacation work, paid and unpaid and for voluntary work. Champions, ie. enterprising staff, students and role models are rewarded and supported to develop initiatives of all kinds – for the curriculum, business, and for the wider community.

These new models for collaborative research, development and/or consultancy – mirror the industry. Typically, staff and students initiate or respond to a problem towards a creative solution in a business or commercial context; or, increasingly, initiate creative and cultural activities in a public, education or community setting.

> 'This involves creating a balance between placing an emphasis on individual achievement and excellence versus encouraging collaboration and team effort.'[3]

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[3] NESTA (2002) *Barriers to the Realisation of Creative Ideas*

This approach provides a synergy for the continuing professional development of students, academic staff, graduates, and those working in creative enterprises.

All of these experiences have multiple rewards, i.e. raising staff and student awareness of future possibilities for themselves and their practice; building confidence in behaviours and skills required for working in professional domains.

The result is that staff are updating their knowledge about the world of work, taking more responsibility for preparing students for the transition and encouraging multi-disciplinary working to mirror what is happening in the work place through group work and live projects.

The role of academic staff and teacher-practitioners

New models for staff development in higher education are emerging that support staff in their own professional development as learners, practitioners, teachers and/or researchers, fostering and modelling a learning culture that in turn equips students with the skills to manage their own professional development and successfully engage with the creative industries sector.

The role of academic staff is changing – with emerging entrepreneurs, opportunists, facilitators and enablers of learning.   Academic staff readily apply their innovative approaches to the curriculum itself, and the truly 'entrepreneurial curriculum' is one that creates learning opportunities for students (and staff) to transfer the creative process.

It is clear that the diversity of experience, knowledge and strengths that both part-time and full-time practitioners and academics bring to course teams helps to create opportunities of benefit to all. This diversity needs to be celebrated and institutions need to examine how staff can be supported in developing their particular expertise.

In particular, it is important to examine what individual practitioners bring to courses and find ways of encouraging them to share their experiences of the real world with students, particularly those involving new ways of working.

In summary
- Creative graduates take time to establish themselves and need support for the transition from higher education into the work-place.
- Creative education is 'preparation for life' and produces flexible, adaptable graduates
- The curriculum needs to encourage graduates to have confidence in applying their creativity in a range of settings and sectors.
- Entrepreneurial and employability learning is learner-centred and holistic and needs to mirror the workplace where professional development is integrated within creative practice.
- Creativity and its transfer are key and the growth of the creative industries signal new models for collaborative work and partnerships with higher education
- Professional development of academic staff and teacher-practitioners is key to preparing students for their working lives.
- The truly 'entrepreneurial curriculum' will be one that creates learning opportunities for students (and staff) to transfer the creative process.

2. 'Bold Resourcefulness': Re-defining Entrepreneurship

This paper explores terminology around PPD, PDP, enterprise and employability and looks at some important questions:

What do we mean by enterprise…entrepreneurship…entrepreneurial learning? Why is it important? How does entrepreneurship link to employability, personal and professional development (PPD) and personal development planning (PDP)?

Definitions

Enterprise
1 a project or undertaking, especially a bold one;
2 bold resourcefulness;
3 a business or company.'[4]

The term 'Enterprise' is most commonly applied to a business venture – possibly involving a little risk - and also can indicate a desirable set of behaviours, attributes and knowledge that ensure that the business provides an economic return and potential for growth.

Emerging models for enterprise, entrepreneurship and entrepreneurial learning in universities propose a broader definition and purpose, beyond a business model, more in keeping with 'bold resourcefulness' (in our dictionary definition) and ability to function in our changing society, where greater opportunities now exist, but it is not altogether clear to students and staff how these may be accessed:

'…(An alternative model for higher education) is based on the view that the role of entrepreneurship in society is that it provides an opportunity for individuals and organisations of all kinds and in all walks of life to cope with, provoke, and perhaps enjoy, an increasingly complex and uncertain world' [5]

At the University of the Arts London in July 2006, a group of academic staff set about defining what they mean by 'enterprise.' They too expressed reservations about where 'enterprise' is located and how it is interpreted – beyond a narrow business model (Figure 2.1).

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4 OED Compact, 2005

5 Gibb A (2005) Towards the Entrepreneurial University: Entrepreneurship Education as the Lever for Change, NGCE Policy Paper 3, NGCE Birmingham.

Figure 2.1: Definitions for Enterprise, Employability, PPD and PDP[6]

Enterprise / entrepreneurial	Employability
Ideological issues? Context dependent? 'Includes skills and attributes: self-management; resourcefulness; proactive; self-sufficient; flexible, opportunistic; not easily fazed; a 'can do' attitude; vision; financial acumen (tax and other life skills); problem solve; confidence; networking; project management skills.'	'…is having the skills and abilities to practice professionally. Life skills - valuing and recognising skills and attributes which include: emotional intelligence, self-efficacy; self-management; confidence, team working abilities; being enterprising, flexible; adaptable; communication skills. A way of being and doing which enables students to act in the world.'
PPD - Personal and Professional Development	**PDP – Personal Development Planning**
'a framework for supporting independent learning into, through and beyond HE. Addressing awareness of self and awareness of contexts in order to enable students to become self-actualising and socially effective; being enterprising, flexible; adaptable; communication skills.'	'is student owned and student led. It is a structured and supported process whereby individuals reflect upon their learning, experiences and performance. This is situated in social, personal, academic and work-related domains. It encompasses the whole person and acknowledges the individuality of learners.'

It is clear from this exercise that employability, entrepreneurship and PPD have many commonalities - we are talking about the same thing.   Let's explore some of the terminology in more detail.

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[6] Source: UAL Philosophy and Approach to PPD, PDP, Employability and Enterprise in the Curriculum, Paper from Workshop 11 July 2006

Re-defining entrepreneurship

A recent study found that students 'are uncomfortable with a narrow definition of entrepreneurship focussed entirely on commercial success,'[7] preferring a wider interpretation to embrace contributions in cultural, artistic, social, community or educational settings:

> 'Entrepreneurship is routinely expressed and measured in terms of business start-up. There is evidence to suggest that this is inappropriate to art, design and media, and broader definitions that focus on self-efficacy in many contexts including not-for-profit and public subsidy sectors and in employment will encourage more students to develop entrepreneurial capacity.'[8]

This is carried through after graduation. Studies of graduate career paths in creative subjects reveal 'a predisposition to engage with work of social and community value, often low paid or of a voluntary nature' [9] – values that at first sight appear to be at odds with business models of entrepreneurship.

Creative practitioners are known to value creative achievement and critical peer recognition[10], together with autonomy and control over creativity[11] above commercial and financial success.

> '…(creative enterprises) have an approach to developing a career as a portfolio of projects, contacts and skills that may become increasingly important in other sectors of the economy – a highly collaborative, creative and networked model of production. They prize their small scale as the basis for the intimate and creative character of their work…negotiating a space within the market economy where they can pursue their interests and develop their own products.[12]'

Students, and indeed creative practitioners, do not readily use the term 'entrepreneur' and may not go so far as to define themselves as businesses, preferring the terms 'freelancer,' 'practitioner' and 'artist' to describe what they do. They are more likely to label themselves by their art form, or practice, e.g. designer, sculptor, illustrator, textile designer, actor.

Forty-five percent of students interviewed in a recent study anticipated that they will start a business or work freelance at some point after graduation.[13] However, in creative enterprises, typically, business start-up and freelance practice tends to be an evolutionary process:

> '(They) do not necessarily set out to 'start' a business. Their approach is to focus on evolving their practice as an extension of their higher education experience'[14]

It therefore follows that it is entirely natural that student definitions of success are 'more aligned with academic than commercial values.'[15]

Botham and Mason propose a Framework for Entrepreneurship Education[16] involving nine key areas (Appendix 1), and argue that entrepreneurial education is of benefit to all, not only

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[7] HEA-ADM and NESTA, 2007, Creating Entrepreneurship: entrepreneurship education for the creative industries, p.58.

[8] Ibid, p.112

[9] Ball (2003) Future Directions for Employability Research in the Creative Industries, p.18.

[10] Ibid, p.109

[11] Ball L and Price E (1999) 'Graduate into Business: Research Report: Rethinking business start up – a new model for success in art and design', University of Brighton / DfEE.

[12] Leadbeater C and Oakley K (1999) The Independents, Demos.

[13] HEA-ADM and NESTA (2007), p.58.

[14] Ball L (2003) Future Directions for Employability Research in the Creative Industries, HEA-ADM/Design Council, p.35.

[15] HEA/ADM and NESTA (2007) p.57.

[16] Botham R and Mason C (2007) Good Practice in Enterprise Development in UK Higher Education, NGCE, pp85-93.

to those contemplating starting an enterprise. However, this framework has its limitations, as it assumes a narrow interpretation of entrepreneurship, it has a business focus, and there is little emphasis placed on the creative process. A broader definition of entrepreneurial learning in creative subjects is required.

Employability and PPD

Encouragingly, emphasis on the benefits of a creative education, together with the qualities needed to take creative practice into other domains, are articulated in National Employability Profiles[17] for creative subjects (Art and Design; Communication Media, Film and Cultural Studies; Dance, Drama and Performance) (Appendix 2).

These include the supporting entrepreneurial characteristics, including tacit learning, such as abilities to:
- anticipate and accommodate change, handle ambiguity, uncertainty;
- interact effectively with others through collaboration, collective endeavour and negotiation;
- work flexibly, creatively and independently with self-discipline, self-direction and reflexivity;
- manage personal workloads and meet deadlines under pressure with flexibility, imagination, self-motivation and organisation.

Similarly, UAL staff definitions for Employability and Personal and Professional Development (PPD) (see Figure 2.1) place emphasis upon underpinning personal and entrepreneurial attributes. These foundations for effective learning embrace:
- learning to learn - understanding what and how to learn, their own approaches, and what is involved in learning, teaching and assessment
- self-reflective practice, leading to critical self- and peer-evaluation, receiving and giving feedback and acting on criticism
- motivation and a proactive outlook leading to independence and autonomy
- personal development planning as an embedded life-long learning process, beginning with making decisions about study choices
- effective research, investigative and study skills
- personal and transferable skills
- group and peer learning skills

Professional development requires learners to build on these basic foundations and engage with the professional world (career management skills):

Self-awareness - reviewing strengths, achievements, values and aspirations
Researching potential career areas, audiences/clients; learning how to access opportunities, building networks and contacts; testing out possibilities
Personal Development Planning; prioritising; decision-making; setting goals; action planning
Presenting and promoting self and practice - compiling CVs; making applications proposals for funding and projects; websites and show-reels

Personal and Professional Development (PPD) has an explicit and established presence in the higher education curriculum in applied creative subjects. PPD learning outcomes may be embedded (and assessed) in all course activities; offered as a complementary or discrete unit or module; or bolt-on/extra curricular – assessed or not assessed. Models and their pros and cons are explored in **5. Models of Practice**.

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[17] HEA Student Employability Profiles, pp44, 56, 66.

Personal Development Planning (PDP)

PDP is a process - a tool for self-appraisal and reflection: 'a structured and supported process undertaken by an individual to reflect upon their own learning, performance and / or achievement and to plan for their personal, educational, and career development.'[18] (see Figure 2.1)

PDP is part of the HE Progress File being introduced across all levels of higher education, providing each student with a transcript – a record of their achievement and learning. Recent developments[19] propose a new form of Progress File, integrating PDPs, academic and informal learning with transcripts: the Higher Education Achievement Report (HEAR).

Ideally, Personal Development Planning drives the learning process and is owned by the student. It is an important tool for enabling constructive dialogue between students and tutors and supports the feedback/assessment process.

In an industry dominated by small, non-growth micro-enterprises and freelancers, the individual, by default, manages their own career path and professional development. PDP therefore is an important learned process to be taken into professional life.

E-Portfolios

The portfolio is a commonly understood term for those in creative subjects, particularly in visual disciplines, in which practitioners archive and present their practice. The E, or electronic portfolio, is a web-based flexible tool for recording the results of PDP – experience, knowledge and achievement (text-based, visual, audio) that can be changed and updated by the student and commented on by tutors and others.

E-portfolios provide a natural vehicle for Personal Development Planning - a means for the individual to personalise evidence for the achievement of learning outcomes and assessment results and take beyond university into other formats, to make it relevant for the context. For example, drawing on the material to create e-CVs and professional websites.

In summary

- A broader definition of entrepreneurship is required to accommodate a changing society and the particular characteristics of the creative industries.
- Entrepreneurship, employability learning and personal and professional development have many commonalities and naturally occur in creative subjects in higher education
- Personal Development Planning ideally drives the learning process and creative direction and is an important aspect of professional practice
- E-Portfolios provide an important flexible tool for recording progress and achievements.

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[18] Definition from Centre for Recording Achievement, www.recordingachievement.org.uk
[19] The Burgess Group Report (2007) 'Beyond the honours degree classification,' Universities UK.

3.Entrepreneurship Through Creative Practice

Good practice in entrepreneurship education in creative subjects is the subject of several recent studies.[20] All place emphasis on the attributes, knowledge and skills specifically required for venture creation and graduate enterprise, with supporting business education – and placed in an academic context. This Paper focuses on a broader interpretation of creative entrepreneurship in relation to recent research that places creative practice at the core. Universities have a role at different stages of the student experience in:

> 'raising awareness of how creative practice can link with the creative sector as well as generally generating positive perceptions of entrepreneurship through the introduction of appropriate role models, case studies and mentors.'[21]

Entrepreneurial learning – where does it occur?

Entrepreneurial learning is best encouraged through the core subject of study[22]. Similarly, models of good practice in employability learning advocate integration within the learning experience,[23] and a student-centred approach, located within the student's own personal and professional development:

> 'Student-centred entrepreneurship education can build a sense of immediacy for students, demonstrating how entrepreneurship directly relates to their practice and motivating students to adopt entrepreneurial thinking. It also allows students to test and build entrepreneurial thinking into their practice and situate it at the core of their subject.'[24]

An holistic approach to entrepreneurial/employability places emphasis on learning through creative practice, in which staff and students identify and discuss together where underpinning entrepreneurial learning occurs.

Professional contexts, work placements and work related learning are normally associated with providing opportunities for students to apply their learning. In a recent study, '50% of assessment of entrepreneurial learning outcomes is based on applied or workplace learning'[25] It is important to recognise that student-led entrepreneurial learning can occur outside the curriculum, through work and social activities, and many of our students are already entrepreneurs when they arrive at University; (in a recent study, one fifth of participating students were already running a business).[26]

Entrepreneurial learning through creative practice

Creative practice itself is the pivotal component of entrepreneurial learning. The pedagogy of creative subjects is ideally suited to encouraging high-level intellectual skills and entrepreneurial attributes. These are naturally located in experiential learning that is central to creative practice involving:

- Formulating questions
- Testing concepts and processes
- Taking risks

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[20] DCMS (2006); HEA-ADM and NESTA (2007);and Kellet (2006)
[21] DCMS (2006) Developing Entrepreneurship for the Creative Industries: The Role of Higher Education, p.39.
[22] Gibb A (2005) Towards the Entrepreneurial University: Entrepreneurship Education as the Lever for Change, NGCE Policy Paper 3, NGCE Birmingham.
[23] Harvey L, Locke W and Morey A (2002) Enhancing employability, recognizing diversity.
[24] HEA/ADM and NESTA (2007) Creating Entrepreneurship, p.96.
[25] HEA-ADM and NESTA (2007) p40.
[26] HEA-ADM and NESTA (2007)

- Applying critical judgment – analysis, decision-making
- Learning from mistakes
- Focussing on goals
- Collaboration and consultation
- Transferring learning across contexts

How well do we recognise and value entrepreneurial learning in the learning, teaching and assessment process?   How do we encourage students to take risks and value their developmental ideas?   If the focus for assessment is on competence and 'product' outcomes this can prevent students from articulating the valuable learning from taking risks and mistake-making - work in progress.

A study of methodologies developed by design students concludes that they are equipped with important creative skills in research, managing complex tasks, and innovative approaches to resolving problems. Working in teams, they transfer skills and ideas, acquire knowledge in an active form and possess key attributes such as being persistent, taking risks and handling uncertainty[27].

> 'The UK's powerful art and design school tradition needs to be celebrated, nurtured and developed.'[28]

Clearly, in creative disciplines, there is no need to 'add' entrepreneurship to the curriculum. It already exists. Experiential learning that is central to creative practice is seen as key to encouraging divergent thinking that plays an essential role in problem creation and solution.[29]

As an important part of their continuing professional development, students and graduates need to be 'engaged' in investigating and developing their creative practice and locating it in relation to contemporary contexts and audiences – involving regular tutor/peer feedback and review. Strengthening the practice in this way will ensure higher success rates for business ventures and for creative practitioners in other contexts – both in employment and self-employment.
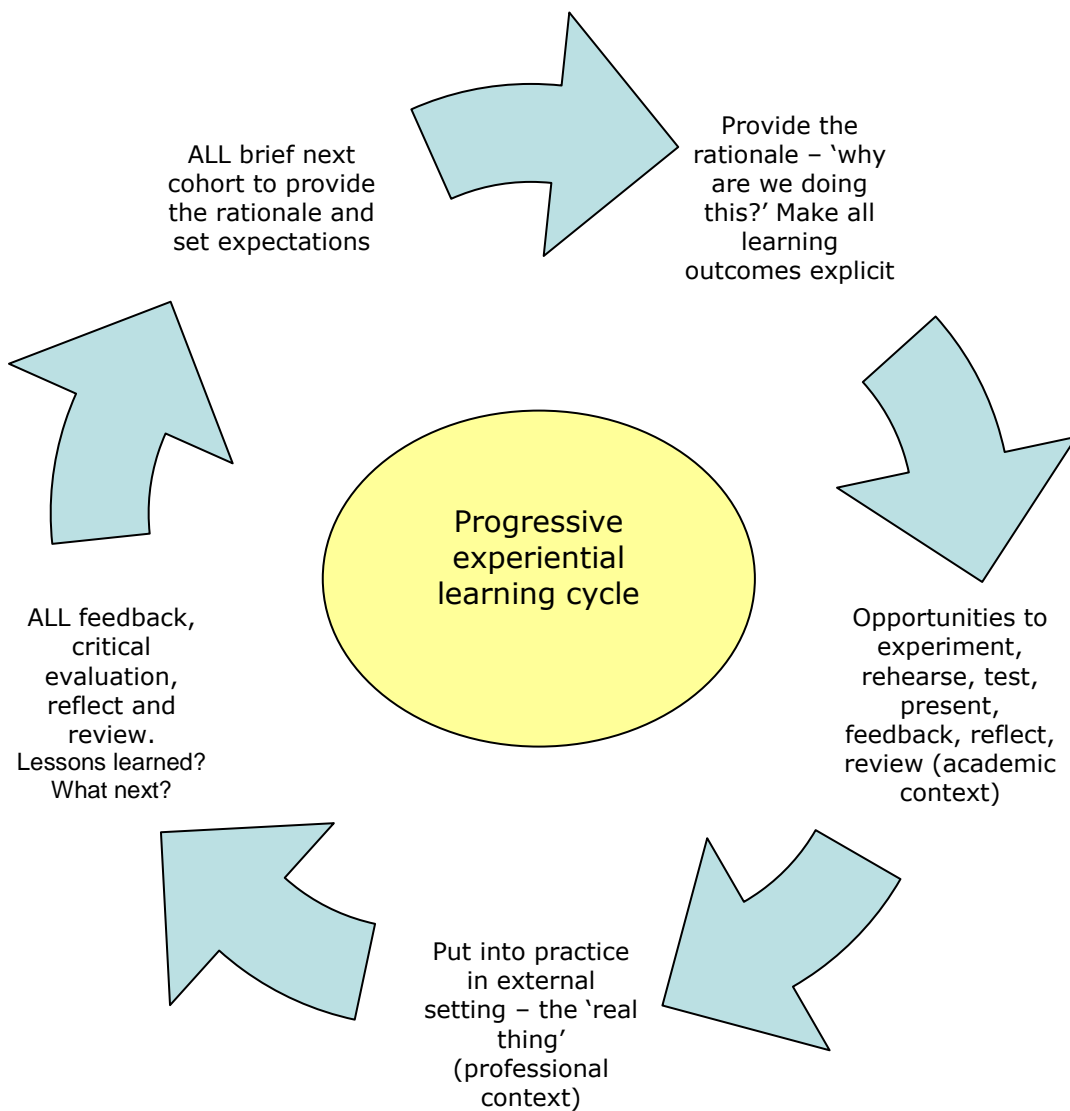
Progressive learning

A progressive approach (Figure 3.2) first of all in an academic setting, then through applied activity such as live projects, work placements and other collaborations with industry and employers, provides opportunities for transfer of the creative process and builds students' confidence. It is important to achieve a balance between providing a secure platform and just the right amount of challenge at each stage.

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[27] Kimbell R, Saxton J, Miller S (2000) Design Skills for Work
[28] Hutton, W (2007) Staying ahead: the economic performance of the UK's Creative Industries: Overview, The Work Foundation, p.23.
[29] HEA-ADM and NESTA (2007) Creating Entrepreneurship, p.30.

Figure 3.1 Progressive learning through creative practice

ALL brief next cohort to provide the rationale and set expectations

Provide the rationale – 'why are we doing this?' Make all learning outcomes explicit

Progressive experiential learning cycle

Opportunities to experiment, rehearse, test, present, feedback, reflect, review (academic context)

ALL feedback, critical evaluation, reflect and review. Lessons learned? What next?

Put into practice in external setting – the 'real thing' (professional context)

(Adapted from Ball (2004) in 'Compass, a tool for professional practice teaching,' Artists' Information Company, www.a-n.co.uk)

Enabling creative transfer

Addressing creative practice development enhances students' intellectual capabilities by providing a context for the transfer of creative problem-solving.
However, transfer of the creative process does not automatically occur, unless reflection on the experience takes place, preferably shared in a critical context (staff/student and peer/employer/external professional) so that personal and creative learning can be articulated, and related to future progression, new goals or ideas to be developed and explored. (Figure 3.3)

Figure 3.2: Learning cycle illustrating transfer of the creative process
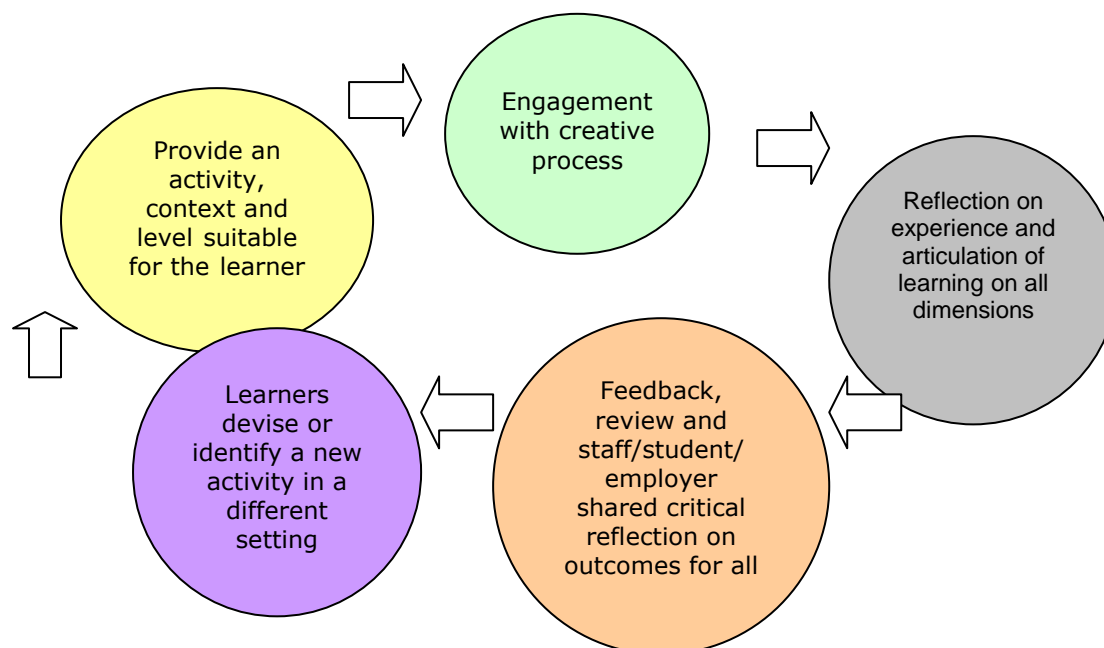
The role of reflection and Personal Development Planning

Articulation of the valuable learning that occurs through creative practice is crucial. Regular reflective, critical review is sound professional practice, and fosters innovation and the birth of new ideas. So often, students cannot say what and how they are learning, with the consequence that they cannot move on to apply their learning in other settings.[30]

Oral and written reflection are both key to articulation of learning and ideally are encouraged in a continuous, embedded process of review in which individuals set goals, plan, act, reflect, and act on reflection to inform future goals.

Reflection is encouraged through the assessment process, but there are problems, as the focus may be on the 'use' of competencies, rather than on learning and its impact on development.[31] Reflective writing for assessment can impair the development of authentic reflective capacity, as students may write what they expect will gain 'good' marks.' In the assessment process, it is important to place the focus on the (learning) i.e. the proposed action or the action resulting from reflection, rather than on the reflection itself.

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[30] HEA-ADM and NESTA (2007), p108
[31] Lymbery (2003)

Personal Development Planning has an important role to play in reflection to help students to plan the learning opportunities, resources and input they need; record and reflect on their progress and articulate the learning, attributes and skills they are developing through creative practice:

'it is more about using PDP to somehow structure or objectify the creative process. If we assume that all art and design practices position creativity – as innovation, invention, imaginative flair or even dreaming – as something that is quintessential to all activities, then PDP allows for a kind of detached reflective position to be established that should not restrict the dynamic of the creative act but assists in the making of judgments about the level and direction of the process'[32]

PDPs provide an important vehicle for recording and reflecting on extra-curricular and other non-assessed, important learning activities, often initiated by the student, that contribute to a portfolio of professional skills and experiences, and E-Portfolios provide an important flexible tool for recording progress and achievements.

What other factors foster entrepreneurial learning and professional development?

Students specifically value real-life projects and do not think these experiences compromise the creative process. They cite collaborative and inter-disciplinary working as vital elements – provoking the cross-fertilisation of ideas and approaches, networking, mentoring relationships and peer learning.[33] Involvement by teacher-practitioners and industry professionals through studio practice simulate the professional domain and provide opportunities for transfer of the creative process:

- seeking and responding to commissions, competitions, performances, installations, external exhibitions
- extra-curricular - internships (paid and unpaid), outreach, volunteering, creative interventions set up by specialist centres
- simulated and real business start up, incubation opportunities
- learning about aspects of professional practice for creative ventures: project management business skills, planning, advice, and where to get support

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[32] Jackson (2006) PDP and the development of students' creative potential: Summary of a Survey of Practitioner Views, Centre for Recording Achievement.
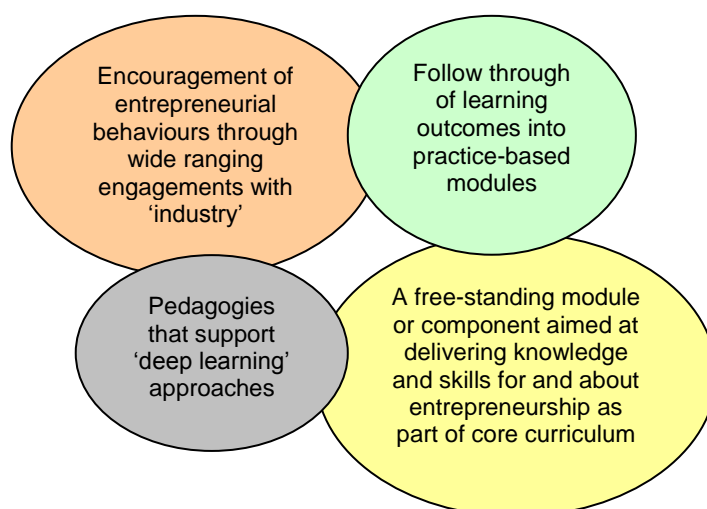[33] HEA-ADM and NESTA (2007), p62

Can entrepreneurship be taught?

Taught entrepreneurship is known to fail unless the quality, ideas and concepts are nurtured and evaluated as part of progressive creative practice.[34] Indeed, as already discussed, much entrepreneurial education concentrates on business skills and competencies, and neglects the creative practice itself and its role in the development of the individual.

How students learn about venture creation and the business practice that supports it is crucial. For example, a taught course of business practice will be more valuable if students can relate the learning to their own experience, test out the theory and engage through experiential learning, preferably as a natural progression within their own practice. For example, students may work in groups to assemble and manage a budget and fund-raise for their end of year shows; or exhibit at a professional trade fair and will need to have a pricing policy. Both these experiences provide rich opportunities to learn about financial management, costing, pricing and apply it in practice. There is a need for mentors and university staff who can confidently teach in both areas. A combined team approach between those with 'business' expertise, teacher-practitioners, and industry professionals can help to integrate creative and professional aspects of learning. Relevant and user-friendly resources would also benefit learning in this area.[35]

Most HEIs offer students enterprise training and professional practice elements via a number of different curriculum models: embedded in core study, as discrete modules or courses, optional or as extra-curricular activity provided by specialist in-house centres. These are explored in **Paper 5. Models of Practice**. The most recent detailed study[36] examines entrepreneurship provision in art, design and media subjects and proposes an adaptive, student-centred matrix model that supports stakeholder engagement in four different ways:

Figure 3.3 Matrix model for enterprise provision in art, design and media

Encouragement of entrepreneurial behaviours through wide ranging engagements with 'industry'

Follow through of learning outcomes into practice-based modules

Pedagogies that support 'deep learning' approaches

A free-standing module or component aimed at delivering knowledge and skills for and about entrepreneurship as part of core curriculum

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[34] HEA-ADM and NESTA (2007)
[35] Artists' Information Company (2005)
[36] Ibid, p.95.

Where do business skills fit it?

In a recent study, students felt that business management skills were more appropriate after graduation and they would like business start-up support at a local level, indicating an interest in remaining in the vicinity of their higher education institution. Graduate retention, particularly in areas of regeneration is a key factor in stimulating growth of creative industries. [37]

Entrepreneurial and business start up education needs to be 'real' and timely. This is where CPD and other flexible provision is extremely important alongside the development of engaged critical creative practice.

Business models for entrepreneurial learning place emphasis on Business Planning as an important process for developing an enterprise. Ideally, a business plan is a positioning exercise: a means of presenting the outcomes of an investigation into the formation of a realistic creative venture - something that is ongoing and not an end in itself. In a more holistic approach, it is important to place emphasis on the quality of research into the creative practice itself, its development, how it is to be supported in the early stages, and the prospective contexts, audiences, markets, costs and strategies, aligned with the personal aspirations of the practitioner.

The creative curriculum provides many opportunities for experiential learning in professional contexts. A 'real life' approach may take longer and require more organisation, but the learning will be greater. The key is to construct teams of staff who are confident in designing and enabling experiential activities that integrate both the business and creative domains. There is a growing need for teacher-practitioners who are facilitators and enablers.

How effective are the professional and entrepreneurial aspects of the curriculum?

It is clear from recent studies that many HE institutions have well established employability and entrepreneurship education in place, in the curriculum, extra-curricula, and post-graduation. In one HEI, an audit revealed that 90% of courses were offering employability or entrepreneurial learning activities. However, there is little current data about how successful these are and there is more work to be done to measure the effectiveness of entrepreneurial learning in terms of how it is applied after graduation.[38]

Work placements and experiences do not automatically develop or encourage students' confidence and entrepreneurial skills, as the context or work activity might not be 'entrepreneurial' - or students are given low level tasks because they lack experience:

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[37] HEA-ADM and NESTA (2007) p.61
[38] Ibid, p.111

> 'Consequently, the student's skill set becomes hard to position and evaluate because of their lack of experience, often resulting in the students being given minor and unchallenging tasks. Employers also maintain that students come with minimal skills that make it hard for small businesses especially to manage a placement student.' [39]

Students themselves sometimes feel that employers do not know what they are capable of doing:

> 'Professionals tend to turn their noses up at students; it does feel like they think we are stupid and incapable when in fact the majority of us are the complete opposite. We are completely capable, we deal with the pressures of deadlines too, we are good at problem solving and we all understand process and idea generation. It is drummed into our head every day!' (Student LCC, April 2006)[40]

Employers (many of them very small enterprises in the creative sector) need educating about what the curriculum provides and students need to capture and present a summary of their interests, positive strengths and attributes - an indication of what they can do and what they want to learn. Much depends on how the experience is managed by all – student, academic, placement staff, employer.

All courses regularly evaluate student experiences within the curriculum and externally. These may bring out very positive results, for example, lists of new skills learned, evidence of new knowledge and its application. In itself, evaluation can provide evidence that students can identify, reflect on and articulate their learning, but it is the longer-term benefit of the learning and its application in future career paths that will be of most interest.

Research is also needed to track students and graduates and measure their progressive learning through their academic journeys and beyond into their career paths, to provide insights into how entrepreneurial attitudes and aptitudes are developed.

Summary of key issues:

- Creative subjects embed entrepreneurial attributes and behaviours in their pedagogies and encourage high level intellectual skills.

- Staff and students need to be involved in debating and re-interpreting entrepreneurial and employability learning for the creative curriculum.

- Entrepreneurial learning is naturally located in creative practice and encouraged through experiential learning and a progressive developmental approach.

- Entrepreneurial learning is enhanced by collaborative and inter-disciplinary learning which provides opportunities for creative transfer.

- Much business and entrepreneurial education focuses on business skills and competencies and neglects the creative practice itself and its role in the development of the individual.

- Encouraging engaged practice will strengthen graduate success rates in employment and entrepreneurship.

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[39] Manu, R (2006) 'The Future Within', MA Design Studies, Central Saint Martin's College of Art and Design, p.10
[40] Ibid (2006) p.22

- Taught entrepreneurship fails unless the quality, ideas and concepts are nurtured and evaluated as part of progressive creative practice.

- There is often lack of clear articulation – students cannot say what and how they are learning, with the consequence that they cannot move onto the next phase – applying their learning in other settings.[41]

- Teacher-practitioners' contributions to courses and opportunities for external collaborations such as live projects are highly valued by students.

- A combined team approach between those with 'business' expertise, teacher-practitioners, and industry professionals can help to address the barriers between business and creative learning.

- Broadening out sites for learning in work-placements and work-related learning opens up new opportunities for students and staff.

- Personal development planning (PDP) has an important role to play in driving the creative learning process.

- Assessment of reflection needs to focus on the learning and the proposed action (next steps) resulting from the reflection.

- Employers and cultural and creative industries need to be educated about what the creative curriculum provides so they can make better use of students' and graduates' experience.

- More work is needed to measure the effectiveness of entrepreneurial learning by researching graduates' career paths so we can understand how students develop entrepreneurial learning, and which aspects of their courses are most valuable.

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[41] HEA-ADM and NESTA (2007), p108

4.   Research into Professional Development Needs

What do we know about the industry perspective, what employers value in our students and the gaps that have been identified in professional development for workers in the creative industries sector?

This literature review draws on reports (the majority of them recent), both national studies and papers and two reports internal to the University. All present similar findings and emerging common themes and recommendations for provision in creative subjects for preparing graduates for work and continuing professional development. There are limitations to this review in terms of its coverage of all disciplines.

Visual artists

An Arts Council report emphasizes the need for artists to continue to develop their practice and professional skills into working life.[42] Visual artists contribute both to cultural life and in society, and work in all sectors. As practitioners they work in a wide range of sites and roles, with a predisposition to work in social, community and not-for-profit sectors. Artists have an important role to play in economic regeneration and this is well understood.

The most recent studies and intelligence about the position of the visual artist are initiated by the Artists' Information Company and include income studies, contexts, sites and ways of working, and CPD needs. [43]

Visual artists aiming to continue with their practice need to find support and opportunities that will help them to develop new work and devote time to building networks and professional contacts. Professional development needs are best met through 'engaged' practice, with regular opportunities for artistic refreshment, involving
- Development of new ideas and new work through the continuous interrogation of practice combined with
- Ongoing research for positioning – establishing contexts for art practice, learning about audiences and markets
- Strengthening their practice through critical dialogue and professional networking with peers and mentors
- Professional presentation
- Just-in-time access to relevant professional training in business, IT and marketing
- Learning how to access professional opportunities in a range of sites for learning: commissions, funding opportunities, residencies and start up support

Artists have a key role to play in developing art markets and generating demand.   Artists frequently collaborate with other artists and broker relationships with other professionals.[44]

Design

The most recent study[45] of high-level skills needs for the design industry comments on the current 'oversupply' of graduates. This is seen as both negative – in that the industry cannot absorb the numbers of graduates emerging from higher education – and also positive in

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[42] Arts Council (2006) Art, enterprise and excellence – strategy for higher education
[43]Artists Information Company, www.a-n.co.uk
[44] Ball L, Price E, Rawson D (2004)
[45] The Design Council/Creative and Cultural Skills Sector Council (2007), p.

relation to the potential for design graduates to apply design thinking in other employment sectors, thus bridging the gap in understanding between design users and designers.

The same report identifies the four most important professional development needs for designers:

business management and project management skills
understanding clients' needs
verbal communication
team and inter-disciplinary working

More specific workplace skills are identified in a report on the supply of and demand for design skills[46]. These include the ability to verbally articulate ideas, take criticism and work to deadlines.

A study of the needs of new creative enterprises in product design and 3D by CSM/Innovation Centre[47] found the same gaps, as well as a lack of understanding about pricing, and the need for financial support and advice.

The 'Higher Level Skills for Higher Value' report[48] proposes a Professional Framework for design involving four complementary domains:

Skills – design practice specific, interpersonal, business,
Process – project management, design processes, evaluation
Values – business culture, management style, ethics and environmental issues
Insights – client and user awareness, markets, cultures, business and supply chains

Continuing professional development is required for both new graduates and for those in creative practice to address these areas. The industry is made up of a small number of large design practices, and the majority of other workers are freelancers or working in small organisations of fewer than ten employees, therefore professional development tends to be learned 'on the job.'

One study of employer needs in particular[49] cites design practice-specific attributes and skills as important requisites:

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[46] Vanilla Research (2006)
[47] Salvadori D (2006)
[48] The Design Council/Creative and Cultural Skills Sector Council (2007)
[49] Vanilla Research (2006)

Subject specific design skills and technical competence, for example in pattern cutting in fashion textiles, or in industry-standard software skills in multi-media are considered to be essential.

Although each year there is a small core of talented, entrepreneurial, highly employable design students there are concerns about basic levels of skills in all design graduates. The same report found that graduates were ill-prepared in job-seeking skills, specific to the creative industries – i.e. knowing how to access opportunities and find work.

It is clear that the design industry values the fresh input and creativity new graduates bring to professional practice, and all studies praise the higher education curriculum for the learning experiences they provide and for encouraging and nurturing creativity and new talent.

Employers rated creativity as the most important graduate attribute in a small study focusing on the fashion industry.[50]

'They scored our students most highly on their creativity, followed by team work and initiative.'

Kellet, in her study of skill development for creatives specifically mentions knowledge of how the industry operates commercially. [51]

'students do not always leave (higher education) adequately equipped with specialist industry knowledge or an understanding of their future role within it'

Kellet's analysis of 'soft' skills gaps are broadly in two categories:

1 Personal qualities:
Inter-personal and self-management skills, team working and decision making
Managing uncertainty, learning from mistakes and risk taking

2 Professional/business awareness:
Generating ideas, identifying markets and clients, understanding the route to market
Business management skills – finance, costing, pricing, project management

This study found that although graduates recognized the importance of business skills, they felt that these are not valued by courses.

Performing arts

A study of entrepreneurial education for **dance** in a sector where almost 40% of workers are self-employed presents a set of entrepreneurial skills
required of the dancer[52]:

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[50] Creative Careers (2007) Employers' Views of Our Fashion Graduates, University of the Arts London.
[51] Kellet S (2006) p.19
[52] Burns S (2007) p.17

- a combination of inter-personal, how to, networking, negotiation, creativity and critical thinking,
- able to engage professionally
- self-awareness and ability to identify development needs
- managing freelance practice
- advocacy
- making funding proposals
- need to be prepared for the transition.

Burns also asserts that the range of entrepreneurial skills required for **dance** students are broadly similar to those for **visual art** - the ability to:
- balance creative independence with the ability to work collaboratively
- manage artistic integrity within a market context
- manage self
- create financial self-sufficiency through the management of skills
- adopt a creative and lateral approach
- create networks, maintain and manage them and communicate effectively
- be proactive, pragmatic and flexible

'In social terms the focus is on the interaction of the people who work together to make dance possible. It is an aggregation of many smaller micro-worlds or sub-communities, a social network emerging from the cooperation of these micro-worlds all with greater or lesser knowledge of the entire network.' [53]

This is entirely relevant to **all** creative disciplines.

Research findings in a study of entrepreneurial learning in the **performing arts**[54] are broadly similar, and identify five key domains for learning:

1. Workplace experience
2. Personal development – careers, challenges, emotionally, artistically, organizationally
3. Project management
4. Networking and information gathering
5. Creative practice development

In summary, higher education aims to encourage and develop important entrepreneurial personal qualities and skills in the curriculum, but these studies find that new and recent graduates lack confidence in some key areas.

Recommendations

Overall, recommendations drawn from these reports do not advocate adding to the curriculum, but making more of what courses already provide and raising standards. There are common themes emerging:

1 Identify entrepreneurial learning
Encourage the identification and articulation of entrepreneurial learning, both in the curriculum and extra-curricula. Skills such as opportunity recognition and identifying target markets have their foundations in developing students as capable, resourceful and imaginative researchers who can seek out, select information in response to a question, analyse, prioritise and use to inform decision-making, in academic or commercial settings.

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[53] Ibid, p.8
[54] Evans M (2006)

Experiential learning is key to developing capable graduates. The curriculum offers many opportunities for these to be applied and developed in industry related learning and through live projects. Courses need to highlight these attributes more clearly for students and say why they are important.

2 Prepare graduates for the industry and wider opportunities
The 'High-Level Skills' report[55] in particular recognizes that CPD is currently fragmented and needs to be more structured and supported by both the industry and higher education.   It recommends a strategy for improving the high-level professional design skills at all levels, from students through to leading designers by:
- establishing a network of visiting design professors to connect education and industry and enhance student entrepreneurial skills;
- encouraging and promoting multi-disciplinary working through experiential learning to mirror practice in the industry;
- providing web-based career and course information service to raise awareness of the wider opportunities open to graduate designers as 'researchers, managers, strategists and communicators.'[56]

3 Strengthen basic and high-level skills development
Institutions need to strengthen the curriculum to prepare students for entry into the industry, such as developing communication skills through the use of more dynamic critiques and opportunities for verbal self-appraisal. Personal and professional skills required are:
- verbal and written communication skills
- networking
- self-promotion
- presentation
- team working
- job searching and career management
- knowledge of the wider options for creative graduates

In terms of professional practice needs, these are:
- More commercial briefs, faster working
  - Strategic skills, consumer behaviour, brand development
  - Marketing, business management
  - Account and project management
  - Advice on intellectual property
  - Practicalities of working in design
  - Business start up and funding opportunities

4 Support graduate enterprise
Crucial to student development is the management of the transition of student to entrepreneur (employed or self-employed) and clear structures in place to provide the appropriate learning experiences, resources and support at each stage before and after graduation. This requires a collaborative effort by both higher education and industry to provide:
- Business, IT and marketing skills
- Career development planning
- Mentoring and coaching
- Enterprise training and incubation units
- Graduate bursaries and apprenticeships

5 Prepare graduates for the transition from higher education
Courses are teaching many of the underpinning entrepreneurial skills and attitudes through experiential learning, industry links, collaborations, and bringing professionals into education.

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[55] The Design Council/Creative and Cultural Skills Sector Council (2007)
[56] Ibid, p.46

However more needs to be done to prepare students for the transition and their awareness of the wider career paths open to them, including:

- Better preparation for getting first job and being effective in first job (work readiness)
- Developing the use of PDP and reflective practice to encourage students to reflect on links between courses and career aspirations
- Helping students to recognize their worth and potential in creative practice and the wider opportunities open to them

6 Encourage creative practice development

Designers and creative practitioners need to be continually strengthening their creative practice as 'engaged practitioners' through:

- a commitment to researching and developing new ideas and new work,
- seeking feedback through engaging in critical dialogue with peers and those in the profession, so they can locate their practice in appropriate and new contexts;
- seeking out new opportunities to both support and develop their practice both paid and unpaid

Sources (annotated)

Arts Council (2006) 'Art, enterprise and excellence – strategy for higher education.' A document laying out a recognition and future strategy for higher education's contribution to the arts.

Ball L, Price E and Rawson D (2004) 'Creating A Vision for Artists' Professional Development in the SE of England', Arts Council England South East. A report resulting from a consultation event with visual artists and professional development providers.

Ball L and Price E (1999) Graduate into Business: Rethinking Business Start Up, Higher Education Regional Development Fund, DfES/University of Brighton. A survey of the needs of creative enterprises and a proposed strategy for the curriculum.

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Evans, Mark (2006) 'Icebreaker' published by HEA-PALATINE. An examination of models and practice for the effective integration of creative practice and entrepreneurial skills and understanding, at both undergraduate and postgraduate level within Performing Arts,

Kellet, Sally (2006) 'Emergent Practices in Entrepreneurship Education for Creatives,' HEA-ADM Subject Centre. Research into models of practice for enterprise education for creative students and skill development required for creative entrepreneurship and employment.

Salvadori, Dani (2006) 'A Pilot Project - developing product and 3d design companies, a report on a small study of 20 graduates working in creative practice', CSM Innovation Centre.

Vanilla Research (2006) 'Supply of and Demand for Design Skills', Executive Summary, commissioned by the ADM/HEA, Design Council, and CETL Teaching and Learning through Design.   Interviews with 50 practising designers to discover skills gaps in new or junior designers.

5.   Models of Practice

This paper reviews models of practice for professional development, employability and Personal Development Planning

Curriculum models

There are many commonalities between entrepreneurial/employability learning and Personal and Professional Development (PPD), supported by Personal Development Planning (PDP).

For simplicity, in the following pages, models are grouped under six headings, ranging from embedded to ad-hoc and extra-curricular. [57]   In practice, there are variations, and indeed combinations of models within the curriculum.   We will start with the embedded model indicating key features and issues, and move to more ad-hoc activities. Ideally many of the features of the integrated model are present in other models, with experiential learning and a student-centred approach encouraging engagement with each experience.   The key features and pros and cons of models are summarised.

HEIs tend to offer combinations of models, providing a rich mix of opportunities. All have their benefits, and demonstrate an evolving curriculum. What might start as an ad-hoc learning experience may be tested outside the formal curriculum and then brought into mainstream course activity, and it is this opportunity for flexibility and innovation in the curriculum that brings exciting experiences to students and improves the currency of course offers.

Many courses combine more than one or several models.   For example, an integrated model may also offer Core Study Units, Optional Units and/or Ad-hoc or bolt-on activities. Students experience many opportunities for the enrichment of their studies in this way and reinforcement of professional and entrepreneurial learning.

Figure 5.1: Curriculum models for personal and professional development

Model	Integrated (holistic) 1	Core study 2	Optional 3	Ad-hoc or bolt-on 4	Extra- curricular 5	CPD 6
Relation to the curriculum	embedded within all Units	separate Units part of degree award	separate Units part of degree award	additional activities may not part of award	additional activities may not part of award	separate Units post- award
Accredited	√	√	√	√	√	√
Non- accredited				√	√	√

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[57] For an alternative typology for entrepreneurship education in art, design and media, see HEA-ADM (2007) Creating Entrepreneurship, pp50-56

1. **Integrated (holistic)**
- Embedded within creative practice and academic pursuits throughout core curriculum via experiential learning
- Learning outcomes are re-interpreted for the subject discipline, clearly articulated in all activities and assessed as part of the final award.
- Whole course team approach with a cohesive and explicit set of educational values, embracing entrepreneurship, employability and professional development as integral to creative practice.
- Learning agreements, learning reviews, self-evaluation and structured reflection contribute to personal development planning which directs the individual's learning path
- All areas of the curriculum are equally weighted.
- Students learn to address and reflect on personal and professional matters throughout their studies and embed them in their practice.
- Students are supported in their individual learning paths through regular self, peer and tutor evaluation
- All staff are involved in delivery
- Students engage in progressive, developmental learning activities with opportunities for transfer of the creative process
- Variations – may be integrated but not made explicit and assessed

Issues: Embedded PPD and entrepreneurial learning may be 'hidden' (implicit model), meaning that students may not value or recognise entrepreneurial learning and development of important personal and professional skills and attitudes.

2. **Core study (separate Units or Modules)**
- Typically PPD as a core, but discrete activity, running parallel to other studies; or a block or year of work placement or project activity
- An assessed and compulsory programme involving students in examining issues relating to the personal career and professional development, as well as aspects of design practice and work related learning.
- Ideally accredited and assessed and fully supportive of core study
- Best practice will include many of the student-centred features of the Integrated (holistic) model
- Gives credibility to the learning processes themselves as learning outcomes
- Provides a framework with which students can continue their personal and professional development after graduation
- Ideally delivered by course team, teacher-practitioners supporting input from industry related.
- Students experience different pedagogic models, which is valuable, but there may be more didactic learning, rather than experiential, which may affect student engagement and motivation.
- Active learning may or may not take place.

Issues: Importantly, enables students to take an overview of all course elements and validates reflection as a core learning activity. May be delivered by specialist PPD staff only, who are not involved in teaching core studies with the result that sometimes students do not value or attend. Delivery may be marginalised if not endorsed by course team, with the consequence that students will not be encouraged to make the connection between the valuable learning in these Units and creative practice.

3. **Optional (separate Units or Modules)**
- The student may select or choose to undertake this study and therefore be highly motivated
- Typically elective units on: business start up; enterprise; marketing; creative writing; multi-disciplinary working with other subject areas; and industry collaborations.

- Accredited and contributes to final degree assessment
- At best students choose to enhance their subject discipline, and these Units provide an opportunity for students to create their own bespoke learning pathway
- Helps develop self and opportunity awareness
- Provides courses with an important opportunity to test new aspects of the subject discipline, areas of interest, multi-disciplinary working, and University-wide learning activities for the curriculum

Issues: As for 2. Core Study. Students may not engage fully if not supported or encouraged by core study staff team. Students may be unable to relate their learning to their own creative practice. If not accredited or assessed, this may adversely affect student attitudes and motivation.

4. Ad-hoc or bolt-on
- Typically un-accredited and timetabled outside normal teaching hours
- Gives students opportunities to enrich their creative practice through additional learning
- Organised by staff as an informal course add-on
- Typically may be a talk by a practitioner, a visit, an opportunity to participate in an external exhibition, an alumni networking meeting; a University-wide initiative or short course
- Credits may be awarded for ad hoc activity, if the core curriculum is sufficiently flexible
- Can raise important issues for students and their practice, but may be no time for applied learning unless an experiential approach is taken
- Will tend to attract independent, highly motivated students who are keen to access new learning opportunities

Issues: As for 2. Core Study and 3. Optional: Student commitment and engagement if not assessed, and students may not integrate or relate their experience into their creative practice. If outside formal curriculum, student attendance and motivation may be affected and students may not have an opportunity to discuss the significance of this activity for their practice and development.

5. Extra-curricular (pre-graduation)
- Self-directed extra-curricular study or learning activities to complement degree studies
- Permits scope for student-led activity, sometimes self-initiated by the student during degree studies, such as a group external exhibition or show.
- Use of external agencies and local support, networks, etc.
- Can combine with part-time employment in related or unrelated fields
- Can offer accreditation for part-time work, residencies and external initiatives, such as community-based work.

Issues: As for 2, 3 and 4 above: Students tend to be highly motivated and will see as an opportunity to enhance their prospects

6. Continuing Professional Development (CPD)
- Similar to extra-curricular, and occurs after graduation, providing bridging opportunities and is ongoing supporting professional practice,
- Typically, funding and support for business start up or incubation scheme
- Training or short course; additional skill training, e.g. IT; enterprise training;
- Industry based internships and post-graduate placements
- Graduate bursaries and apprenticeships and provision by external agencies and schemes; ie. NESTA Pioneer Scheme; Crafts Council Next Move; Cockpit Arts
- Formal postgraduate provision – practice-based higher degrees, diplomas and certificates
- Professional development schemes: ie. Artists' Access to Art Schools (AA2A)
- Self-initiated professional development in a range of different sites for learning – paid and unpaid; e.g. competitions; residencies; volunteering; being mentored

- Informal workplace on-the-job learning
- Networking, alumni meetings and events
- Resource-based learning via specialist websites and resources

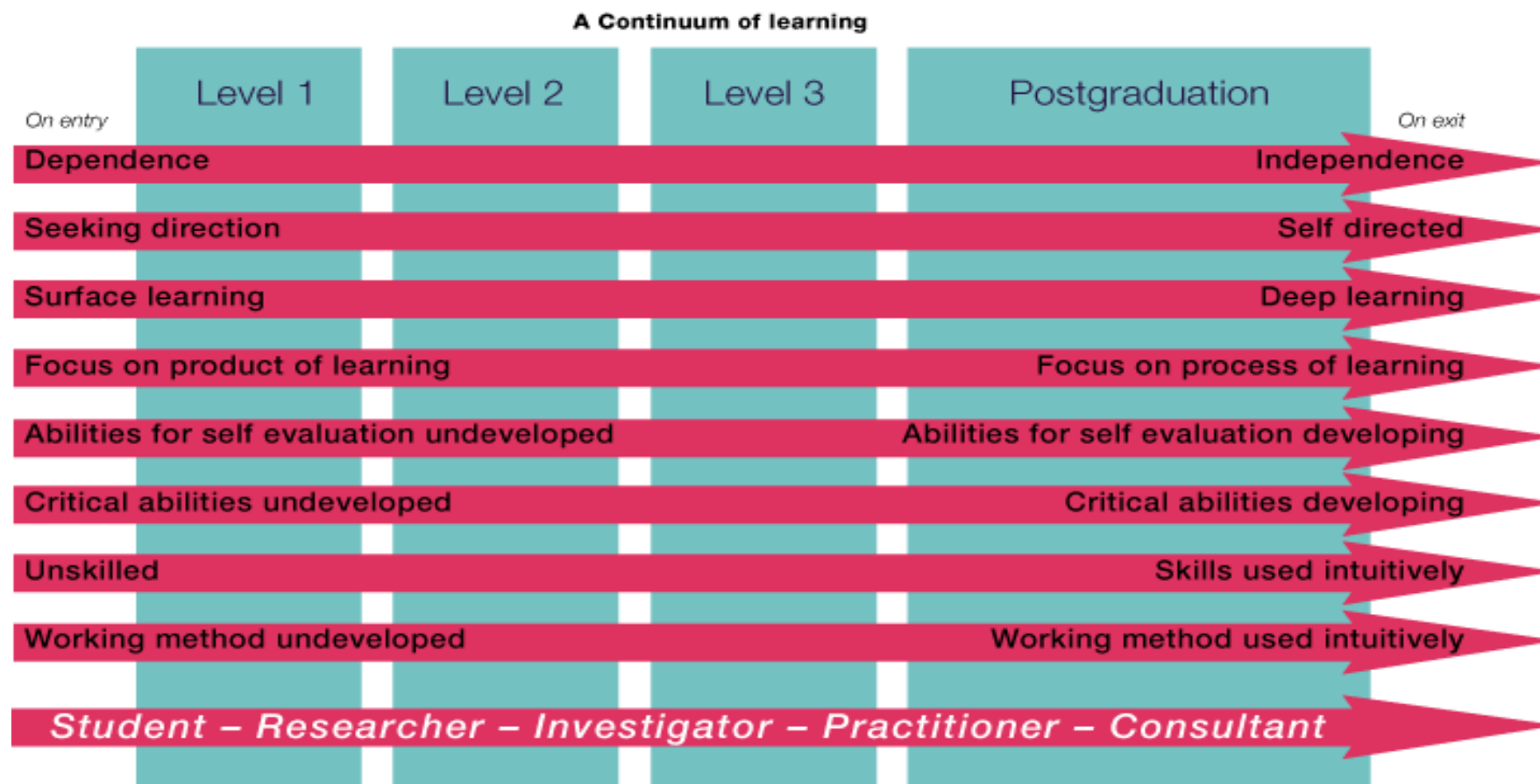**Issues:** As for 2, 3, 4 and 5 above: Creates opportunities for easing the transition to work

The academic journey – student mindsets

What curriculum activities are appropriate at each level or stage of learning? The next section considers a student-centred model for personal and professional development and its interpretation through the academic journey.

In Figure 5.2 the academic journey is expressed as a progression of mindsets on a continuum of learning:

Figure 5.2   A Model for the Student Journey in Personal and Professional Development

A framework for personal and professional development in the art and design curriculum

A Continuum of learning

| Level 1 | Level 2 | Level 3 | Postgraduation |

On entry → On exit

Dependence → Independence

Seeking direction → Self directed

Surface learning → Deep learning

Focus on product of learning → Focus on process of learning

Abilities for self evaluation undeveloped → Abilities for self evaluation developing

Critical abilities undeveloped → Critical abilities developing

Unskilled → Skills used intuitively

Working method undeveloped → Working method used intuitively

Student – Researcher – Investigator – Practitioner – Consultant

Each stage or level of learning is characterized by a different mind-set as follows:

On entry to higher education

- In a mindset of dependence and seeking direction
- Critical abilities and ability for self-evaluation are undeveloped
- Limited and untested working method, creative practice and inter-personal skill development
- Inclined to engage in a surface approach and their immediate concerns are to acquire knowledge and skill so that they can produce a tangible result or product for evaluation/assessment – for example, a body of work or an essay.

On graduation

- Recognise the value of the (intangible) creative learning processes, and are less focused on the end result
- Working and learning independently, with a well-developed range of working methodologies, used intuitively
- Evaluate and review creative practice as an embedded professional skill
- Finding direction and able to direct and plan their work.
- Inter-personal and professional skills are well developed and used intuitively
- The nature of the work/practice is bound up with personal references, lines of inquiry and interpretation (deep learning).

The learning continuum (Figure 5.2) presents a generalized model, developed to provide a rationale for students. There are real benefits in debating the stages and terminology with students to encourage them to construct their own bespoke models, relevant to their own development – and it provides a potential framework for charting their progress, as well as a rationale for designing professional development activities.

Learning, teaching and assessment strategies need to encourage the transition of mind-sets at each stage:

The **Student - Researcher** will be focusing on orientating themselves for the academic context, becoming an effective learner with particular emphasis on learning to learn, acquiring effective study, practising and applying independent research skills, beginning to learn about self-evaluation and reflection.

The **Researcher - Investigator** will be identifying strengths and possible options and choices for study, developing learning methodologies, rehearsing personal and professional skills, applying research and investigative skills in both academic and external settings, testing career options in real world settings and undertaking work experience, strengthening their abilities for making informed critical decisions and self-evaluation.

The **Investigator - Practitioner** will be preparing for graduation and applying learning in a range of contexts (transfer of the creative process). They will understand how to plan and carry out self-directed strategies to achieve personal, creative and career objectives. They will have an awareness of the professional requirements of the area of work they will be entering. Reflection and self-evaluation will be central to the development of their practice.

The **Practitioner – Consultant** will be consolidating their learning and finding direction through work and related professional opportunities. They will work intuitively and have continuing personal and professional development embedded in their practice. They will be able to independently appraise their own and others' practice; identify and undertake further development integrated with their creative activity. Critical self-evaluation and reflection will be embedded within their learning methodology.

The progression to **Consultant** naturally leads to mentoring and nurturing the progress of others. Indeed, academic staff working with this continuum identify with the Practitioner-Consultant role.

© Linda Ball, abstracted from Ball L and Price E (1999) 'Rethinking business start up – a new model for success in art and design,' Research Report, DfES HE regional development fund/University of Brighton, subsequently published in: Ball L (2000) A Framework for Personal and Professional Development in Bourner T, Katz T and Watson D (2000) New Directions in Professional Higher Education, SRHE, pp.203-210.

Models for Personal Development Planning and E-Portfolios

Effective PDP practice:
- Integrates within mainstream academic pursuits
- Links to learning objectives and outcomes of programmes
- Is supported and endorsed by lecturing staff
- Reflects local customs, practices, circumstances
- Complements existing good practice
- Builds on existing partnerships between learners and academics
- Is underpinned by support from the institution[58]

Benefits for students	Benefits for tutors
- Make links and take an holistic view of their studies - Reflect critically - Become independent - Adopt a pro-active stance in all areas – academic, extra-curricular, career planning - Capitalise on learning in a variety of contexts	- Add value to learning/teaching experience - Help students to take responsibility for their own learning - Facilitate more effective monitoring of student progress - Improves quality of academic support and guidance - A mechanism for recording tutorial and pastoral support - Foster career related skills and for writing informed references for employment - Evidence individual student learning and achievement - Improves work-related and based learning

E-portfolios provide a depository for evidence of progression - the results of Personal Development Planning.   The best models foster lifelong learning and formative self-evaluation, because they are learner-centric – owned by the student, who can regularly update their academic and professional achievements, and choose which parts of the portfolio they wish to allow others to see. E-portfolios provide a natural vehicle for recording and valuing extra-curricular learning. The format should enable sharing with others (ie tutors, students and employers) who can add formative feedback.

Ideally, in an academic context, E-portfolios are accessed via the internet, via institutional VLEs – particularly useful where students are studying remotely or from multiple locations. After graduation, there needs to be a mechanism in place that allows the student to transfer the contents of their E-portfolio and continue with the process: a resource and archive on which to draw for professional purposes: web-sites and digital archives of practice, show-reels, etc; CVs and for applications of all kinds.

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[58] HE Academy

Professional Development and Enterprise in the Curriculum
HEIF Funded Project: 2007-2008

STAGE 1 REPORT - OVERVIEW

Contents

See separate pdf. for Part A

Introduction and aims of the project

A THE CONTEXT FOR PROFESSIONAL DEVELOPMENT AND
ENTERPRISE

1: The context: new models for creative higher education and work

2: 'Bold resourcefulness' – re-defining entrepreneurship

3: Entrepreneurship through creative practice

4: Research into professional development needs

5: Models of practice

See separate pdf. for appendices

Appendix 1
A Framework for Entrepreneurship Education

Appendix 2
National Employability Profiles for creative subjects

Appendix 3
*Examples of models of practice for Personal and Professional Development in
the University's courses at each College*

PART B

Professional Development and Enterprise at the University of the Arts, London

6. University of the Arts London, an enterprising university

This paper looks at the presence of professional development and entrepreneurial learning in the curriculum; the University's main concerns with regard to graduate successes; and reviews how the University is contributing to student development and the support of enterprise activity.

An enterprising University

The University has made significant progress in its strategic aim to be an enterprising university, meeting acknowledged prime indicators, evidence for which is provided in the following pages:[1]

Figure 6.1: An enterprising university

The University:

- produces well educated graduates through specialised creative education, training and CPD
- plays an important role in serving needs of creative industries, nationally, regionally and internationally
- grows established and sustainable innovation and enterprise centres & research units foster venture creation and enterprise
- has a strong research culture: highest number of art & design research active staff in the sector. Grade 5 RAE.
- forges and maintains strong partnerships and collaborations with key industry professionals

How is entrepreneurial learning articulated?

The University articulates enterprise and aspirations for academic achievement and career progression of its students in its strategic aims:

'ENTERPRISE: Enterprise is about taking the initiative to seize new opportunities, particularly those arising from the inventiveness and creativity of staff and students. We

[1] NESTA (2007) Five Ways Universities Drive Innovation, Policy Brief.

have become more explicit about our desire to be enterprising; to be supportive of those who wish to be entrepreneurial; to grow our financial return from enterprise and entrepreneurs, and to use such funding to invest in the provision of improved services to our staff and students.'

'ACADEMIC: We want our students to 'benefit from a high quality learning experience fully meeting their needs and that of society' (HEFCE Strategic Plan 2003-08). To do this we must ensure that the University's curriculum, as a whole, is relevant to students, the creative industries and broader society. It must be innovative and responsive to emerging needs of current and prospective students and be appropriately resourced.' [2]

What are the University's main concerns?

The University wants all its graduates to reach their potential and believes that there is more work to be done to:

- Ensure all students have opportunities to experience and develop employability and entrepreneurial skills and knowledge
- Improve capacity for successful employment and self-employment
- Identify and build on existing good practice
- Increase the impact of PPD on all students[3]

In summary, venture creation, knowledge transfer and graduate enterprise are areas in which the University has made considerable progress with dedicated Centres to support innovation, and seed funding for staff and students to develop ideas and products.

The University strives to provide excellence in creative education and it is clear that many 'entrepreneurial' opportunities are available to students throughout the University's innovative curriculum. Recent initiatives supporting innovation in the curriculum include the CLIP/CETL (Creative Learning in Practice Centre for Excellence in Teaching and Learning). The Centre for Learning and Teaching in Art and Design (CLTAD) provides a flexible programme of accredited professional teacher training for the University's staff.

The University is proud of its graduate successes, with a growing number of creative professionals of international and national standing in their fields, yet there are concerns about the seemingly low numbers of University's graduates entering 'related' work or employment in some courses. In Figure 6.1, of those UAL graduates in *full and *part time employment, just over half are in work classified as directly 'related' to their discipline: 53% are in related work; 19% are in indirectly related, 28% are in unrelated work.[4]

'Notwithstanding UAL's success in developing many among the highest achievers in the arts and creative industries, overall its graduate destinations have been weaker than those of its key comparator institutions in recent years. This would suggest scope for greater attention to the aspirations, development and achievement of students who are performing less well than the institution's luminaries.'[5]

[2] Medium Term Strategy 2005-2010
[3] University of the Arts London, Learning and Teaching Strategy, 2006.
[4] No comparative figures are available from the national statistics.
[5] Dodd K (2007) Destination data of graduates from University of the Arts London, pp37-38

Figure 6.2 Graduate destination data (percentages) 2005[6]
(Compares UAL Graduate Destination data with available national statistics in percentage terms.)

UAL Graduate destinations (latest figures available)	All UAL graduates (known) %	All UK creative arts and design full-time graduates (known) %	All UK graduates, all subjects full-time (known) %
in full-time work* 33% part-time* 10% self-employed 14% voluntary work 2%	59	66	63
further study	9	11	16
combining work and further study	5	7.5	8
unemployed	11	10	6.5
Other (remaining categories)	(16)	(5.5)	(6.5)

Further scrutiny of these figures indicates that there is clearly work to do to improve the response rate, and encourage completion of important questions.   In 2005, almost one quarter of graduates failed to return their questionnaires (known destinations =78% of graduates).   7% of the 'knowns' failed to answer in detail, or were classed as Other (9%).   More earnest pursuit of detailed information would greatly improve the overall profile of the results.

It is clear that more success stories involving graduates in a wide range of working roles are needed – 'real' career experiences to be fed back into the curriculum, pointing to a need for improved co-ordination and presentation of information about graduates at course and College level.

What direct intelligence do we have about the University's graduates?
- An active Alumni Association is building profiles and case studies of the University's graduates and their career paths
- At Wimbledon, first year sculpture students track graduates three years on and experiences are fed back into the course
- The CSM Innovation Centre is gathering data about the longitudinal career paths of CSM graduates and documents many success stories
- A review of Destination data is explored in Dodd K (2007) Destination data of graduates from University of the Arts London, Report for Student Services, with recommendations for making more effective use of the data
- Creative Careers keeps in touch with graduates and initiates small studies of different sectors; has commissioned film clips of interviews with graduates in different work roles.
- The Fashion Business Resource Studio is tracking graduate successes and maintains a database (FashionAim) of graduates seeking work
- Many courses have active formal and informal links with graduates and alumni.

UAL graduate aspirations and career patterns

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[6] Percentages derived from figures in Table 3: Destinations of full-time UK first degree graduates by subject area, Destinations of Leavers in Higher Education 2005; and UAL Creative Careers Destinations of Leavers 2005. (Other categories represent the remaining percentages)

As part of this Project, a pilot e-mail survey is in progress inquiring about graduates' aspirations, career paths, what they valued on their courses, what they felt was lacking and what they are currently doing. The survey involves graduates registered on the ECCA and Alumni mailing lists. It is early for results to be conclusive, and at the time of writing a small sample of returns (16) selected at random gives evidence of complex and multiple-activity working lives.

What are they currently doing?
The questions sought to discover the range of graduate activity rather than elicit answers purely about paid work or employment. Typically graduates are involved in combinations of professional practice, employed work, professional and practice development, ie. generating work.

Figure 6.3: What are graduates currently doing?

Number of times specifically mentioned:

Own design practice (sole-trader, or partnership)	7
Practice development – ie. producing new body of work	6
Exhibiting/performing	4
Updating skills – ie. photoshop; art therapy	3
Employed full-time (related)	3
Employed full-time (unrelated)	2
Unemployed and looking for a job/work	2
Applying for funding	2
Unpaid work/voluntary work	2
Part-time teaching University	1
Promotion of self and work	1
Tendering for new work	1
Postgraduate study	1

Encouragingly, all the students in the sample are continuing with their practice in some way, and seeking different ways to support it. Thirteen had worked on a freelance or self-employed basis since graduating. It is clear that graduates face many obstacles and have to be persistent to find work or employment. The trend for multi-tracking or portfolio careers appears to be continuing, with eight graduates involved in a combination of three or more work or practice-related activities. Only three graduates are involved in a single activity. An evolving career pattern involves time thinking about and preparing for the next move.
Examples: 'What are you currently doing?'

Graduate A 1982 Industrial Design	1 partner in Cardross Glass LLP, designing and supplying commissioned architectural art glass, for an international clientele
	2 Council Member and Associate of the British Society of Master Glass Painters
	3 Part-time associate lecturer, PGCert Glass

Graduate B 1993 Acting	1 Exhibiting as performance poet in 3 formats at the Truman Brewery off Brick Lane, live and in text.
	2 Made new voice reel and had new photographs taken
	3 Tendering for work at West Wing Arts Centre in Slough
	4 Commissioned by Wellcome Trust to perform own material fronting four discussions, this autumn

Graduate C 1994 Footwear and accessories	1 full-time successful own business, designing and making accessories and developing footwear range

Graduate D 2001 Product Design	1 unemployed and seeking a job
	2 preparing for painting show in November
	3 working on a logo project freelance
	4 just finished making hi-fi furniture for private client

Graduate G 2004 Art and design	1 full-time Mental Health and Learning Disabilities Administrator
	2 taking introductory courses in teaching and art therapy

Graduate E 2005 Fine Art	1 working part-time as underground station assistant
	2 continuing own artistic practice
	3 applying for funding and contacting sponsors
	4 attending evening class on book publishing

Graduate F 2005 MA Industrial Design	1 full time employed as mechanics/graphic designer in field of product customization for mobile phone company with responsibility for customers in Europe, Africa and Middle East

The Project Team will continue to gather graduates' stories into 2008 and present a full analysis for the summer. Early results point to a need for preparing students for first steps by raising awareness of the opportunities open to them and how they may be accessed.

More evidence of longer term career patterns to feed back to staff and students – 'real careers' is needed. A new national longitudinal study of graduate career paths is planned[7], and it will be important to seek evidence of continued engagement with practice and transfer of the creative process into other settings.

Mapping the curriculum

The University fosters the development of students' entrepreneurial skills and learning through an aligned curriculum.   The ethos is:

> 'Constructivist: authentic, complex, social, placing process above products, with an emphasis on development of students' skills and meaning-making, and learning and teaching strategies that help students to achieve their potential...[8]'

During the period January to May 2007, the Project Manager arranged or attended more than 40 meetings with key people (individuals and groups) across the University to gain an overview of curriculum models, and to inform the methodology for the project. Course documentation was

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[7] National Longitudinal Survey of Destinations of Graduates in the Creative Arts 2008, CHEAD and UAL initiative, forthcoming
[8] UAL Learning and Teaching Strategy

examined to see how entrepreneurial learning and professional development are articulated at College and course level. Owing to the time limitations and the size of the University, the focus has been on undergraduate BA(Hons) courses only. Therefore, the initial mapping exercise is illustrative rather than definitive.

The University offers its staff and students a mixed economy and matrix of opportunities and resources for professional development and entrepreneurial learning. These are grouped into 10 areas and mapped out below:

1. Experiential learning through creative practice	2. Creative collaborations	3. Industrial placements and work-based learning	4. Entrepreneurship, business start-up and support for creative ventures for staff and students	5. Personal and professional development (PPD)
6. Personal development planning (PDP) and E-portfolios	7. Mentoring and volunteering	8. Networking opportunities	9. Web-based and other resources	10. Postgraduate and CPD provision

See also **Paper 5. Models of practice** – for an explanations of the key features of Models, **and Paper 7. The creative curriculum at UAL** - for specific projects, initiatives and course activities. Further research is required to capture and evaluate the impact of entrepreneurial learning.

1. EXPERIENTIAL LEARNING THROUGH CREATIVE PRACTICE
Experiential learning provides the main vehicle for the encouragement of students' employability and entrepreneurial learning: embedded live projects, work related learning, opportunities, competitions and commissions supported by courses and by specialist centres: e.g. CSM Innovation Centre; Fashion Business Resource Studio LCF. Many opportunities for transfer of the creative process occur within studio practice and outside the curriculum, and examples are given in **7. The creative curriculum at UAL.**

The pedagogies of experiential learning in creative practice: the 'project', peer learning through the 'crit' – provide the cornerstones for developing and strengthening creative practice through articulation of learning, engagement in critical dialogue and utilising constructive feedback. (See **3. Entrepreneurship through Creative Practice**).

Enhancement of student learning in this area is encouraged by reflection and articulation in learning and assessment practices, to help students to recognise and value important attributes skills and characteristics that will be useful to them in their future professional lives.

However, the difficulties in offering consistent experience across a diverse institution are recognised. There is more work to be done to debate with (staff and) students the valuable learning from creative practice, and build students' confidence in articulating what they can do, so they can relate their learning to future opportunities (transfer of the creative process).

2. CREATIVE COLLABORATIONS
- Curriculum-based: staff-student-industry-community collaborations of all kinds in a range of sites for learning; some international, e.g. Shared Talent (LCF); supported and brokered by specialist centres: e.g. CSM Innovation Centre; Fashion Business Resource Studio.
- Extra-curricular: work, volunteering, exhibitions, outreach projects, festivals – student and staff-led initiatives; e.g. Young Design Programme, Sorrell Foundation (open to all UAL students); Artrepreneurs (Camberwell); and supported by staff and student-led websites.
- Alumni Association and Student Union initiatives, including volunteering schemes, outreach and mentoring.

Many of these collaborations have multiple benefits, meeting widening participation, social and community agendas.

3. INDUSTRIAL PLACEMENTS AND WORK-BASED LEARNING
The UAL, like many higher education institutions, recognizes the importance of providing a professional context for students to apply their learning with a well-developed programme of placement and work-related opportunities across all Colleges. Curriculum models range from a one-year period of accredited paid work in industry (leading to a Professional Diploma) in addition to the formal degree programme – to opportunities for shorter work placements, live projects and extra-curricula collaborations of all kinds.

Placement programmes are well supported by academic staff, dedicated placement and PPD staff and specialist centres such as the Fashion Business Resource Studio. Detailed placement handbooks provide important reference material for preparation and raising awareness about professional behaviour and applying for placements.

4. ENTREPRENEURSHIP, BUSINESS START-UP AND SUPPORT FOR CREATIVE VENTURES FOR STAFF AND STUDENTS
There is a rich mix of provision:
- In the curriculum via core study, electives (LCC Business Start Up and Going Freelance) and PPD Units, with follow through to extra-curricular initiatives and supported by specialist centres: ECCA; CSM Innovation Centre;
- Enterprise funding and support for creative ventures and product/service development – Proof of Concept fund (LDA/UAL)
- Special projects, many brokered by College based research centres, and individual staff initiating local initiatives for collaborative working and partnerships
- Funding to support research and staff/student business and entrepreneurial activity: for example, Enterprise Centre for Fashion Enterprise
- College-based centres are moving towards a University-wide remit: The CSM Innovation Centre, Enterprise Centre for the Creative Arts, Own It; Artquest; The Engine Room
- Short courses programmes across the University provide opportunities for learning new skills, refreshing creative practice and just-in-time training.

5. PERSONAL AND PROFESSIONAL DEVELOPMENT (PPD)
Models of practice are well-established in the University's curriculum and range from embedded and core units of study in all courses to ad-hoc events and activities, both accredited and non-accredited. For an explanation of models and their advantages and disadvantages, please see **Paper 4. Models of Practice.** There are many variations and combinations of models in use across the University.

**Curriculum Models for Personal and Professional Development
in the University's Courses**

* **Integrated** PPD is well-established in the University's curriculum, evidenced by explicit PPD and employability/enterprise related learning outcomes embedded in all Units of Study. However, there are variations and the most common approach is to offer integrated PPD with additional Core Units.

* **Core Units for PPD** incorporate learning to learn and the foundations for academic study, inter-personal and career management skills, reflective practice, team working and aspects of professional practice, with variations from College to College. For example, Camberwell and CSM provide support for progressive learning in support of practice-based learning, with discrete units at Stages 1 and 2. Wimbledon offers PPD Units at Stage 2 in Fine Art, and in Stages 1 and 2 in Theatre Design; LCC offers PPD units at Stages 1, 2 and 3. There are Core Units formalising work experience and work placements. Delivery modes may be 'long thin' (ie. weekly timetabled) or 'short-fat' (ie. concentrated 2-3 days intensive blocks).

* **Optional and Elective:** The Diploma in Professional Studies provides credits for an industrial placement year in several of the University's courses. Colleges have well-established elective programmes, providing students with opportunities to enhance their studies, many with entrepreneurial learning.   LCC for example, offers electives in Business Start Up, Project Management and Going Freelance; The Young Design Programme (Sorrell Foundation) provides an opportunity for multi-disciplinary working for student teams drawn from all of the University's courses;

* **Ad hoc or bolt-on activities:** University staff are extremely entrepreneurial in evolving the undergraduate curriculum to accommodate initiatives and interests, as well as providing opportunities for enhancing students' learning: examples include events, talks, visits, ECCA Graduate Week, Enterprise Week; opportunities for external exhibitions, etc. They tend to be in a non-accredited form.

* **Extra-curricular** activity may be student or staff led, similar to ad-hoc or bolt on.   Many extra-curricular activities are student led: for example volunteering. University examples: ECCA provision – resources and support; Student Union volunteering, Creative Careers events and seminars; Alumni Association networking meetings. There is more work to be done to recognise and value extra-curricular activity.

* **Continuing Professional Development (CPD)** is provided through post-graduate study and research, skills training, vibrant short courses programmes, funding for business start up, etc. Examples include: Artquest mentoring scheme, The Design Practice, LCC; Artists' Access to Art Schools (AA2A).

How is PPD articulated at course level?
In undergraduate programmes, course handbooks and specialist PPD handbooks provide a narrative, with maps or charts indicating progressive development and application of PPD objectives and outcomes from Stages 1 – 3.   Courses re-interpret PPD outcomes for their own subject disciplines and often with specific reference to employer sector requirements.

A sampling exercise involving course handbooks from each College gives an indication of the PPD ethos and models of practice adopted, with an indication of PPD objectives and learning outcomes for each Stage – see **Appendix 3**. One course from each College is selected. This exercise is intended to be illustrative rather than definitive, indicating mixed models of practice with PPD integrated and core study to varying degrees across all Colleges.

Many of the University's courses are designed to provide entry into a specific profession, for the example the BA Acting Course (**CSM**), which offers

'a sustained programme of particular preparation for the acting profession, complemented by the Personal and Professional Development Unit in the early stages of the Course which provides an invaluable skill base for research, life-long learning and the world of work.'

PPD values expressed throughout the University's courses emphasise the wider benefits of a creative education as well as potential outcomes closely related to creative practice.

At **Wimbledon**, in Sculpture, where PPD and reflective practice is embedded, there is a recognition of the importance of encouraging students to reach their potential, following individual paths.   Academic staff deliver and 'own' the PPD programme, moving towards further integration of three key domains in the curriculum – an holistic, embedded model.
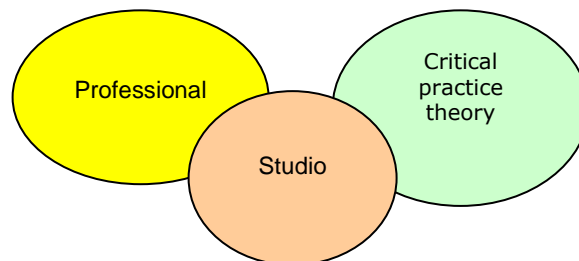
Progressive learning opportunities 'expose that feeling of vulnerability in a supported environment,' building communities of learning. The effectiveness of models of practice needs to be evaluated in terms of how well students make the connection between PPD, creative practice and their career plans.

6. PERSONAL DEVELOPMENT PLANNING (PDP) AND E-PORTFOLIOS
Personal Development Planning tends to be articulated (good practice) in relation to local customs and practices, with variations from College to College, and is embedded in most courses. It manifests itself through personal documentation, such as learning agreements, artists' statements of intent, and evidence of learning in journals, placement reports and diaries, written and verbal reflection, and critical self-evaluation as part of assessment.

However, if PDP is not central to the learning process but seen purely as an assessment task, its value as an instrument for confidence-building through articulating strengths and achievements may not be recognised.

AT **CSM**, PDP explicitly underpins direction:

'Development Planning reflects all your areas of study and helps you to direct your work in support of your future plans, both within the course and beyond. It involves:

- *thinking* about where you are now;
- *reflecting* on your strengths and improvements you would like to achieve;
- *planning* where you want to get to and what skills and knowledge you will need to develop to get there;
- *recording* the development you make in undertaking your plan of work;
- *identifying* when you have reached your goal;
- *reflecting* on your learning and achievement and, in the light of this,
- *planning* what you want to achieve next.

Development Planning is an activity which contributes formally to your personal documentation of your progress at key points during the course. This documentation is also known as a *Progress File* and when you finish your studies it provides an evaluative record of your learning, including a 'transcript' of your Unit marks, often essential in applications to postgraduate courses or employment.' (CSM, BA(Hons) Fine Art)

At **Wimbledon**, in all courses, students use

'negotiated learning agreements to plan, develop and evaluate your work. The learning agreement will be discussed with your tutor and will enable you to reflect on your personal development throughout the course, as well the development of your practice.'

Self-evaluation underpins PDP at **Chelsea**, and

'formalises and integrates the skills learnt through the PPD aspects of the course' at each stage and forms the basis of discussion within personal tutorials at each Stage.' 'Self evaluation enables you to both reflect on your progress through the course thus far, and, importantly, to envision your future progress within the course and also your plans for the future.' (BA Textile Design, Course Handbook).

At **Camberwell** Personal Development Planning is embedded with an emphasis on independent learning, informed by on-going self-reflection and critical analysis of practice via learning logs and evaluative reports, formalised through written statements and assignments. The PPD map explicitly places emphasis on progressive independence, towards Stage 3 in

'planning and organising your own learning through a process of analysis, reflection and self-evaluation.'

Similarly, at **LCF** where personal responsibility for planning and managing study is articulated throughout studies and placement programmes. It is made clear to students that as part of the tutorial system, they are responsible for:

'agreeing an action plan and acting on it.'
PPD activities include:
- 'Making project plans and seeing them through to completion
- Setting positive goals for yourself and monitoring how you achieve them'

At **LCC**, reflection and Personal Development Planning are embedded in practice, and articulated through key skills:

Good practice for PDP places it at the centre of the learning process. **(See 5. Models of Practice**).

However, there is no clear articulation at University level for Personal Development Planning, E-portfolios or Progress Files. New HE policy is extending transcripts to include a Personal Development Plan and evidence of academic achievement in the Higher Education Academic Report (HEAR)* [9]. The University may wish to consider its strategy for PDP as it is key to driving the learning process, and encouraging greater articulation of learning through creative practice provides the key to building student confidence. Exemplars of practice in Personal Development Planning across the University need to be identified, shared and celebrated.

E-portfolios
The University is currently investigating the development of a university-wide E-portfolio template. E-portfolios* have an important role to play in archiving achievements and extra-curricular learning in relation to Personal Development Planning, and ultimately Progress Files. At course level, students are encouraged in many different ways to record their learning and achievements; ie. compiling CVs and e-portfolios, with considerable support from staff for those preparing for placements and work, and from Creative Careers. Creative Careers runs an annual CV competition to encourage excellence. Student and graduate work is featured on College based websites at degree show time, and for exhibitions occurring at different Stages of study.

There are many examples: graduates at LCF can subscribe to a web-based recruitment site - FashionAim where students place a summary CV and a selection of images of their work. Employers may submit job vacancies, and graduates can give permission for employers to view their personal details and academic achievements with a view to selection for interview.

Creative Careers is working on web-based 'employability tools' with which students can review their achievements, strengths and career strategies. A first version is due for trialling in summer 2007.[10]

Student-led e-portfolios
Many courses and cohorts of students design their own independent websites for the promotion of graduate shows, and there is a growing trend for student-led personalised networking web-sites, wikis and blogs (e.g. My Space). However, these have limited value in the professional domain, with a blurring between social and professional functions. Graduates need to be encouraged to adopt a professional outlook and progress towards a different web-based e-portfolio to connect with other creative professionals and work opportunities.

7. MENTORING AND VOLUNTEERING
A recent survey of across the University revealed around 30 different opportunities for students to be mentored by industry professionals, peer to peer mentoring, graduates mentoring current

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[9] * See **2. Re-defining entrepreneurship**
[10] Tess Bygge is currently researching and writing and on-line employability toolkit for students and graduates.

students, students mentoring other year groups, work-based opportunities and volunteering to open up new possibilities. At LCC peer mentoring is successfully embedded across the College.

> 'Outstanding examples are: PGD in Character Animation (CSM), BA/MA Acting (CSM) and BA Graphic Design pathways (LCC). Schemes seem most successful when they are embedded, as they are in these cases, rather than being an add-on.' [11]

Further work is needed to recognise, value and provide credit for student-led and extra-curricular experiences.

1. NETWORKING OPPORTUNITIES
- Alumni Association: Newsletter and Arts Monday meetings; Creative Careers, ECCA and other events
- Job search and career development - supported by Creative Careers – centralised resources, events, guidance, vacancy services, employability advisers contribution at course level;
- College-based initiatives
- College-based and centralised learning support, services and resources for staff and students: e.g. The Learning Zone
- Student-led activity, see above e-portfolios

2. WEB-BASED AND OTHER RESOURCES
There are many learning resources (staff, student and University-led) including digital networking and promotion web-sites under development:
- ECCA; Artquest; Own-It; with links to further resources
- Dedicated PPD websites: e.g. Graphic Design PPD website at LCC
- Support for resource based and e-learning via the VLE (Blackboard); Chelsea Wiki, blogging, etc.
- Well-established handbooks for PPD provided by courses
- Creative Careers, including employability tools under development
- Alumni Association website
- FashionAim (LCF) provides an on-line job matching service for both graduates and employers in the fashion and textiles industry
- CSM Fifzine, a professional on-line portfolio, linking students with creative industry employers: www.fifzine.
- Second Life – a showcase for University students' and graduates' work at LCF.

10. POSTGRADUATE AND CPD
The University provides a portfolio of opportunities for academic, professional and practice-based research and post-graduate academic study, and higher degrees in all creative disciplines including the MA in Creative Enterprise (LCC). Academic staff have access to opportunities for teacher professional development offered by CLTAD and this provision is being expanded to cater for recent graduates and post-graduates who wish to gain some professional accredited teaching experience, involving a placements and mentoring by experienced staff.

Continuing Professional Development (CPD) provision includes:
- IP support provided by College-based Centres and central research services (e.g. Own It), proto-typing and product development (e.g. CSM Innovation Centre)
- support and funding for creative ventures, business training (ECCA),

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[11] Drury R (2007) Review of Mentoring and Work Placement Opportunities for Students and Graduates of the University of the Arts, London, CLTAD.

- a portfolio of highly successful, practice-based short courses for professional up-skilling and pre-entry
- mentoring (see 7. above)
- Knowledge Transfer Partnerships[12]
- Creative Careers offers on-going support, guidance and employment opportunities

Key factors having a significant impact on the curriculum

A recent study by the CSM Innovation Centre[13] recommends a matrix of support for student enterprise across the University to encourage an outward facing culture, with a focus at local (College) level, and it is clear from the mapping (above) that considerable progress has been made in this respect:

Support for graduate enterprise networking, collaborations, partnerships, interactions between academic staff and business/creative organisations; business support (ie. incubators in London boroughs); funding sources.	**Development of a creative enterprise culture in the curriculum** experiential learning, live projects, IP and business awareness; employability learning – networking, marketing and self-promotion
Investment and development of UAL and College infrastructure to support above and develop services such as ECCA for both staff and students. (Co-ordination of information and activity in a single portal, ie. through ECCA site.)	**Joint activities with LDA and local authorities** active role in business/creative networks; focussed use of funding and support; joint workshops and seminars.

The success of this matrix relies on four key contributing factors:
1. **Teacher-practitioners and industry professionals**
2. **Professional development in pedagogy**
3. **Student development**
4. **Development of specialist College-based Centres**

1. Teacher-practitioners and industry professionals
Research active and highly qualified staff (Grade 5 RAE) contribute to the currency and quality of the curriculum and consultancy interaction with the industry. The involvement of highly entrepreneurial staff, teacher-practitioners and industry-based professionals (2,003 AL staff are currently contributing to the University's courses) results in innovative learning opportunities for students to engage with creative practice in different settings via collaborations and external sites for learning.[14]

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[12] See also 4. Entrepreneurship, support for business start-up (above).
[13] Salvadori D (2006) Developing Product and 3D Design companies – pilot project, CSM Innovation Centre.
[14] The role of the practitioner-educator is the subject of a PhD thesis being undertaken by Shreeve, A Director of the CLIP / CETL.

2. Professional development in pedagogy

Teaching staff are active in pedagogic research and committed to evaluating and improving the learning experience for students.[15] Professional development in learning and teaching is provided by **CLTAD**, with over 100 staff benefiting from its courses and awards annually. Staff engage in projects relating to their teaching practice, many of which involve experiential and work related learning and good practice in developing student capability.

The **CLIP/CETL** Centre for Excellence in Teaching and Learning: Creative Learning in Practice is a significant contributor to strengthening the curriculum. It is placing a value on creative learning and teaching practice by developing and rewarding staff for pedagogic innovation:

> 'Creative Learning in Practice exemplifies the close links that our courses have with the creative industries and authentic learning experiences that enable students to become practitioners. We develop innovative ways to build on successful practices.' [16]

Many other initiatives occur informally and are supported at College and course level as a natural feature of course development. PPD Co-ordinators and tutors, Learning and Teaching Co-ordinators and staff in those designated roles are key to the development and enhancement of PPD, and those in academic management roles involved in curriculum design and development at course and College level. There are well-established staff networks at College level and a UAL-wide PPD networking group is growing its membership and remit for debating and exchanging good practice.

A short review of projects and awards funded by the CLIP/CETL is included in **7. The creative curriculum at UAL** and illustrates how the key areas for professional development, work-based and entrepreneurial learning are being addressed.

3. Student development

There are many enterprising students, some of whom already have experience of freelance work and creating opportunities before they arrive. Students are capable and need encouraging with more emphasis on peer learning to tap into the rich experiences they bring to courses, and to reflect on the learning the curriculum provides. Attention is needed at the outset of students' experience to lay the foundations for effective learning, self-management and a professional outlook so that all students are capable of making the most of opportunities.

There is evidence that students are keen to collaborate and engage with other disciplines. Growing numbers access enterprise services and business start up, e.g. a four-fold increase in students registering for the business start up elective at LCC, and an understanding on their part that they may work freelance at some point in the future; increase in the scope, coverage and attendance for ECCA graduate and industry weeks.

Further work is needed to recognise, value and provide credit for student-led and extra-curricular experiences.

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[15] Evidenced by a thriving Pedagogic Research group and publications such as: Sims E and Shreeve A (2006) 'Evaluating Practice-Based Learning and Teaching in Art and Design, CLTAD/Pedagogic Research.
[16] CLIP/CETL aims and activities http://www.arts.ac.uk/cetl.htm

4. Development of specialist College-based Centres

These innovative Centres play a vital role in driving an enterprise culture. Initiatives that have grown into funded and dedicated Centres are important facilitators of knowledge transfer, collaborations and partnerships. They contribute to the curriculum, support enterprise, venture creation and continuing professional development for both staff and students:

Artakt	The Enterprise Centre for the Creative Arts
Artquest	Exchange
Centre for Creative Business	Fashion Business Resource Studio
The CSM Innovation Centre	Plus Equals
The Design Laboratory	The Design Practice

For example, ECCA - The Enterprise Centre for the Creative Arts plays a key part in supporting both students and graduates, initially for LCC students, and more recently across the University, with pioneering work to support creative ventures. It is an interesting model, as its staff make a direct contribution to PPD in the curriculum; schedule Graduate and Enterprise Weeks during the academic year – events, resources, talks, visits to encourage students' enterprise skills and awareness of how to access opportunities; and provide a full CPD programme and range of services including opportunities, resources, links and contacts. There is further potential for ECCA to become a hub for encouraging graduate enterprise across the University, as well as strengthening its role in the wider community.

Areas for development

Clearly, the University has made immense progress towards supporting the professional development of its students and embedding an enterprise culture. The effectiveness of curriculum models is an area for further investigation, in terms of how well students make the connection between professional development, creative practice and their career aspirations.

Overall, there is more work to be done in the learning community as a whole (staff, students, employers, creative professionals) to identify and debate the important learning that creative higher education provides. This will help to build staff (and industry) confidence in their roles in supporting students into their future careers.

In this study, areas for further attention have been identified in relation to:
- improved co-ordination of support for enterprise
- encouraging a more holistic expression of learning through creative practice
- valuing extra-curricular and student-led activity
- improving intelligence about graduate career paths
- encouraging students to adopt a professional outlook
- preparation for the transition from higher education
- and the role of Personal Development Planning.

The strengths of the curriculum identified are demonstrated in exemplars of practice in **Paper 7. The creative curriculum at UAL.** Areas for development are explored further in **9. Emerging issues and priorities.**

7. The Creative Curriculum at UAL

An important part of the work for this Project has been to seek out innovative examples of curriculum and extra-curricular activity across the six Colleges that encourage students to focus on a more holistic expression of learning, interpreted through creative practice in different contexts. All activities selected below involve a mix of pedagogic approaches, with **experiential learning at the core**, and they embed many of the key features identified in this Report as exemplars of practice that encourage: **student confidence**; **the foundations for effective learning**; **creative practice development and its transfer**; **professional skills and behaviours**; and **awareness of potential career possibilities**:

Following the examples, Figure 7.1 indicates which key features are present in each course activity.   This is followed by further examples of curriculum developments in progress, supported by the CLIP/CETL and CLTAD.

1 'The First Assessment'

The aim of this project is to ensure that the first assessment communicates to students the importance of independent learning, their capacity for self-evaluation and learning as a process for personal transformation. Staff at Camberwell will prepare guidelines and pilot first assessments (peer and self-evaluation) that focus on student reflection and self-evaluation to develop a student's sense of their own self-efficacy, their capacity to learn and be changed by learning. UAL Widening Participation Project supported by CLTAD.

2 'Summer School in Study Skills for Fashion'

The Summer School which ran for the first time in July 2005 and is aimed at students from vocational routes, who have already secured a place on a course at LCF. It is collaboratively developed and delivered by staff working within Study Support, Cultural Studies and a number of other curriculum areas. Students improved their understanding of cultural studies; developed confidence in visual skills; interpreting images; use of 'academic' language; developed friendship networks; increased confidence in ability to manage academic writing. Positive impact on retention and progression. Contact: Diana Aronstam and Terry Finnigan.

3 'On Track'

A pan-Europe student-led graduate tracking project, piloted in 10 institutions. By tracking the career paths of graduates 2 years on, Wimbledon first year students begin to have a sense of how their own career might develop. The School has access to the information gathered and builds its alumni contacts. Students work individually to contact graduates and then in groups to analyse their findings about employment patterns, income, countries of employment and choices made by graduates. They present to the rest of the year group and invite a small number of graduates in to be interviewed in front of the group.   Develops skills in communication, inter-personal skills, researching, interviewing, analysis and knowledge of 'real' career paths. Contact: Tamiko O-Brien   Link: http://www.inter-artes.org./pub/down_27.pdf

4 'The London Project'

All courses at CSM 10 credits. Stage 1 PPD – an induction and introduction to learning at first year undergraduate level; aims to orientate students within the College, the University and London. A group project involving researching London as a resource relevant to studies. Places emphasis on skills, understanding and approaches to learning, locating, navigating and communicating information. Learning outcomes: managing the project; knowledge of London as a resource; communication skills; use of academic conventions; intellectual property; use of UAL learning resources; evidence through written report, group presentation and written critical reflection on learning. PPD staff and Course Teams

5 'Artrepreneurs'

A programme based at Camberwell College of Arts where Stage 2 students can identify, deliver and engage in a wide variety of art projects with/for the local community. The purpose of this programme is to enhance work-related, volunteering and practice-based learning in partnership with community organizations.
The programme works as an agent for students, either finding suitable projects for students or placing students in specific projects already set. Students carry out the work as part of an accredited elective. Link: http://www.kevinpotter.f9.co.uk/outreachfinal/menu.html

6 'The Young Design Programme'

An HE and Schools collaborative project, that brings a design team of undergraduate students together with a client team of school pupils to address a design brief connected with the school environment. Each student design team is then mentored by a dedicated professional practitioner.

The programme is available to all students in the University and focuses on building 'transferable skills' such as communication, presentation, problem solving, negotiation and team working, in addition to their design skills.

Students spend around half their academic year on the programme, which is formally assessed. It was developed collaboratively by the University of the Arts, London and The Sorrell Foundation's 'joinedupdesignforschools'. Over two terms, students receive training and support from the Sorrell Foundation, and are supported by their university course tutors. The students' learning on the projects is assessed through existing course guidelines, in most cases using a 40 credit, second stage professional practice unit. Course tutors carried out assessment.   Link: http://www.thesorrellfoundation.com

7 'Indigo'

Second year students at Chelsea organise their stand at a high profile international textiles trade fair in Paris each year. The students show their work in the same venue as professional companies, visit the fair and experience what it is like to belong to the world textile design. Students work in teams each of which is responsible for an aspect of preparation, organisation, exhibiting and selling at the show. Students contribute their own textile design samples. The cohort travel to Paris and support the stand as well as visiting Premiere Vision, an important trend prediction for textiles and fashion companies. Students learn about the industry, develop professional skills and experience of digital print and graphics technology and presentation.
Refer to: A written case study by Alison Shreeve

8 'Making Yourself Visible'

PPD Second Year project at Camberwell requires students to make their work/ideas visible in an appropriate context in London. May lead to an intervention, an exhibition, work on location, a publication or an interaction with a local community group, school or museum.   Students work in teams of 8 to develop a Team Proposal and planning its presentation with regard to site / those involved in the project. Assessed learning outcomes: team's ability to function effectively; understanding of professional contexts scheduling and budgets; presentation skills and appropriate technologies. Staff involved: Yvonne Kulagowski and C Bowmaker.

9 'Dissertation or placement?'

At Camberwell, Stage 3 students are given the opportunity to choose from three formats within a 30 credit unit: Live Project, Work Placement or 5-6000 word Dissertation to explore the most relevant and specific contexts (critical and professional) to their individual programme of study. In 2006-7 145 students chose Live Project/Work Placements and submit a critically reflective evaluation report on the experience. Students can arrange a work placement, professional experience, or live project in an external setting (minimum 5 weeks). They keep a written log with visual documentation and submit a 2000 word evaluation report. Popular with international students.
Contact: Jim Pearson

10 'Design Practice'

An in-house design consultancy at LCC, set up by an recent graduate. Students work in dedicated studio on a range of briefs from clients across a wide range of business sectors projects. Opportunities for new graduates on 1 year contract and for placement students.
www.lcc.arts.ac.uk/design_practice.htm

11 'Virtual Studio'

Sculpture students at Chelsea collaborate with students from the Royal Melbourne Institute of Technology in Australia, culminating in a synchronous online event – communicating visually and verbally both asynchronously and synchronously via video link and the internet. Seen as an enrichment activity outside the formal curriculum. Students valued the opportunity to work collaboratively in their College group, having to put their ideas across and having a dialogue with students from a different culture about the project outcomes.
See: Ellen Sims, Paper Virtual Studio: Online Collaboration Between Two Art Schools Across Time, Distance and Cultures.

12 'Electives for enterprise'

At LCC an innovative and well-established cross-College and School electives programme offers Units in Business Start Up (128); Going Freelance (152); Project Management (50) and Collaborative Projects in Graphic design (98) – which have proved to be very popular with students. Numbers in brackets indicate students attending in 2006-7.
Contact: Tony Wailey

13 'Enterprise week'

Since 2004, The Enterprise Centre for the Creative Arts (ECCA) has put on cross-UAL events as part of National Enterprise Week. The UAL Enterprise Week has grown exponentially, year on year and in 2006 offered an extended programme across Chelsea, CSM, LCC and LCF which also offered a programme of fashion industry events. The range of events was designed to relate to as many of the creative disciplines within the University with generic sessions on tax and IP. More than 650 students attended, with events bookable via the ECCA website. The 2007 Enterprise Week will focus on the themes of collaboration, ethical business and brand building. Sessions on promotion, contracts and project management will be an addition to the programme and events will he offered across all UAL Colleges.
Contact: Marice Cumber, Catherine Smith

14 'On-line PPD for graphic designers'

Graphic Design and Media Design students at LCC have their own dedicated website, developed by staff, with sections on PPD, what it is and why it is important, in relation to the world of graphic design; PPD courses and events; design companies; resources and publications; opportunities for volunteering; galleries; degree show websites; news; articles; links to organisations
http://www.lccppd.co.uk/

15 'The Chelsea Wiki – student-led technology'

Fine Art students at Chelsea were encouraged to communicate and share experiences of locating and using external exhibition spaces. Initially, Blackboard was to provide a communal discussion space. However, students preferred the autonomy of the Chelsea wiki – making the transition into working as independent artists in the community.
Contact: Abigail Reynolds

Figure 7.1 Experiential learning in curriculum activities

Key features

Curriculum activity

Curriculum activity	group work and peer learning	creative collaborations	research and investigative	inter and multi-disciplinary	presentation and promotion	learning about 'real' careers	prof and business awareness	inter-personal skills	autonomy, independence	building contacts, networking	industry awareness	creative practice development	transfer creative process	confidence in self and work	evaluation of self and practice	personal development planning
1 Summer School in Study Skills for Fashion	■			■				■	■	■						
2 The London Project		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3 On Track	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■
4 The First Assessment	■		■	■	■	■	■	■	■	■		■	■	■	■	■
5 Artrepreneurs	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6 The Young Design Programme	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
7 Indigo	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
8 Making Yourself Visible	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
9 Dissertation or placement?	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
10 Design Practice	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
11 Virtual Studio	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
12 Electives for enterprise	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
13 Enterprise week	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
14 On-line PPD for graphic designers				■	■	■	■	■	■	■	■	■	■	■	■	■
15 The Chelsea Wiki – student-led technology	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

CLIP / CETL and CLTAD

Examples of ways in which the University's staff contribute to the enhancement of creative learning in the curriculum are summarized below:

CLTAD Teaching and Professional Development Scheme 2007-8

- **Reflective language and writing for the visual curriculum**
Visual Directions: an integrated approach to teaching & learning materials - Diana Aronstam and Terry Finnigan, LCF are developing materials that provide guidance on the language used in commentaries on visual aspects of the curriculum and the language involved in reflective writing.

- **Presentation and promotion**
*The role of E-portfolios in postgraduate art and design course*s – Paul Lowe is investigating the various concepts of E portfolios and their application in Postgraduate art and design contexts as modes of tutorial and reflexive practice, portfolio presentation and commercial promotion.

- **Collaborative working and career progression**
Combining student/staff/industry skills and experiences, to facilitate a commercial venture.   Ellen Hanceri and Sue Westergaard, School of Printing and Publishing, LCC.   Design to support the concept of career progression.

CLIP-CETL Fellowship Awards 2007-8

- **CPD and mentoring**
Mentoring Scheme – Awarded to Neil Barnett, School of Graphic Design, LCC for a project involving second year students, alumni in the design industry, design professionals and PPD staff at LCC will work together to set up the requirements for a mentorship scheme and then investigate outcomes.

- **Good practice in showcasing postgraduate work and exhibitions, relationships with audiences and the art world**
Maximising the MA Show – Awarded to Paul Glinkowsky, Wimbledon
This project will interrogate the MA show, in various courses of the University and research how it is currently perceived by staff, students and audiences; identify examples of current good practice and suggestions for future practice

CLIP-CETL Fellowships 2006-7

- **Encouraging independent learning**

Teaching Thinking Skills: Connecting the Units. Darren Raven and Catherine Smith (LCC) have developed teaching methods to enable students to investigate and acquire transferable thinking and reasoning tools to facilitate independent learning and reflective practice.

- **Employability skills through work-based learning**

The student experience in work-based learning, what students learn and how it helps their employability. Sandra Drummond (LCF) is questioning the qualities that make up employability from the student and employer perspective; through examining the student experience of placement in the BA Fashion Management – what they start with, what they learn and what contributes most to their employability

- **Peer evaluation and feedback**

Enhancing the student experience of peer assessment. Chris New (CSM) will be developing a methodology that breaks down barriers to critical feedback and improve students' ability to criticise their own work. The project will look at a variety of scenarios where students are asked to give feedback to each other.

- **Encouraging students to articulate their learning through creative practice**

Documentation of foundation students' creative processes. David Bracegirdle's project (CCAD) will give students the opportunity to share ideas, techniques and concepts about the way they undertake their practice through a series of lectures, workshops and group discussions. Filmed and photography by students and edited into a learning resource.

- **Entrepreneurial collaborations**

Pedagogic aspects of the PARK project – a live exhibition jointly run by the Engine Room and the School of Fine Art at Wimbledon in partnership with Cannizaro Park and the London Boroughs of Merton and Camberwell. Hayley Skipper (Wimbledon) will be evaluating and disseminating effective practice-based teaching and learning in the context of public exhibitions through focussing on the student voice, their experience and reflection.

- **Learning about how industry works**

Making the Fashion Industry Visible Andre Hughes and Claire George (LCF) Production of a DVD to illustrate the overview of the product development process to students who can't access or see it in action.

8. The Student and Graduate Voice

This paper examines findings relating to student and graduate experience, from pilot studies undertaken during the summer of 2007 within the University. This is presented in relation to other evidence about student/graduate aspirations and experiences.

As discussed earlier in this report, it is clear that students need more support and preparation for the transition from higher education into work – evidenced by surveys that indicate lack of preparedness, loss of confidence and poor career management skills. Students need to be informed about the options available, understand where they fit in and how to access opportunities.

One of the contributing factors to loss if confidence is that students and graduates are poor at articulating the valuable learning they are gaining from creative practice, and view the knowledge and skills they have gained as separate and unconnected experiences. For example, when asked to express employability and entrepreneurial learning outcomes, there is a tendency for students to focus on competencies (ie. communication skills, team working, and self-management) and knowledge gained, rather than what they have gained experientially from creative practice and process.

In the pilot studies we set out to explore how questions might be framed to students/graduates about their higher education experience to discover more about their aspirations, which aspects of courses they have found particularly valuable in relation to their aspirations, and how they articulate what they are learning.

Pilot studies involved an email survey of UAL graduates (July to the present – ongoing); individual and group case study interviews with students at LCC and Camberwell in June 2007; group sessions with students participating in the Young Design Programme (cross-College), gathered at evaluation events, and from a presentation and discussion by a student team at a University PPD Network event in May 2007.

What do we already know about what is important to students and graduates in relation to their working lives?

A recent study about creative entrepreneurship consulted 103 students and graduates from UK higher education institutions in a series of focus group discussions.[17] The three top priorities – what students want from work are:
- Happiness
- Job satisfaction
- Peer recognition

Almost half (45%) anticipate they will start a business or work freelance at some point, and one fifth (21%) of students participating in the focus groups were already running a business. The same study found that students valued the **contribution made by teacher-practitioners and industry professionals**, but felt their professional/entrepreneurial expertise could be harnessed more effectively; **collaborative learning through real life projects** – and felt this did not compromise the creative process, offering opportunities for real-world working and working in teams.

Developing their 'craft' and intellectual potential' were the most important aspects of their courses, **and occupational skills.** Creative entrepreneurship and generic business skills could

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[17] HEA-ADM Creating Entrepreneurship, pp 56-66

be delivered in **short courses on a just-in-time** basis, leaving space for focussing on more discipline specific professional learning on courses; and more support for graduates at the point when they are starting up in practice. Most students wanted to see more **open-learning credited in the curriculum** to encourage students to work more effectively with local agencies and creative businesses.

Students believed that 'Good **networking, creativity and problem solving** are characteristics ascribed by students to entrepreneurs and characteristics they value in themselves.' Students would like to see **more strategic development** of 'learning and teaching activities and environments, **extra-curricular support** and **alumni organisations** and **collaborations with industry and external agencies**.'

An ongoing e-mail survey of UAL graduates found broadly similar results. In summary, graduates most valued:
- inspiring tutors, especially those with industry experience
- developing autonomy and creative freedom - developing ideas and pursuing lines of inquiry that were of personal interest
- the creative process, learning by doing
- learning how the industry works through industry-related and 'real life' projects and work placements
- peer learning/learning with other students

'I valued the (technical) skills I acquired because these are transferable to other artistic practices.'

The 'international aspect of the course has definitely strengthened my English skills – which has helped to get me into my current position.'

'Writing a thesis has helped me to be able to express in writing my thoughts and this is helpful in the professional world.'

'The whole process from idea, through to producing patterns and actually making shoes was the most valuable aspect of the course. This is now enabling me to grow my own business.'

'The course was very practical and attempted to simulate the industry: we were given briefs which we then had to create products for.'

'It changed my life in a really positive way…it was the only place that could offer such low-cost, effective, targeted and useful, work-orientated

'The course was amazing. It was a Diploma – different people from different backgrounds. So we had a big difference in levels, and mainly in commitment'

What else would you like to have learned or experienced?
Most common –
- Advice on how to approach the professional world
- Learning how to access opportunities and who to approach for work or employment.
- Collaboration with students in other creative areas
- More 'real world' learning, and relevant placements
- Industry contacts and networking opportunities
- Preparation for self-employment and working freelance
- Design skills to industry-standards – what industry expects
- More critical feedback on my work

'..advised into the way of approaching the world of work, how to connect people, how to concentrate on my professional objectives'

'More group working as we did not spend much time together and socialise generally.   Would have helped gell the group. By the end it got too competitive....'

'…rewarding and useful to have formal interaction with other departments, since everyone at an art school is involved in both creative problem solving and communicating the result one way or another.   This would help everyone, teachers and students creatively and professionally'

'I felt I was not given any confidence in the work I was creating. There were no balanced comments and I graduated with very little confidence in what I was doing.'

'I feel that I wasn't at all prepared for the professional world. …Most of the time, I feel that I am lacking the skills to do the work that is expected of me.'

'To have advice to assist me in setting up my own business would have been invaluable. I was very lost, and therefore ended up taking work that was nothing to do with my chosen field'

'I feel personal feedback is the one thing a design course can give which I could not get more effectively from books, the internet or contacts, but the course failed to provide this.'

'It took me a year to find a job (which isn't that related to my education) because of lack of experience. Experience which I could have gained if I had been able to find any internship places.'

Some of the comments indicate a culture of dependence – i.e. wanting to be told, or directed, whereas the more independent-minded graduates were able to articulate more clearly from the experiential aspects of courses what they learned that was useful. One graduate identified a conflict of expectations:

> 'I feel that the gulf between the perspective of tutors, who are under pressure to get results and the students who not only want to get a good degree but a job/career path is too wide.'

Case study interviews

Stage 2 of the Project will involve identifying and exemplars of good practice in the University's curriculum that encourage entrepreneurship, employability and professional development. Preparations for this involved a series of pilot case study interviews with groups of students to explore the relevance of the questions and format for the case studies and criteria for exemplars. What follows is a summary of the findings from the pilot sessions with:

- Stage 2 and 3 students from across the University participating in The Sorrell Foundation's Young Design Programme
- Stage 3 LCC Graphic and Media Design students, PPD<Exit> Programme
- Stage 2 Camberwell students from an elective programme: 'Artrepreneurs'

These will be presented in full in case studies separate from this report. In groups, students were questioned about what their career aspirations, what they were learning from a particular course activity; the most valuable aspects of this activity for themselves and their creative practice at this stage of their development; what personal and professional qualities, attributes, attitudes and skills they are using or developing, and how?

There are a number of emerging themes that confirm the findings of 'Creative Entrepreneurship:' [18]

Aspirations

In terms of aspirations, there is anxiety about graduation, the transition and entering the workplace. Students on the whole assume they will continue to develop their practice after graduation. There is little discussion about other options:

> 'Being in education is easy because you can put off the real world for so long and then finally we're at the point now where it's ok, what are you going to do? I feel anxiety about the whole thing.'

> 'I feel prepared to a certain degree…there's only so far you can feel prepared after theory. There's practical stuff you need to prepare for yourself as well. And there's experience and that will all come when you try and fail, or try and succeed.'

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[18] HEA-ADM Creating Entrepreneurship

Ability to articulate the creative process
Students are not naturally aware that it is important to be able to talk about the transference of creative practice from an academic to a professional context, and what they are learning from this – and how important this kind of reflection is for maintaining confidence in themselves and their practice.

Our questioning found that students were able to speak about improved confidence, a broadening of awareness of the variety of different post-graduation possibilities, skills such as communication, decision making, planning and attributes such as flexibility, as well as values. However, they were less able to articulate how the experience had impacted on their creative practice.

The value of group reflection
In the group interviews, students commented on the value of this opportunity for group reflection, and how it rarely happened in an academic context.   Peer reflection validates and expands on the rich learning, particularly from course activities that engage students with external and professional requirements.

Theory and practice
Within courses, the combination of theory and practice is valued.

Multi-disciplinary working is seen as an essential part of a career trajectory.

Teacher-practitioners
Students value the authenticity of the teacher-practitioner voice – and their experiences of working in a professional context. Students are keen to tap into this so they can learn about the industry and how to engage with it.

Self employment
Graphic design students in particular seemed convinced they will need to know about aspects of self-employment and that this way of working will play some part in their working lives.

Motivation
Students are inspired by course activities that are complex and challenging and take them out of their comfort zone to operate at a professional level.

> 'Really amazing the morning we had our presentations – very, very different to any other presentation I've seen in College. People were so much more devoted and so many more things happening than all the fake pretending to do things…'

There is evidence of this, particularly in relation to involvement in the Sorrell Foundation's Young Design Programme, in which multi-disciplinary teams of students work with client teams of pupils in schools on using design to make a difference to the school environment, staff and pupils:

> 'I learned a lot in terms of communication because it's a very different realm to be in. Me, the kids, the school all come together on a level.'

Motivating factors for engaging in Young Design included:
- having a real client
- the enthusiastic response of the children
- working with students in a multi-disciplinary team, each bringing their unique experiences to the project
- learning from each other

- working towards a goal and pride in the achievement
- a strong sense of ownership and commitment, as all students had chosen to undertake the project, and been through a selection process
- final celebration of the whole learning community, giving added value to the experience and sense of achievement.

In conclusion, it is clear that there is more work to be done to encourage students and graduates to focus on a more holistic expression of learning, interpreted through creative practice in different contexts. This will enable students to be more confident in speaking about and identifying how they can apply the creative process in other settings.

Clearly, preparation for the transition needs to be a priority by providing opportunities and direct experience of how the professional world operates, and how to access it successfully at appropriate stages of the student journey.

Further sources relating to the student voice and student experience
There are a number of papers and evaluation reports circulating within the University, providing a evidence of student learning and feedback on their experiences. These will be situated on the Project web pages at CLTAD.   For example:

Gunstone J and Chilcott D (2007) Widening Communication and the Sorrell Foundation Young Design Programme 2006-2007.

Manu R (2006) The Future Within – How can the benefits of creative collaboration between graphic design students and professionals be promoted, so that work placements become integral to studio culture? MA Design Studies 2006.

Shreeve A (2006) Excellence in Learning Development – What Could it Be? Learning Development in Higher Education Network, 3rd Symposium.

Sims E (2006) Virtual Studio: Online collaboration Between Two Art Schools Across Time, Distance and Cultures, CLIP CETL.

9. Emerging issues and priorities

This Paper explores some of the important issues for strengthening the creative curriculum arising from Stage 1 of this inquiry, and presents priorities for enhancing students' potential and professional development.

Professional development and the curriculum

It is clear that there are many commonalities between professional development, enterprise and employability. For the curriculum, ideally, these need to mirror the workplace and be embedded within creative practice via experiential learning opportunities. The truly 'entrepreneurial curriculum' is one that creates progressive learning opportunities for students (and staff) to transfer creativity and reflect on the result.

Students need to understand the value of their creative education and the wide range of opportunities in which they can apply their learning through creative practice, and that these processes are highly transferable into other settings and work sectors.

What are we doing well?

There no doubt that the University is a highly entrepreneurial institution. Venture creation, knowledge transfer and graduate enterprise are all areas in which considerable progress has been made through creative collaborations of all kinds. Dedicated Centres support innovation, and provide training and events before and after graduation, and seed funding for staff and students to develop ideas and products.

There are well-established pedagogic models, with experiential learning at the core and an evolving curriculum allows for updating and new initiatives in response to changing needs of industry, students and academic priorities. Personal and professional development is well-articulated and integrated into course design and delivery across the University's courses. The University offers its staff and students a mixed economy of opportunities and resources for professional development and entrepreneurial learning using its well-established relationships with industry partners.

Teacher-practitioners and students bring their own entrepreneurial attributes and outlooks to courses, and staff take every opportunity to enhance the curriculum, often supported by the CLIP/CETL and CLTAD professional development programmes. The wealth of good practice needs to be celebrated and shared across the whole learning community.

There is a sense that we do not need to add to the curriculum, where much professional and entrepreneurial learning occurs naturally, but there is scope for strengthening and making more of what students bring and the opportunities that courses provide through experiential learning in creative practice; in particular, those learning activities that include the key features identified in this study (Figure 9.1) (see **7. The University's entrepreneurial curriculum**):

Figure 9.1 Desirable features of experiential course activities for encouraging professional development and entrepreneurial learning

Transfer of the creative process	Inter-personal skills
Group work & peer learning	Research & investigative skills
Creative collaborations & external sites	Autonomy & independence
Inter & multi-disciplinary learning	Confidence in self and work
Learning about 'real' careers	Building contacts, networking
Personal development planning (PDP)	Industry awareness
Professional & business awareness	Creative practice development
Presentation & promotion	Evaluation of self and practice

Why isn't it working?

Considering the strengths that have been identified, why are our students not more employable or successful?   Staff, students, graduates and industry all raise concerns about raising awareness about the value of a creative education, improved co-ordination of services and preparation for the transition from higher education.

Staff have concerns that embedded (PPD) models do not always make the professional and entrepreneurial outcomes explicit in learning, teaching and assessment. Whilst Colleges and courses are keen to ensure students engage in professional development activities relevant to their subject of study and its future application, there is more work to be done to investigate how it is communicated to students from Unit descriptors through to the learning outcomes in course learning materials, briefs, how it works in practice and to capture evidence of students' ability to articulate their learning.[19]

Referring back to the University's priorities, the main concern is that whilst our most talented graduates are successful in their chosen fields, there are many students who do not flourish, and find the transition to work difficult:

> 'I feel I wasn't at all prepared for the professional world.   Most of the time, I feel that I am lacking the skills to do the work that is expected of me.'
>
> 'Being in education is easy because you can put off the real world for so long and then finally we're at the point now where it's OK, what are you going to do? I feel anxiety about the whole thing...'[20]

There is more work to be done to encourage students and graduates to focus on a more holistic expression of learning, interpreted through creative practice in different contexts. This will enable students to be more confident in valuing, speaking about and identifying how they can apply the creative process in other settings.

Building students' confidence is crucial. Managing students' expectations by allowing more time for discussion and review of successful outcomes through working in small groups, and peer learning on a regular basis improves their abilities to debate and articulate valuable learning. In some courses this practice is well-embedded. In others, it will involve a further shift in ownership of learning to the student to achieve deeper learning engagement and motivation. Staff suggest

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[19] Notes from workshop involving staff in University-wide PPD group, 2006 and 2007
[20] Comments from UAL graduates responding to email pilot survey.

more could be made of complementary activities - for example, students develop valuable enterprise skills through putting up shows. How might these be recognised and valued by students, by staff and by others?

Barriers

There are a number of perceived barriers to improving the professional development of students and entrepreneurial learning:
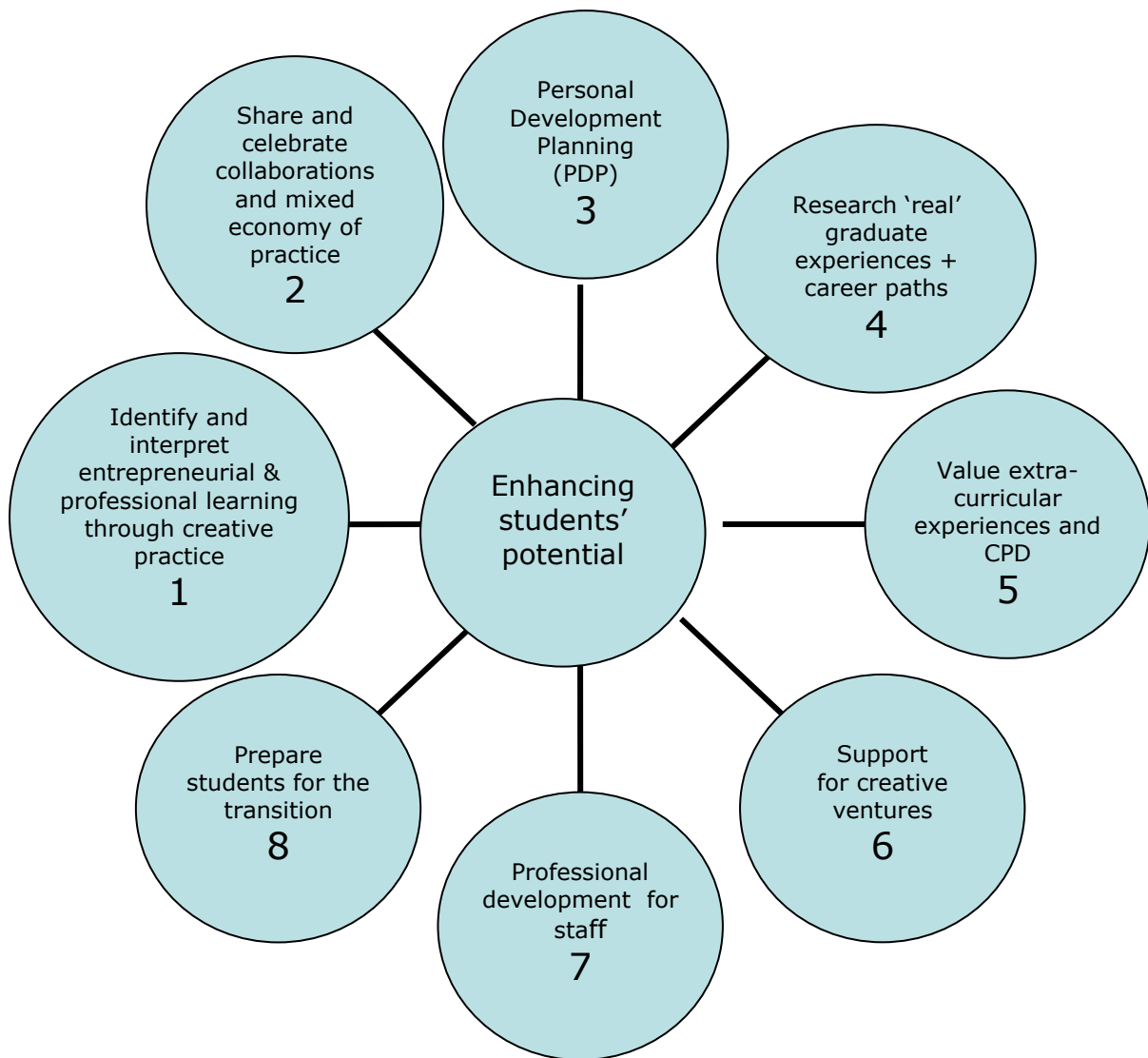
- A large and inevitably bureaucratic University makes it hard for staff to adapt to uniform structures, and centralization can be at odds with the fact that some of the most innovative aspects of the curriculum are developed at College, course level or even by negotiation between individual staff and student, or student and student.

- Academic language combined with the over-bureaucratization of learning has the effect of not always communicating to students the importance of a connected up learning experiences, with the practitioner at the centre of creative practice.

- Emphasis is placed on process learning, and this is evidenced through the development and production of tangible products, artefacts and performances, which are celebrated through the degree show, assessment events and experiences.   Students have a tendency to place value on work produced for assessment as a final celebration and culmination of knowledge, understanding, skill and experience, rather than as a step in their progressive development, and this can inhibit recognition of the valuable learning processes they are acquiring.

- The curriculum is already rich in innovative learning experiences and staff are experiencing initiative overload. Staff need to be rewarded for what is already in place, and any proposed changes need to be a natural part of the progressive process within expected validation and quality assurance timetables, rather than an addition to both staff and student workload.

- At course level, there is sometimes a resistance to cross-disciplinary and team work because of the importance of encouraging and rewarding individual endeavour and achievement, and the demands of an already full curriculum.

- Segregation of PPD and staff responsibilities for delivery inhibits students' ability to make connections between all elements of their courses. The more staff integrate the roles, the better the experience for the student. A whole course team approach is required.

Whatever strategies are put in place, they need to be realistic, build on existing practice, align with periods when courses are undergoing change (re-validation) to ensure staff (and student) ownership, and the University needs provide appropriate resources and support for enhancements.

Priorities

In this study, eight inter-related priority areas have emerged that will contribute towards enhancing students' potential and employability. The next step is for these to be debated within the University. Stage 2 project activities supporting these priorities follow this section.

Figure 9.2 Priorities for enhancing students' potential and employability

Priorities

1 Identify and interpret entrepreneurial and professional learning through creative practice
 	
Encouraging greater articulation of learning through creative practice is the key to building student confidence.
	At Course Level:
	• To arrive at a shared understanding and common language about what entrepreneurial learning, PPD, PDP and employability mean in the context of subject specific creative practice, courses need to openly debate terminology and definitions, involving staff, students, employers, creative professionals and the following questions on a regular basis:
	    What is important and why – to arrive at a collective rationale?
	    Where it occurs at each Stage, i.e. through and within creative practice; elsewhere?
	    What learning underpins it, i.e. learning to learn, self-management, autonomy, independence, reflection, etc.?
	• Devote time to building Course Team ethos as part of the course re-validation process – common language, purpose, importance and relevance of engaging with PPD and PDP.
	• Ensure that opportunities to engage in shared reflection are built into the learning, teaching and assessment process, so students can relate their learning to future opportunities (transfer of the creative process).
	
	At University and College levels:
	• Explain in marketing and prospectus the link between learning outcomes, creative practice and employability/entrepreneurship.

2 Celebrate collaborations, local initiatives and mixed economy of practice The wealth of good practice already occurring across the University needs to be shared, exchanged and celebrated.	**At University, College and Course levels:** • Encourage live projects and local initiatives – inter- and multi-disciplinary working between courses, and ensure that shared reflection on progressive developmental learning experiences occurs back in the academic context • Provide events and opportunities within the University calendar for sharing the excellent practice that already exists. • Exploit the model – blurring the boundaries, exposing students and staff to opportunities for collaborative internal and external projects that link research, teaching and professional practice. • Nurture collaborations that provide multiple outcomes for staff and students, ie. Young Design Programme. • Evaluate: There is little data about the effectiveness of creative collaborations and learning through external sites, and valuable work started by the CLIP CETL needs to be extended, so that staff are regularly evaluating their teaching and disseminating their findings through University-wide events and publications. • The University's Cross College PPD Network needs to be supported and continue as a 'think tank' and forum for the exchange of practice. • CLTAD website will develop web pages as a repository for good practice in entrepreneurial learning and teaching and PPD.

| 3 Personal Development Planning

PDP is key to driving the learning process and fostering independent learning in all areas.	**At University, College and Course levels:** • There are many excellent models in place, yet in terms of staff and student awareness of its role in articulating learning, recognising achievement and driving the learning process, this is an under-developed area. • Recommendations from the recent Burgess Report regarding the new Higher Education Academic Record (including a Personal Development Plan) need to be considered and the role of PDP and a strategy for implementation debated. • There needs to be a clearer articulation for Personal Development Planning, E-portfolios and Progress Files and the relationship between them. • Train academic staff, including ALs in supporting PDP for students. (See also 7 Professional development for staff.) • Use e-portfolios to help students to archive their practice and development, encourage them to plan, record, reflect on their progress and set new goals, thus encouraging autonomy and self-directed learning as a life-long process.

| 4 Research 'real' graduates experiences and career paths

Intelligence about aspects of courses valued by graduates in relation to their longer term aspirations, and evidence of graduates' continued engagement with practice will contribute to a more informed picture, as well as provide evidence of 'transfer of the creative process.' | **At course level:**
• Building learning communities by tracking and involving alumni and recent graduates, and involving students in gathering up to date, accurate information about graduate career paths, and 'real' careers, will improve understanding of the wide range of opportunities available and how to access them successfully.

At College and University levels:
• Examine how First Destination data (DLHE) is gathered by the University, how the data is classified (related and unrelated work) and how the response rate might be improved by more persistent and personalised gathering of information, such as employing alumni or students to follow up recent graduates by phone or email.   A reduction in the 'unknown' category will improve the profile of graduates overall.
• Commission and co-ordinate intelligence about graduate career paths, drawing on current work: CSM Innovation Centre; Fashion Business Resource Studio; Alumni Association.
• Commission studies of exit experiences and progression from the University's courses, including enterprise support, postgraduate and CPD provision.

At national level:
• A proposed longitudinal study of creative graduates' working lives is planned for 2008 and will need to ask how graduates are applying their learning, so that HEIs can understand which aspects of curricula and extra-curricula activity are most valued as well as providing evidence of graduates' contribution in all walks of life. |

5 Value extra-curricular experiences Student-led activity, process-focussed projects and extra-curricular commissions provide important opportunities for professional development and creative transfer.	**At course level:** • An adaptive curriculum can provide a mechanism whereby important learning from activities such as volunteering, mentoring, and freelance work etc. can be recorded by ensuring that reflection on the experience occurs back in the academic context. • Personal Development Plans and e-portfolios need to be given a stronger role in capturing and valuing student achievements in the broadest sense, archived by the student. **At University and College levels:** • Explore ways in which student-led and extra-curricular experiences can be valued and integrated within the University's framework.
6 Support for creative ventures With regard to venture creation, enterprise and freelance working, the University offers an exceptional portfolio of services and opportunities.	**At University, College and course levels:** • Encourage and disseminate models for supporting student enterprise (ie. Salvadori D, 2006). • Improve access to enterprise support through a single web-based portal with clear signposting. • Celebrate and promote local initiatives and successes of creative ventures (staff and students) at course, College and University levels. • Encourage an holistic approach in support for enterprises by placing emphasis on combined personal, professional and practice development and creative transfer. • Develop user-friendly course materials and on-line resources to academic staff to improve their confidence in supporting students.

7 Professional development of staff	At University, College and course levels:
Successful professional development of students is dependent on the ability of staff to facilitate reflective learning, professional development and personal development planning.	• There are some important questions about who is responsible for student professional development (PPD) – getting all staff on board with external projects, for example, and a need for Associate Lecturers (ALs) to be 'trained' about the pedagogy and HE intentions.[21] • Encourage staff to adopt PDP models themselves as teacher-practitioners and researchers – what do they want for their own personal, creative and professional development, thus modelling good practice? (Staff appraisal, and professional development PG Cert / P Dip in Learning and Teaching, CLTAD). • Develop academic staff to work more effectively in teams of industry, business and creative professionals and students as co-practitioners. • Encourage and reward staff to evaluate and develop their teaching and innovative course activities. The CLIP/CETL and CLTAD have an important continuing role to play in this respect. • As part of the validation cycle, course teams to debate and audit courses in terms of entrepreneurial learning, where it occurs against employability profiles and re-interpret for their own discipline so it can be clearly articulated to students. • 'Employability and entrepreneurial learning through creative practice' to be core study for PG Cert and PG Dip (CLTAD), enabling 100+ staff a year to improve their confidence in preparing students through studio practice for the transition to work. • Invest in ALs and value the contribution they make as teacher-practitioners by finding out training needs in relation to reflection, personal development planning and their own practice development, so that they are able to facilitate the same in students. The implication of these priorities is that the University may wish to consider how it is supporting staff development for **continuous improvement of learning and teaching practice for professional development and enterprise** on a longer term basis, beyond the CLIP/CETL funding.

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[21] University-wide PPD, PDP, Employability and Enterprise Network, Meeting 3 May 2007.

| 8 Prepare students for the transition

Preparation for the transition from University is an important part of progression, working towards transformation from student to professional mindset, work readiness and ability to access opportunities.	**At course level:** • Prepare students for the transition as part of the progression and make them aware of the wider possibilities for applying their creative learning, and how to access graduate projects, internships and freelance working. • Develop PDP and reflective practice to encourage students to reflect on the links between courses and career aspirations. • Help students to recognize their worth and potential in creative practice and the wider opportunities open to them by encouraging them to articulate their learning with peers and others on a regular basis. • Develop active alumni networks and maintain relationships with graduate after leaving; **At University and College levels:** • The University may wish to consider its base-line provision for all undergraduate courses to include a work-related placement or opportunity for every student, linked with PDP. • Pre-start inspirational courses to demonstrate what the industry can do helps to set expectations and improve awareness about wider possibilities for applying creative learning. • Provide 'stepping stones' at the point of graduation and improved access to internships, post-graduate placements and projects; build on initiatives such as: Graduate and Enterprise weeks; industry related activities; external exhibitions; LCC Design Practice, internships, post-graduate placements and Knowledge Transfer Partnerships;. • Work with the LDA to fund 3 month post-graduation internships with SMEs, open to all students, not just the most able or successful.[22]

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[22] There are successful models of practice in the South West and in other Regions.

10. Recommendations

Priorities for enhancing students' potential and employability are discussed in **9. Emerging Issues and Priorities**. The key recommendations that follow indicate activities considered to be essential for the beginning of a progressive strategy for continuous improvement.

A. (e&e) AWARD

At course level

The immediate priorities at **course level** are presented as a progression, and are proposed as a minimum requirement for all courses. To be addressed through the validation cycle, beginning in **Autumn 2008**:

1. A common language for professional development and entrepreneurship
As preparation for the validation process, course teams will provide evidence that they have engaged in a debate about course content and outcomes in relation to student career aspirations, professional development, employability and entrepreneurial learning, to arrive at a collective rationale and interpretation in relation to their own subject area, where it occurs at each stage, and what learning underpins it. This will be achieved through a structured Workshop.

In Autumn 2008, the Workshop will be designed and piloted by the Professional Development team at CLTAD in collaboration with College Learning and Teaching Co-ordinators. The Workshop materials can be self-facilitated by Course Teams, or they can invite a member of staff from another course team, or CLTAD professional development staff to facilitate the Workshop.

Output: a course-team (e&e) statement of student employability and entrepreneurship opportunities and aspirations.

2. Personal Development Planning (PDP)
PDP ideally drives the learning process and creative direction. Building on the (e&e) statement, explicit provision is to be made for students to debate the content with staff, to articulate and reflect on links between courses and career aspirations and, as they progress, to archive their achievements, both course-related and extra-curricular in an e-portfolio. There are many existing processes in place at College and course level, and this will be a progressive next step from 1. A common language for professional development and entrepreneurship. Local initiatives are to be identified, aligned and adapted, rather than impose a uniform system or method.

3. (e&e) Award for work-place and work-related learning
Opportunities for work placements, live projects, commissions, external projects, work-place or work related learning, drawing on a broad spectrum of experiences and opportunities, both course based and extra-curricular at each Stage of the course are given value by a University-awarded 'kite' mark or (e&e) (employment and enterprise) award. Reflection on the value of experiences in relation to career aspirations are evidenced in the e-portfolio, in any format – written or visual documentation.

Outputs: each student prepares for the transition to the next Stage with their Personal Development Plan and (e&e) statement in their e-portfolio as part of their Higher Education Academic Record.

B STAFF DEVELOPMENT AND RESOURCES

At University level

1. Dissemination of this study
An extensive mapping project was undertaken in the process of this study, and provides the underpinning rationale, models of practice, and literature survey to inform the priorities and recommendations.   This documentation is to be made available on the CLTAD website, signposted in downloadable sections, along with other key reports and references.

Output by September 2008: Resources for CLTAD website.

2. 'Employability and entrepreneurial learning through creative practice'
to be core study for the PG Cert and PG Dip (CLTAD) enabling 100+ staff a year to improve their confidence in preparing students through studio practice for the transition to work.   Links to (e&e) Award staff development workshop for course teams.

Output by end 2009: A module that is part of CLTAD's professional development programme and adaptable as a free-standing workshop for course teams.

3. Evaluate the effectiveness of creative collaborations and learning
Allocate a sum from the remaining HEIF funding for staff to identify and evaluate exemplars of practice, (5 projects) in relation to the criteria and key features identified in this study, with the aim of disseminating learning from the transfer of creative practice from one context to another. Methodology to involve interviews with staff and students, pre, during and after the learning experience.   Evidence can be presented in the form of video clips, pod-casts and/or documentation. Schedule for inclusion in the CLIP-CETL/CLTAD professional development programme for 2008-2009.

Output by end 2009: Five case studies, presented in lively material for both staff and students to access.

C GRADUATE DESTINATIONS AND OPPORTUNITIES

At University and College levels

1. Destinations of Leavers in Higher Education
Initiate discussions in the Academic Development and Quality Pro-Rectorate about how First Destination data (DLHE) is gathered by the University, how it is resourced, how the data is classified (related and unrelated work) and how the response rate might be improved by more persistent and personalised gathering of information, such as employing alumni or students to follow up recent graduates by phone or email.

Output by Summer 2009: Improvements in response rate, and overall profile of UAL graduates leaving in 2008.

2. Creative graduates – creative futures
In 2008 – 2009 the University is leading a UK-wide longitudinal study of graduate career patterns, involving collaboration between 27 HEIs and a sample of more than 20,000 graduates up to six years after graduation. The research is being undertaken by the Institute for Employment Studies, and the results will provide evidence of the enduring contribution of art, design and media education to creative and cultural capital and to all walks of life. The resulting report will inform staff, students, graduates and employers about the differentiated career progression and satisfactions of creative graduates. The results will be collated with other studies, e.g. study of fine artists career patterns, NESTA/CSM Innovation, 2007.

Output by Spring 2010: A Research Report relating to UK-wide graduate career patterns, and a dataset and report relating to the University's own graduates, and comparison with related studies.

3. Stepping stones and internships
Build on work already started by CSM Innovation, Fashion Business Resource Studio and other Centres on establishing funded internships for recent graduates with SMEs in the creative sector and other sectors. (May align with the DCMS plans for graduate apprenticeships). Open to all recent graduates, not just the most able or successful. Investigate funding possibilities, working with LDA initially. There are successful models of practice in Wales, the South West and other regions of England. 'Creative Graduates – Creative Futures' should provide critical information to inform this project about graduate mobility, retention and diversity of work and employment.

Output by Summer 2010: A formal pilot internship programme for UAL graduates, supporting 20 graduates in the first year. Funding to support the programme and its evaluation.

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Appendix 1. Summary of a framework for entrepreneurial education. Source: Botham R and Mason C (2007) Good Practice in Enterprise Development in UK Higher Education, NGCE, pp85-93.

1   Subject knowledge

Benefits of a university education: self-confidence in relation to subject knowledge, independence, a belief that hard work brings results, i.e. obtaining a degree, personal networks and experience of income uncertainty.

2   Entrepreneurial behaviour, attitudes and skills especially through creative subjects

An entrepreneurial mindset – seeing the world in terms of opportunities, taking initiative and calculated risk, able to operate and make decisions in conditions of uncertainty, generic entrepreneurial skills including ability to recognise and evaluate opportunities, think strategically, networking effectively, persuade and influence.

3   Empathy with the life-world of the entrepreneur

Understanding, appreciating and being able to cope with the lifestyle often associated with setting up and running new business ventures. Working flexibly, uncertainty relating to business survival, loneliness of being owner manager/sole trader, working under pressure and being responsible for all aspects of the business.

4   Inculcation of key entrepreneurial values

Belief in the power of the individual to take action and make things happen; ie being proactive and self-reliant; using tools ie. writing briefs, business plans.

5   Motivation to an entrepreneurial career

Ability to compare costs and benefits of entrepreneurship with being employed. Inclination for those who are already thinking of entrepreneurial careers. Access to role models and case studies.

6   Understanding the process of venture creation

Initial idea generation and evaluation, through start-up process into survival and growth. Understanding challenges likely to be faced at each stage.

7   Developing generic entrepreneurial competences

Finding and appraising ideas and opportunities. Emotional self-awareness and assessment. Identification of business development needs. Knowing what to look for and find necessary answers
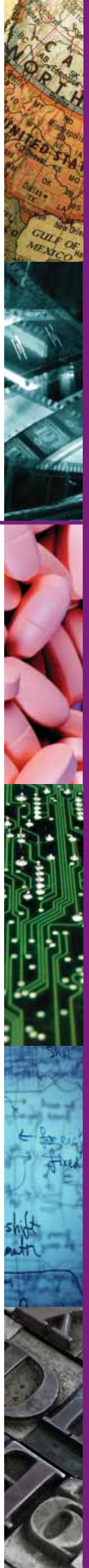
8   Key basic business skills

Experiential activity, planning, setting up and running a business. Working for real customers and solving real problems. Accredited and extra-curricula, competitions, start ups.

9   Managing key stakeholders

understanding views of those supporting creative ventures; ie. grant awarding bodies, banks. Audiences, clients, funders, suppliers, team working, and employers.

Student employability profiles

A guide for higher education practitioners

Graduate Prospects

CIHE
THE COUNCIL FOR INDUSTRY AND HIGHER EDUCATION

The Higher Education Academy

Contents

Introduction

The Higher Education Academy with the Council for Industry and Higher Education (CIHE) has produced this guide to promote and support the use of the Student Employability Profiles. We envisage that this guide will be of benefit to a wide range of staff within higher education including those closely concerned with:

- designing and delivering the curriculum
- supporting students' personal development planning activities
- providing career guidance and support to students and graduates
- communicating what disciplines can offer to prospective students
- undertaking employer liaison.

This guide provides an overview of the 50 discipline profiles that have been produced in consultation with the 24 Higher Education Academy Subject Centres and directs the reader to further material available on the Centres' websites. It is also designed to facilitate the use of the profiles within the higher education community by suggesting ways in which these resources can be used to:

- inform curriculum design
- support the delivery of employability skills development in undergraduate students
- enhance the understanding of prospective students and their parents as to the value of degree level study
- communicate more effectively with employers (especially non-cognate) in a shared language, the skills that students are likely to have developed with degrees in particular subjects.

The document is not designed to be prescriptive so a further aim of the publication is to act as a starting point and to inspire staff to consider how they can adapt the material for their own use. The way in which the profiles can be used is obviously determined by the user and not by the material itself. Case studies are used to illustrate 'real-life' use of the material and suggest different applications. The reader is also signposted to other relevant resources available from the Academy Subject Centres, the Academy York and other organisations.

What are Student Employability Profiles?

The Academy's Subject Centres have participated in the compilation of Student Employability Profiles working with the Academy York and CIHE. The project was completed in two stages with 23 profiles produced in 2004/5 and the remainder completed during 2005/6. Each profile identifies skills that can be developed through the study of a particular discipline based on subject benchmark statements developed by UK higher education academic communities and copyrighted by the Quality Assurance Agency for Higher Education (QAA). These skills have then been mapped against input from CIHE Employer membership regarding the employability skills, competencies and attributes which they valued when recruiting. While acknowledging that no list is definitive, these represent the key competencies that employers observed in individuals who can transform organisations and add value early in their careers and comprise:

- **Cognitive Skills/Brainpower**: The ability to identify, analyse and solve problems; work with information and handle a mass of diverse data, assess risk and draw conclusions. (Analysis, Attention to detail, Judgement)
- **Generic Competencies**: High-level and transferable key skills such as the ability to work with others in a team, communicate, persuade and have interpersonal sensitivity. (Image, Influencing, Interpersonal Sensitivity, Planning and organising, Questioning, Teamwork/ Working with others, Written Communication)
- **Personal Capabilities**: The ability and desire to learn for oneself and improve one's self-awareness and performance – lifelong learning philosophy, emotional intelligence and performance. To be a self starter and to finish the job (Achievement Orientation, Adaptability/Flexibility, Creativity, Decisiveness, Initiative, Leadership and tolerance of stress)
- **Technical Ability**: For example, having the knowledge and experience of working with relevant modern laboratory equipment. The ability to apply and exploit information technology (Technical Application, Technical Knowledge)
- **Business and / or Organisation Awareness**: Having an appreciation of how businesses operate through having had (preferably relevant) work experience. Appreciation of organisational culture, policies, and processes through organisational understanding and sensitivity. Ability to understand basic financial and commercial principles (Commercial Awareness, Financial Awareness, Organisation Understanding)
- **Practical Elements - Vocational Courses**: Critical evaluation of the outcomes of professional practice; reflect and review own practice; participate in and review quality control processes and risk management.

Kubler and Forbes (2005)

Further information can be found in the report *Graduates Work* by Professor Lee Harvey (CIHE 2001).

All the Profiles have slightly different forms to meet the needs of individual Subject Centres. A list of all of the profiles which have been produced and links to the relevant Subject Centre websites can be viewed at **www.heacademy.ac.uk/Employability>>Student Employability Profiles**.

The majority include:

Discipline-specific information
- evidence from QAA benchmark statements of the work-related skills developable through study of a particular subject
- summary of knowledge taught
- skills mapped against competencies identified by the CIHE as ones that help transform organisations
- list of typical career paths/options related to degree discipline

Generic material
- employers' criteria
- glossary of competencies in alphabetical order
- glossary of terms: descriptive criteria and indicators for employability competencies
- reflective questions based on the employability competencies designed to stimulate student evidencing of skill development and achievement
- further consideration and links

Copies of the generic material can be found between pages 140 and 154.

The project was originally conceived as a means of enhancing communication with graduate recruiters through highlighting the employability skills developed through the study of a range of disciplines. Other applications, however, for a well-researched and plain English articulation of the rich layers of skills and attributes derived from the benchmarks, soon became clear. Academy Subject Network staff saw the value of the material for supporting their academic colleagues in making work-related skills learning more explicit in course programme design and delivery. The Profiles can also be used to great effect in communicating the benefits of degree level study to prospective students and their families as well as to current undergraduates.

Employability – some background

There are many definitions of what it is to be 'employable' and views on the processes that develop this attribute. Knight and Yorke (2004) summarise five meanings of the term 'employability' which cover a spectrum including 'getting a graduate job' and a 'product of skilful career planning and interview technique'. A relevant definition of employability is:

> 'a set of achievements - skills, understandings and personal attributes - that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.'
> **Yorke (2006)**

The skills and other qualities that enhance an individual's employability are, in many cases, those that also facilitate learning and the application of subject knowledge. The ability to analyse data, to solve complex problems and to communicate outcomes effectively are commonly applied in both academic and employment processes. This relationship between learning and employability is made explicit in the Skills and Attributes Maps that most of the Subject Centres have developed as part of their Student Employability Profile. The Maps list the key behavioural indicators or criteria identified within the subject benchmark statements. These are then cross-referenced with the competencies outlined by the members of the CIHE Employers' Forum. An example of one of the Maps can be found on page 28 to give those unfamiliar with the Student Employability Profiles an insight into the structure of this resource. A Map has been developed, however, for the majority of the disciplines and reference should be made to these via the individual Subject Centre websites.

Using the profiles

Informing curriculum design

The close relationship between employability skills and attributes and those competencies needed to be an effective learner means that many curricula will already support development of these qualities through a range of activities, assessments and teaching practices. In recent years, however, more specific work has been undertaken at an institutional and departmental level to examine the relationship between the curriculum and employability. Course and curricula audits provide an opportunity to identify existing good practice and consider how gaps could be filled. They also provide an excellent springboard for discussion and set the agenda for further development.

> 'Curriculum auditing offers a way of testing how and where employability-related learning is incorporated and where there might be gaps. The development of module-based curricula has often drawn attention away from the programme as a whole, with the module often being the focal unit of analysis in validation/approval procedures.'
> **Yorke and Knight (2004)**

The Higher Education Academy is aware of a number of employability audits. Professor Ian Hughes, Higher Education Academy Bioscience Subject Centre and Debra MacFarlane-Dick, University of Glasgow, have produced two audit tools to assist with curriculum development. The University of Central England Careers Service also has webpages designed to offer advice to enable academics to map exactly where and how students develop employability. This material is available from the Enhancing Student Employability Co-ordination Team (ESECT) toolkit on the Academy website, **www.heacademy.ac.uk/ Employability.htm >>Tools and Resources>>Tools for Employability>>Mapping or Auditing Employability**

The Student Employability Profile Skills and Attributes Maps can provide an additional tool as both part of a curriculum skill audit and then also in promoting the good practice identified through the process. One of the strengths of the Profiles is that they have articulated the learning experience in a language that can be readily understood by students. The benefits, in terms of skill development, accrued through a particular approach to assessment or module content could therefore be explained to students in an accessible form and made more explicit. Understanding the reasons behind why an assessment or activity is structured in a particular way can reassure the learner that there is a real value in undertaking a more novel or challenging type of assessment and it is not just innovation for its own sake. A curriculum audit using the Skills and Attributes Map may also identify areas where particular attributes and competencies are not strongly developed and course teams may need to consider ways of enhancing students' development in these areas.

Reviewing employability skills

The Engineering Subject Centre used the Student Employability Profile as the basis for commissioning additional research into skills development in the undergraduate curriculum.

The Centre wanted to identify examples from a small group of graduates as to how they recognised and were able to articulate the skills within the Profile.

Some feedback was also obtained from academics on the teaching and learning strategies used to develop student skills.

These findings form the 'Supplement with Supporting Evidence from Engineering Graduates and Academics' which was published with the main Student Employability Profile, Higher Education Academy Engineering Subject Centre (2005).

The research provides a flavour of the type of work that could be developed from the Profiles.

Supporting career development learning

'Career development learning is concerned with helping students acquire knowledge, concepts, skills and attitudes which will equip them to manage their careers, i.e. their lifelong progression in learning and work'
Watts (2006)

Watts (2006) discusses a number of conceptual models which have been developed to underpin this type of learning but common features include:

Self-awareness – the ability of individuals to reflect on, identify and articulate their skills, competencies, interests and motivations in relation to their career planning

Opportunity awareness – the exploration of the opportunities (employment, further study, voluntary work etc.) open to the individual

Decision making – the strength of synthesising information gained from self and opportunity awareness, clarifying priorities and formulating action plans

Transition learning – the identification and successful acquisition of employment or other opportunities.

These and other aspects of career development learning can be delivered to students in innovative and interactive ways that utilise a variety of teaching approaches. The Student Employability Profiles provide a rich source of material to support this delivery. The case studies and other examples which are contained in this guide illustrate some of the techniques through which Profiles could be used to encourage the reflection and the evidencing of student achievement which meet a range of learning outcomes.

'The aim of engaging students in personally applying career learning leads to an emphasis upon interactive teaching methods whilst including instructional approaches… Facilitative teaching styles that encourage and model an open and honest exploration of the career planning process are often particularly suited to the subject matter'
Association of Graduate Careers Advisory Services (2005)

Decisions on the most appropriate way forward may also be informed by considering a model of material usage that defines three separate approaches to using resources to facilitate learning:

Mode one: Materials led

In this case resources are used in their original form: for example, the Skills and Attributes Map and Reflective Questions can be used for Personal Development Planning. Careers and academic staff can also use the questions when staging mock interview sessions.

Mode two: Adaptation

The profiles themselves and accompanying material, however, could provide the basis for new learning resources. A copy of the subject discipline Skills and Attributes Map could be used as:

- a self-assessment grid. The generic employability competencies would need to be explained to, and discussed with the students. They could then be encouraged to consider the skills and competencies which they have developed through extra-curricular activities and employment and map these against the competencies in readiness for developing a CV or completing an application form
- the basis of a role analysis exercise – students could be asked to look at a number of jobs commonly entered by alumni. Through carrying out research using a number of resources e.g. occupational material produced by Graduate Prospects and professional associations students could identify the key competencies required and present these back to the main group
- to create person specifications. Students could be given a number of job adverts or job descriptions that represent areas of work which alumni commonly enter. They could be asked to write the person specification on which these posts are based. What are the key skills/competencies that could be required?
- as an interview checklist for discussion with either final-year students returning from work placement or alumni. The task is to find out more about their role and competencies used. The Student Employability Profile produced by the Higher Education Academy Economics Subject Centre (2005) includes a series of case studies in which alumni have talked about the skills and competencies that they developed through their degree.

Supporting the validation process

A department submitting a new programme for university approval used the Student Profile to support, very strongly, their statements regarding the future employability of graduates from the proposed course.

By using the material, which linked the subject benchmark statement, in this case for Religious Studies, with the generic employability competencies, staff were able to elucidate the outcomes of the course in terms of employment related skills and abilities.

The opportunity to emphasise the work-related benefits of the discipline was of particular value given that the institution runs a large number of vocational courses and that the relationship between Religious Studies and employability was not immediately evident to staff outside the discipline.

Case study supplied by the Subject Centre for Philosophical and Religious Studies:
http://prs.heacademy.ac.uk

'I have found the Student Employability Profiles to be a useful resource to support career development learning. I work with a range of Engineering students including those from Electronics and Electrical engineering. As not all of these students undertake work experience placements, it is very important that they are able to give examples, in job applications, of how they have developed work-related skills particularly through their final year project. I give students a copy of the discipline profile which provides a valuable insight into the range of competencies and abilities that employers are looking for. This is then followed up with information on building a CV and how students can articulate and give evidence of their skills. I also see a number of students for mock interviews and I use the Reflective Questions and the Profile to help students prepare for the graduate recruitment process.'

Jackie Leyland, Careers Service, University of Liverpool

The glossary of competencies (see page 139), which describes the criteria and indicators for the employability skills and abilities, could be adapted to create:

- a stimulus for discussion around the language of recruitment which could aid students' understanding of employers' requirements. After the tutor has worked through an example, students could be given several competencies and encouraged to consider a definition and the type of evidence which would demonstrate that an individual possesses this competence.
- a feedback form which students could use while observing peers undertaking assessment exercises.

Mode three: Design

The material acts as stimulus to the creation of an original resource. An example might be getting students to create their own Skills and Attributes Map/Profile and comparing it with the existing model. This could be done through a visualisation exercise. Visualisation is a technique by which a concept or set of ideas are portrayed using pictures not words. As an example, pictures of sun, sea, sandcastles and suitcases might portray a holiday. Students, working in groups, could be asked to represent, through a picture, the image of a 'skilled' graduate from their degree course. What are the skills and competencies that they would possess? No words are allowed to appear in the picture and success in the exercise does not depend on skill in drawing! In the plenary session, groups can explain their pictures and a composite list of skills can be created and compared to the Profile. Themes can be drawn out of the discussion such as What's different? What's missing? The exercise will not suit every learning style but some students may find it is easier to communicate ideas unconstrained by words.

The following, more detailed, examples demonstrate some of the other ways in which the Student Employability Profiles can be used to support career development learning.

Student Employability Profiles for students

The Physical Sciences Subject Centre is writing a leaflet for students to help them identify and evidence the range of employment-related skills acquired through their degree study and outlined in the Student Employability Profile. Students will also be encouraged to think about ways in which they can develop other competencies and abilities outside of their course. Separate versions are to be produced for Physics and Chemistry. Departments will be contacted and encouraged to order copies to distribute to all Physical Science undergraduates. More details can be obtained from the Subject Centre website (**www. physsci.heacademy.ac.uk**).

The Geography, Earth and Environmental Sciences Subject Centre has produced an Employability Profiles Resource Pack that includes some advice for students on how they can use the Profiles:

> 'Do you find it difficult when writing job applications to express what qualities you have to offer employers as a Geography/Earth Science/Environmental Science graduate?
>
> When you attend job interviews are you prepared to answer the following questions: why should I employ a Geographer/Earth Scientist/Environmental Scientist? What can a graduate from your discipline offer that other graduates can't? What challenges and problems have you overcome and how?
>
> The following profiles are designed to help you respond to these situations and sell yourself to a prospective employer. They will help you articulate your experience with examples that demonstrate your abilities. They have been written by subject experts and employers to emphasise the discipline-specific aspects of our subjects that employers value. Use them to help you sell what you have to offer to a prospective employer.
>
> The profiles do not offer a definitive list of subject-related skills and knowledge. There will be additional skills and knowledge you posses from your course (and other experiences) that you should draw upon when making your job applications.'

> **Higher Education Academy Subject Centre for Geography, Earth and Environmental Sciences (GEES) (2005)**

The Geography, Earth and Environmental Sciences Subject Centre Employability Profiles Resource Pack is available from **www.gees.ac.uk/projtheme/emp/empprofs.htm**

Other Subject Centres including English, Psychology and Philosophy have written a section of the Profile aimed at undergraduate students. These highlight the importance and application of the employability profiles and provide details that should help put the course and skills students might gain into perspective. For example:

'Geography undergraduates at The University of Northampton have the opportunity to undertake a module which links career and personal development planning with a work-based placement. As part of the module, students undergo an application process for a role as a 'learning facilitator'. The Student Employability Profile for Geography is really useful in helping the students to think about their application. In small groups, the students consider what skills they – as geographers – have acquired and developed through their studies. The class compare this list of skills to those outlined in the Employability Profile and review the extent to which they have identified and articulated these. This activity is followed by a short, reflective writing task, in which students outline evidence from their studies to demonstrate that they have these abilities, choosing one example of Knowledge, Thinking Skills and Practical Skills. The Employability Profile provides a useful starting point for discussion and helps students to reflect on the skills and abilities they, as geography graduates, have to offer potential employers.'

Dr Faith Tucker, Lecturer in Human Geography, The University of Northampton

"It is widely accepted that developing skills that can be used in a future career is important for undergraduates, whatever the discipline. Past graduates in English have made their mark in a whole range of careers, including the media and teaching as well as in many fields in public service and business. Having a good degree can make a real difference, particularly in the early years of working. But professional success also lies in being able to apply a range of skills fostered at university and beyond. English graduates are highly employable when they are able to combine the benefits of their academic study with skills both common to other subjects and also distinctive to English.

This employability profile is a way to help you as an English student to reflect on the skills you are gaining and to gather evidence of these skills being put into practice. Evidence can come from study but also from work experience and extra curricular activities. Your own profile can help in turn with writing up Progress Files or personal development planning, CV writing and job applications.

Career opportunities for English graduates are many and varied, often in roles that bear no obvious relation to the study of English. In these circumstances, it is a high priority to be able to demonstrate sound personal transferable skills of value to employers. Even for those who embark on careers with some relationship to English, perhaps in the media, communications and teaching, there are likely to be radical job changes from time to time in the future. So for all students, employability matters."

Higher Education Academy English Subject Centre, 2005

Skills assessment card-sort

This exercise, based on parts of the Student Employability Profile, could be used in a session designed to encourage students to consider what they have to offer potential employers. The activity uses card sorts, a resource that requires students to organise a

number of cards into particular categories. It provides an ideal opportunity to 'externalise' decision-making processes in a flexible manner as students can 'try-out' different scenarios simply by rearranging the cards. The employability skills and competencies as identified by the QAA Subject Benchmark Statements could be listed on individual cards. Students are then asked to think about the evidence that they have to show that they have this skill and how they compare with their peers. The cards can then be placed under one of the header cards that range from 1 – significantly better than most through to 6 – No experience yet. When students have sorted through the cards and are happy with their allocation, they can record their decisions on a worksheet along with examples of the evidence, where appropriate, on which they have based their decisions. Encourage students to be specific when selecting evidence and to think, where possible, in terms of 'tasks'/activities. Students can then look at their own examples against the CIHE competencies and qualities so enabling the evidencing of skills to be interpreted in language helpful to employers. This exercise can form a starting point for CV development and other work on job acquisition.

Card-sorts can be developed to meet a wide range of learning outcomes. Staff who want to produce their own resources will find further information on producing and teaching with card-sorts in Butcher (2004) and Boyle and Jackson (2005). Electronic card-sorts to support career development learning have been produced by a number of organisations including the Bioscience (**www.bioscience.heacademy.ac.uk**) and Physical Sciences (**www. physsci.heacademy.ac.uk**) Subject Centres.

Preparation for work placement

The Profiles could be used in a variety of ways to support the learning from periods of curriculum-based (and other) work experience placements. Students could identify and prioritise the skills and competencies that they wish to develop during placement. This could be achieved through using a card-sort exercise in which students prioritise each card under the headings 'most important'(4) through to 'not relevant'(0) under which the cards are sorted If the CIHE competencies were used, cards could be colour-coded: for example, all of the skills and abilities relating to Personal Capabilities could be reproduced on red card while Business and Organisation Awareness skills are reproduced on blue etc. Students could then be encouraged to consider the patterns that emerge. Are their objectives balanced across a range of skills and abilities or focussed in one area? The card-sort could then form the basis of an action plan or learning agreement for work placement and be incorporated into a learning diary/log and work placement assessment.

Job acquisition

The Academy's Geography, Earth and Environmental Sciences Subject Centre encourages staff to use the Profiles when working on aspects of career development. Their Employability Resource Pack (2005) includes an outline, written by Dr Sharon Gedye, of two different applications of the material:

CV development/job application practice

- Provide your students with the application details of two relevant but different jobs. You may want to choose one subject-related job and one general graduate job in order to act as a contrast
- Get your students to develop two CVs or write two job applications, targeted at the two different positions
- Along with the general advice you provide on writing a good CV/application, give each of your students a copy of the student profile in order to help them emphasise the distinctive qualities they bring to the position as a graduate of their discipline. Encourage them to exemplify the main qualities they choose to stress
- This activity will give students experience in CV/job application writing; it will highlight the importance of targeting CVs and applications (i.e. one size does not fit all); and it will get students to consider what distinctive qualities they can bring to a job as a graduate of Geography/Earth Science/Environmental Science.

Interview technique

- Provide your students with the application details of a relevant job.
- Inform them that they are required to undertake a mock interview for this position
- In preparation for the interview (in addition to the other advice you give your students on interview technique), provide all students with a copy of the student profile information. Suggest they reflect on those aspects of their degree they think are most relevant to the job application
- You can further help your students prepare for interviews by getting them to think about a situation they were in, the task that needed doing, the action they took, the result or outcome achieved and what they learned from this. This will help them to become conversant with competency-based interviewing and help them to develop their story
- At the interview ask your student some of the following questions:
    - Why should I employ a Geographer/Earth Scientist/Environmental Scientist?
    - What can a graduate from your discipline offer me that other graduates cannot?
    - What challenges and problems have you overcome and how?
    - What are the main skills you can offer the (mock) position?
    - Give relevant examples of the actual activities you have undertaken that required the skills you highlight (try to encourage your student to highlight how different activities develop different aspects of the same skill e.g. project management requires a different emphasis on time management and organisational skills than would writing an essay)
- This activity will give students experience in preparing for and handling a job interview and it will get them to consider what distinctive qualities they can bring to a job as a graduate of Geography/Earth Science/Environmental Science.

The Geography, Earth and Environmental Sciences Subject Centre Employability Pack is available from **www.gees.ac.uk/projtheme/emp/empprofs.htm**

Material for students

The recruitment process

Angela Edkin and Liz McFarlin, Careers Advisers at Aston University, used material from the Glossary of Terms and Indicators in a booklet for students called 'Competencies Unravelled' (Aston Careers Service 2006). The publication is designed to help students understand more about the competencies that employers want.

The Reflective Questions, along with some other examples, were also used to give students an insight into how employers gather evidence of competencies in the recruitment process. The following extract on commercial awareness from 'Competencies Unravelled' demonstrates how students are helped to understand the nature of competence and the questions which they might be asked as part of a selection process:

'Commercial awareness. What does this mean? Understands the economics of the business. Understands the business benefits and commercial realities from both the organisation's and the customer's perspectives.

People who are good at this:

- demonstrate breadth of awareness of business knowledge (e.g. recognises issues in finance, sales, marketing)
- show consideration of such business implications as increased revenue/profit, decreased expenditure, increased productivity, improved company image and market share
- identify new business opportunities
- take commercial constraints into account
- are able to analyse financial trends (e.g. revenue, profit, productivity) and forecast accordingly
- show an awareness of commercial activity
- show an awareness of competitive products and services and market trends
- identify ways to reduce costs.

The alphabetical Glossary of Competencies Definitions, which is included in both the Guide for Employers, Kubler and Forbes (2005) and the Student Employability Profiles, has also been used as an effective handout for students providing a brief summary of the competencies which employers seek.

Examples of application/interview questions:

- Tell me about an occasion when you made a cost saving in the past. How did you choose where to make the savings? How much money do you think that you saved?
- What do you know about the competitors in this business?
- What differentiates us from our competitors?'

Competencies Unravelled (Aston University Careers Service, 2006)

Supporting a Career Development module

Liz McFarlin is also working with the School of Pharmacy at Aston to adapt a Year One Career Management/Essential Skills module. The discipline Student Employability Profile is likely to feature in the indicative reading list for the module and is to provide material to support a range of activities including self-assessment.

It is hoped that the Profile will encourage students to reflect on the skills they have and to increase their understanding of the competencies required within the subject discipline.

Resources for staff and students

ESCalate, the Subject Centre for Education, has produced a number of new resources including an online module which may be used by students alone or by staff importing all, or some of it into their programmes. Produced in conjunction with the Physical Sciences Subject Centre, it may be accessed at http://escalate.ac.uk/2793

The other main resource using the Profiles, are two booklets which will be available in both paper and web based formats. One, specifically written for students, contains the Student Employability Profile for Education Studies students with an outline of how the Profile may be adapted to be useful for students on any education course.

The other booklet, for staff, provides an argument and context for the employability agenda in the Education discipline in higher and further education, based in part on data from a project by Drs Julie Anderson and Helena Mitchell. The findings from the project are presented alongside a summary of the most recent employability literature and additional resources from workshops, conferences and events run by both ESCalate and other subject centres. This resource is designed to be of use to both recently appointed lecturers and those new to the topic of employability. An important part of the material is the Student Employability Profile data prepared by Peter Forbes and Bianca Kubler for Education Studies students.

As with the employability module, the booklet is designed to be either read through or used piecemeal in conjunction with additional resources and data on the ESCalate website to provide support for those who have no or little experience of introducing employability into their teaching. It links closely with the booklet for students by the same authors.

Personal development planning

Personal Development Planning (PDP) is "a structured process undertaken by individuals to reflect on their own learning, performance and/or achievement and to plan for their personal, educational and career development" (QAA 2000)

There is a close relationship between PDP and Career Development Learning. Effective engagement with the PDP process can provide students with both the evidence and the language to convey their achievements to employers. In addition, reflecting on development and identifying strengths (and weaknesses) can help the individual develop as a learner and understand how their learning relates to a wider context.

The Student Employability Profiles can provide a range of resources to help students engage with PDP. The Skills and Attributes Map could be used to encourage students to identify the skills that they are developing through degree level study and how these relate to those competencies which many employers value. The Reflective Questions can be used in conjunction with this material to help students evidence their achievements using a vocabulary appropriate to the recruitment process.

> "Employers used to ask potential employees what they had done and, implicitly, what skills they had acquired. Now they ask what it is that students have learned from their experiences and, implicitly, how well equipped they are to learn and continue learning."
> **Universities UK (2002) cited in Scottish Funding Councils for Further and Higher Education (2005)**

The Higher Education Academy has produced Guides for Busy Academics which focus on PDP and these are available from **www.heacademy.ac.uk/PDP.htm >>Guides for busy academics**. Titles include 'PDP and Programme Specification' and 'Using PDP to help students gain employment'. Details of other support with PDP available through the Higher Education Academy and the Centre for Recording Achievement is outlined in the leaflet 'Personal Development Planning' available at **www.heacademy.ac.uk/leaflets.htm**

At The University of Northampton, we are developing discipline-based resources, 'Supporting Success in your Subject' to promote the integration of both Personal Development Planning activities and employability skills within the curriculum. Currently paper and electronic versions on our VLE are being piloted by staff, who will be able to make direct links from course material and signpost to specific exercises or information.

These materials highlight extracts from both subject benchmark statements and the Student Employability Profiles to help staff and students identify those academic skills which are transferable to other contexts, and to encourage students to articulate their development more clearly; workshop materials have been designed to supplement these. The employability potential of a subject could usefully be summarised in course/module handbooks, and the competency templates could assist with expressing learning outcomes more clearly in an employability context.

The set of reflective questions are particularly useful for adapting to PDP tasks, as preparation for tutorials, in assignment feedback or progress evaluation, and in designing career-management materials to support self-presentation/application skills. Crucial to student engagement with PDP and ownership of their self-development is an awareness of and confidence in the broad relevance of their subject, and the ability to make explicit connections with other learning experiences. The packs include sections on linking to work-based scenarios and exploring possible employment sectors, which also draw upon the SEPs, graduate case studies, and discipline-based practice from ESECT and the subject centres. It is hoped these will give credibility and relevance to personal, academic and career planning activities for both staff and students.

Andrea Duncan, PDP Coordinator
The Office of Learning and Teaching
University of Northampton

Pre-entry students

The Profiles can be used in a number of ways to communicate the benefits of studying a particular degree. Excerpts from the Profiles can be used in prospectuses, other promotional material, and Open Day talks. Thomas and May (2005) refer to the value of widening participation activities relating to employability which are delivered as part of outreach work and induction.

> "US research indicates that students have greater institutional and disciplinary commitment if they perceive their study to have a direct bearing on achieving their career aspirations (Berger and Braxton, 1998)"
> **Thomas and May (2005)**

The Psychology and the Physical Sciences Subject Centres have produced a section of the Profiles for Psychology and Chemistry that are designed to help prospective students find out more about the benefits of studying the discipline. The material:

● introduces the concept of employability:

"Employability means developing a range of achievements, understandings and personal attributes that make it more likely you'll get a job and be successful in it. Employers value applicants with degrees because they can 'add value' to their organisation. People who spend time studying a science subject will be able to demonstrate an ability to solve problems, to ask questions, to concentrate, to show commitment – all this, and more, will make you of value to a business"

● outlines the attributes, skills and experiences which employers are seeking
● describes the discipline-specific employability skills and aptitudes
● refers to further sources of information on graduate employability.

For further details please refer to the Psychology Subject Centre (**www.psychlogy. heacademy.ac.uk**) and Physical Sciences Subject Centre (**www.physsci.heacademy. ac.uk**) websites

Work with employers

A starting point for the development of the Student Employability Profiles was as a means of enhancing communication with graduate recruiters through highlighting the employability skills developed through the study of a range of disciplines.

A 'Guide for Employers' Kubler and Forbes (2006) commissioned by the CIHE and Graduate Prospects is a valuable resource for use with employers and covers 43 subject disciplines. The Guide introduces employers to the concept of the profiles and the CIHE Employability Competencies. It contains copies of the Discipline Profiles derived from the QAA Benchmark statements, outlining the work-related skills that can be developed through the study of a particular subject and giving an insight into how these skills can be applied in different areas of employment. Extracts from this guide could be included in promotional material designed to encourage employers to recruit graduates or offer work placements from particular disciplines. The majority of the Discipline Profiles from the 'Guide for Employers' are reproduced in this publication between pages 32 and 139.

> '…the Student Employability Profiles are an important step forward in promoting better shared understanding of the content of different degree disciplines. As a graduate recruiter, I have already used the profiles to improve my knowledge of the skills sets and experiences that a graduate might expect to gain from various degrees, helping me to cast the net wider when looking for new graduate talent for our company.'
> **Gary Argent, UK Graduate Recruitment Manager, LogicaCMG**

Dr Simon G Smith, Centre Manager for the Subject Centre for Philosophical and Religious Studies, believes that the Profiles have had an effect on many employers' views on the value of a degree in Philosophy, Theology, and Religious Studies.

> 'The Student Employability Profiles have given employers a significant insight into the benefits of recruiting a student from our degree disciplines. Through highlighting the relationship between academic skills and knowledge and employability competencies, the profiles have contributed significantly to employers' understanding of the nature of these subjects and helped them consider how these graduates could contribute to their organisation'

The profiles may be of particular help developing links with those small and medium sized enterprises who may have had little contact with recent graduates or undergraduates:

> 'For employers that need new graduate recruits to perform effectively early in their careers, (particularly important for small to medium enterprises), this guide helps show the value a graduate can bring to an organisation straightaway.'
> **Kubler and Forbes (2005)**

Higher education staff, particularly those working in careers services, might also find the Profiles to be of use if approached by employers for assistance with their recruitment processes. The Reflective Questions could be a helpful resource for employers who may be using competency-based interviews for the first time or even provide a useful checklist for higher education staff who are involved in recruitment.

'I have found the student profile project extremely useful to be able to really understand for the first time exactly what skills, qualities, attributes and employability competencies we could expect to see from the graduates we recruit according to their subject of study. To maximise the use of the profiles I have also rewritten my interviewing frameworks and questions to align to the profiles.'
Linsey Perry, Head of Graduate Recruitment, Network Rail

Writing references

Many staff in higher education will be asked by employers to provide references on students and very detailed information on appropriate content is available from Human Resources departments within individual institutions. One of the key areas covered in these references will often be how closely the student's skills, abilities and other qualities match those required in the job. The CIHE employability competencies provide an excellent guide to the range of attributes that employers seek and the material uses a terminology with which employers will be familiar. Staff could refer to the Skills and Attributes Maps that indicate how these competencies are covered through degree level study and select examples of academic work to support statements in a reference.

Subject-specific information for employers (recruiters and human resource developers)

Some of the Subject Centres, including English, Philosophical and Religious Studies, Physical Sciences and Psychology have produced a section of the Profile specifically designed for employers which highlights these skills and provides further information on the nature of the subject as an academic discipline. The material commonly features:

- an introduction to the Student Employability Profiles and their application to graduate recruitment:
- the CIHE employability competencies
- the discipline-specific employability skills and aptitudes plus further information on the nature of the subject as an academic discipline and possible career paths.

Please see the individual Subject Centre websites for the complete student employability profiles:

www.english.heacademy.ac.uk
www.prs-heacademy.ac.uk
www.physsci.heacademy.ac.uk
www.psychlogy.heacademy.ac.uk

Further resources for employability

The Student Employability Profiles can meet the needs of a number of audiences. There is a very wide range of material available to support and promote employability which might be used alongside the Profiles or provide a starting point for staff who may wish to design and develop their own resources. The Academy Subject Centres have a section of their websites devoted to employability and many have produced materials for use by and with students. In addition, the list below highlights other sources that may be of interest. Please note that this is only a selection of websites, not an exhaustive list.

Association of Graduate Careers Advisory Services (AGCAS)

AGCAS leads and supports collaboration between its members to deliver career education, information and guidance for students and graduates. It has created an Employability Portal for the benefit of HE careers and academic staff, institutional policy makers, employers of graduates and others who are working to enhance the employability of HE students and graduates. It includes annotated references to a wide variety of resources under a number of headings including curriculum-based initiatives; Progress files and PDP; career management skills; and work experience. The organisation also provides a number of priced publications. **www.agcas.org.uk/**

AGCAS has close links with the Higher Education Academy. There is an AGCAS 'buddy' for many of the Subject Centres. These AGCAS members work closely with the Centres to help them enhance the employability of graduates. A list of 'buddies' is available at: **www.agcas.org.uk/dynamic/organisations/LTSNList.php**

Association of Graduate Recruiters

Priced publications and digest of press articles about graduate employment. **www.agr.org.uk**

Centres for Excellence in Teaching and Learning (CETLs)

74 Centres for Excellence in Teaching and Learning (CETLs) have been established to promote excellence across all subjects and aspects of teaching and learning in higher education. A number of the CETLs focus on career development learning and other aspects of employability. A full list of projects can be found on the Academy website at **www. heacademy.ac.uk/CETLs>>CETLs list**

Council for Industry and Higher Education (CIHE)

CIHE aims to improve the dialogue and mutual understanding between business and higher education. Among its investigations are the enhancement of employability through the curriculum and other aspects of the higher education experience, and the Government's widening participation agenda. **www.cihe-uk.org.uk**

Centre for Recording Achievement

The CRA is a national network organisation which promotes and supports good practice and the sharing of experience in recording achievement and personal development planning within educational institutions, companies and professional bodies. Sections of the website focus specifically on higher education.
www.recordingachievement.org.uk

The Higher Education Academy

The Academy has produced a wide range of material and also provides a gateway to other organisations working in the field of employability and Personal Development Planning. Resources available include:

- context case materials which enable the academic curriculum to be developed in ways which enhance not only the students' knowledge and understanding of their subject but also their employability
- an online directory of employability resources
- a searchable database of employability publications and materials available throughout the sector, updated and maintained on a regular basis and annotated to help you choose
- tools for employability.

The Enhancing Student Employability Co-ordination Team (ESECT) have produced and made available tools and resources to support the enhancement of student employability in higher education. New resources, developed by Subject Centres and individual higher education institutions, which support the development of employability will be added to this site. These could range from card sorts and audits to surveys.
www.heacademy.ac.uk/employability.htm

Higher Education Careers Services Unit

HECSU is a charity whose commercial arm, Graduate Prospects, (see below) provides careers information and services to university careers advisory services, students, graduates, employers and others. The work of HECSU includes commissioning and distributing research around five themes: practitioner research; labour market information; careers guidance; international comparisons and career learning and development.
www.hecsu.ac.uk

Graduate Prospects

The UK's official careers website for higher education students provides a wealth of information on career paths, postgraduate courses and international opportunities.
www.prospects.ac.uk

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Brief guide to the material

This Guide to the Student Employability Profiles for staff in Higher Education is designed to encourage those already familiar with the resources to think about ways in which the material could be used within their institutions. The Guide also serves to introduce the material to as wide a new audience as possible amongst academics, careers staff and those involved in work placements and employer liaison.

Two separate documents form the basis of the Student Employability Profile for most subject disciplines. These are the Skills and Attributes Map and the Discipline Profile .

Skills and attributes map (page 28 to 31)

The Skills and Attributes Map seeks to capture key behavioural indicators or criteria identified within the subject benchmark statements. It cross-references these with the competencies identified by members of the Council for Industry and Higher Education (CIHE) Employers' Forum as being the attributes/qualities that are the key components they have observed in those individuals who can transform organisations and add value early in their careers.

An example of one of the Maps is included to give those unfamiliar with the Student Employability Profiles an insight into the structure of this resource. A Map has been developed, however, for the majority of the disciplines and reference should be made to these via the individual Subject Centre websites.

The discipline profile (pages 32 to 139)

Each Profile identifies a set of work-related skills that can be developed from studying a particular subject and gives a description of the subject as an academic discipline and some commentary on the value of the skills in employment. A copy of a Discipline Profile for each subject is reproduced in this Guide. Please note, however, that some of the 12 Subject Centres involved in the first round, which finished in 2005, have produced more detailed versions of the Discipline Profiles that provide further information on the competencies and skills developed. This additional material can be viewed on the appropriate Subject Centre website.

Important

Subject Centres have, and are continuing to develop, a range of supporting material in addition to the resources outlined above. Readers planning to use the Student Employability Profiles are urged to check on the relevant Subject Centre website for the most comprehensive information and latest developments.

In order for material to be used and developed by the Subject Centres, it was important not to be prescriptive and acknowledge that some disciplines would choose to adapt the Profiles in a number of ways. There are therefore some slight differences in the structure and type of resources that Subject Centres chose to use.

Generic material (pages 140 to 152)

A set of supporting material was made available to each Subject Centre and this consists of:

- employers' criteria
- glossary of competencies in alphabetical order
- glossary of terms; descriptive criteria and indicators for employability competencies
- reflective questions based on the employability competencies designed to stimulate student evidencing of skill development and achievement
- further consideration and links.

Example skills and attributes map – Philosophy

Subject benchmark indicators	**Generic employability competencies**					
	Cognitive skills	Generic competencies	Personal capabilities	Technical ability	Business and/or organisation awareness	Practical and professional elements
Subject benchmark indicators	The ability to identify and solve problems, work with information and handle a mass of diverse data, assess risk and draw conclusions.	High level and transferable key skills such as the ability to work with others in a team, communicate, persuade and have interpersonal sensitivity.	The ability and desire to learn for oneself and improve ones self-awareness, emotional intelligence and performance. To be a self-starter (creativity, decisiveness, initiative) and to finish the job (flexibility, adaptability, tolerance to stress).	For example, having the knowledge and experience of working with relevant modern technology.	An appreciation of how businesses operate through having had (preferably relevant) work experience. Appreciation of organisational culture, policies and processes.	Critical evaluation of the outcomes of professional practice, reflect and review own practice participate in and review quality control processes and risk management.
Articulacy in identifying underlying issues in all kinds of debate.		Questioning, Listening, Interpersonal Sensitivity.	Tolerance for Stress, Adaptability/Flexibility.			
Precision of thought and expression in the analysis and formulation of complex and controversial problems.	Attention to Detail, Analysis, Judgement, Planning and Organising.	Listening, Questioning.	Decisiveness, Tolerance for Stress.			
Sensitivity in interpretation of texts drawn from a variety of ages and/or traditions.	Attention to Detail, Analysis, Judgement.	Written Communication, Interpersonal Sensitivity	Organisational Sensitivity, Achievement orientation.		Organisational Understanding.	
Clarity and rigour in the critical assessment of arguments presented in such texts.	Attention to Detail, Analysis, Judgement, Planning and Organising.	Listening, Questioning.	Achievement orientation.			Professional Expertise.
Ability to use and criticise specialised philosophical terminology.	Analysis, Judgement		Tolerance for Stress, Adaptability/Flexibility	Technical Ability, Technical Knowledge.		Professional Expertise.

Ability to abstract, analyse and construct sound arguments and to identify logical fallacies.				
Ability to recognise methodological errors, rhetorical devices, unexamined conventional wisdom, unnoticed assumptions, vagueness and superficiality.	Attention to detail, Analysis, Judgement.		Decisiveness.	
Ability to move between generalisation and appropriately detailed discussion, inventing or discovering examples to support or challenge a position, and distinguishing relevant and irrelevant considerations.	Attention to detail, Analysis, Judgement.	Listening, Questioning.	Creativity, Initiative, Achievement orientation.	
Ability to consider unfamiliar ideas and ways of thinking, and to examine critically pre-suppositions and methods within the discipline itself.	Attention to detail, Analysis, Judgement.		Creativity, Initiative.	
Ability to conduct arguments about matters of the highest moment without recourse to insult or susceptibility to take offence.	Attention to detail, Analysis, Judgement.	Interpersonal Sensitivity, Influencing.	Adaptability/Flexibility.	Professional Expertise, Image.
Willingness to evaluate opposing arguments, to formulate and consider the best arguments for different views and to identify the weakest elements of the most persuasive view.	Attention to detail, Analysis, Judgement.	Interpersonal Sensitivity, Influencing, Listening, Questioning.	Achievement orientation, Initiative, Creativity, Decisiveness.	

	Attention to detail	Interpersonal Sensitivity	Achievement orientation	Organisational Understanding			Professional Expertise.
Honesty in recognising the force of the conclusions warranted by a careful assessment of pertinent arguments.		Interpersonal Sensitivity, Influencing.	Achievement orientation, Tolerance for Stress, Initiative				
Ability to cross traditional subject boundaries, examining the limitations and virtues of other disciplines and practices, and recognising philosophical doctrines in unfamiliar places.	Attention to detail, Analysis, Judgement.		Adaptability/Flexibility, Creativity, Initiative.				
Ability to apply philosophical skills and techniques to issues arising outside the academy.		Written Communication, Interpersonal Sensitivity, Listening, Questioning.	Organisational Sensitivity, Achievement orientation	Organisational Understanding.			
Listen attentively to complex presentations	Attention to detail.	Listening.					
To read carefully a variety of technical and non-technical material.	Attention to detail, Analysis, Judgement, Planning and Organising.	Written Communication.					
Reflect clearly and critically on oral and written sources, employing powers of imagination as well as analysis.	Attention to Detail, Analysis, Judgement.		Creativity.				
To remember relevant material and bring it to mind when the moment of its relevance arises.	Attention to detail, Judgement.		Decisiveness, Creativity.				
Marshal a complex body of information; and to construct cogent arguments in the evaluation of this material.	Attention to detail, Analysis, Judgement, Planning and Organising.	Interpersonal Sensitivity.	Organisational Sensitivity, Achievement orientation.				

			Technical Knowledge, Technical Ability.
		Written Communication, Listening, Questioning.	
	Attention to detail, Analysis, Judgement, Planning and Organising.		
Present, in both oral and written forms, a clear and well-structured assessment of relevant considerations.	Develop skills in the following areas: information Technology - word-processing, e-mail and WWW, information search and retrieval, using online computer resources to access bibliographic material.		

	Interpersonal Sensitivity.	Lifelong learning, Achievement orientation, Initiative, Decisiveness, Tolerance for Stress, Adaptability/Flexibility, Creativity.
Personal attributes that are important in the world of work that will strengthen the graduate's ability to engage in lifelong learning, and that will contribute to the wider community. These will include, the ability to motivate oneself; the ability to work autonomously; the general management of one's own work to time limits; a flexible and adaptable mind able to face new situations; ability to think creatively, self-critically and independently.		

Professional factors

Employment

Work experience

Accountancy

A graduate in Accountancy typically will:

- be able to critically evaluate arguments and evidence
- be able to analyse and draw reasoned conclusions concerning structured and unstructured problems from both given data and data that must be acquired.
- be able to locate, extract and analyse data from multiple sources
- self-manage their learning
- be numerate, including being able to manipulate financial and other numerical data and to appreciate statistical concepts
- be effective in ICT including using spreadsheets, word processing software and online databases
- be able to present quantitative and qualitative information, together with analysis, argument and commentary, in a form appropriate to the intended audience
- have effective interpersonal skills, including the ability to work in teams
- understand the contexts in which accounting operates including the legal and social environment, the accountancy profession, the business entity, the capital markets and the public sector
- understand the current technical language and practices of accounting (e.g. recognition, measurement and disclosure in financial statements, managerial accounting, auditing, taxation) in a specified field
- understand some of the alternative technical language and practices of accounting (e.g. alternative recognition rules and valuation bases, accounting rules followed in other socio-economic domains, alternative managerial accounting approaches to control and decision making)
- be skilled in recording and summarising transactions and other economic events, preparing financial statements, analysing the operations of business (e.g. decision analysis, performance measurement and management control), financial analysis and projections (e.g. analysis of financial ratios, discounted cash flow analysis, budgeting, financial risks).

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.business.heacademy.ac.uk.**

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Accountancy is concerned with the provision and analysis of information for a variety of decision-making, accountability, managerial, regulatory, and resource allocation purposes. It is practised, in part, within a professional service context. The study of accounting involves the consideration of conceptual and applied aspects, including at least some of the theoretical considerations underlying the subject.

Students are required to study how the design, operation and validation of accounting systems affects, and is affected by, individuals, organisations, markets and society. Such perspectives may include the behavioural, the economic, the political, and the sociological. In everyday speech, 'finance'

is often used synonymously with 'accounting' whereas, in accounting and in economics, finance is restricted to the science or study of the management of funds. Some students will pursue a professional accountancy qualification on graduation. Others consider the subject to be a useful introduction to the worlds of business and finance. Some students study accounting predominantly as an intellectual pursuit.

Agriculture, Forestry, Agricultural Sciences, Food Sciences and Consumer Sciences

A graduate in Agriculture, Forestry, Agricultural Sciences, Food Sciences and Consumer Sciences typically will have the ability to:

- demonstrate knowledge of a wide range of subject-specific facts and principles as well as an awareness of the current limits of theory and applied knowledge
- understand the provisional nature of information and allow for competing and alternative explanations within their subject
- own aspects of the defining elements of the discipline through in-depth study or research
- use qualitative and quantitative information creatively and imaginatively to solve problems, suggest innovations and make decisions
- plan and conduct research or development, evaluate the outcomes and draw valid conclusions
- evaluate and interpret, in a balanced and critical manner, new information provided by others from a range of fields of study
- think holistically and laterally and appreciate inductive and deductive reasoning
- demonstrate awareness of relevant legal, moral, ethical, sustainability, environmental and social issues
- appreciate the need for professional codes of conduct.
- use effectively skills in numeracy, communication and ICT
- use effectively interpersonal and teamworking skills
- develop the skills for self-management and lifelong learning e.g. working independently, time management and organisation skills
- display the potential for competence, behaviour and attitudes required in a professional working life including initiative, leadership and team skills.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.bioscience.heacademy. ac.uk.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Study in this area is concerned with land-based industries, applied biology, rural studies and sciences, and consumer studies and sciences. All the degree programmes are application-orientated, broadly based and require study across a spectrum of disciplines from physics and chemistry through biology to the social sciences, economics and management sciences, and consumer behaviour.

Agriculture and horticulture apply fundamental physical, biological, economic and sociological principles to sustainable production in the countryside and consider the social and environmental impacts of such management systems. Other degree programmes may be concerned with the management of companion animals, working animals and animals kept for their athletic abilities or the recreational and sporting interests

of their owners. Agricultural Sciences are the fundamental sciences of plants, animals, micro organisms and global processes which underpin the use of the biosphere, including the production or management of animals, crops, forest and horticultural products and the management of productive resources for economic or social value.

Food Science and Technology is the understanding and application of a range of sciences to satisfy the needs of society for sustainable food security, quality and safety. Rural studies apply biological, economic and sociological principles to the sustainable management of the countryside. Forestry applies physical, biological, economic and sociological principles to tree and forest management.

Consumer Science and studies are interdisciplinary subjects which seek to understand the relationships between the consumer and the economic, technical, social and environmental forces which influence the development and consumption of goods and services.

The major areas of subject-related employment for graduates in Agriculture and related subjects are in farm management, research and advisory work, and sales and marketing of agricultural products and animal feed. Graduates in Food Sciences may become dieticians, food technologists, scientists, product developers, buyers, production and quality assurance managers and researchers, and managers of enterprises and businesses.

Anthropology

Depending upon the proportion of social or biological anthropology within their degree programme, a graduate in Anthropology typically will have the ability to:

- understand how human beings are shaped by and interact with their social, cultural and physical environments, and appreciate their social, cultural and biological diversity
- engage with cultures, populations and groups different from their own while retaining their personal judgement
- read and interpret texts within their historical, social and theoretical contexts
- recognise the politics of language, indirect forms of communication, forms of power, theoretical statements and claims of authority, and analyse them
- apply their knowledge of anthropology to practical situations, personal and professional
- plan, undertake and present scholarly work showing an understanding of anthropological aims, methods and theoretical considerations
- interpret information on human biological diversity
- analyse and evaluate relevant qualitative and quantitative data
- design and implement a project using data on aspects of human biological diversity
- demonstrate an understanding of their subject of study, and exercise qualities of mind associated with intellectual reflection, evaluation and synthesis
- express ideas in writing, summarise arguments and distinguish between them
- make a structured argument, reference the works of others and assess historical evidence
- think independently and apply analytical, critical and synoptic skills
- apply learning and study skills and use statistical and computing techniques
- apply information retrieval skills to primary and secondary sources of information
- use skills in information technology and oral and written communication
- apply time planning and management skills
- engage in group work including constructive discussion.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.c-sap.bham.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Anthropology covers the biological and social study of humans as complex organisms with the capacity for language, thought, and culture. It is a subject that seeks to be holistic and comparative as well as critical and reflexive. Anthropology can be located in the humanities, social sciences and the life sciences, and has been described as the most scientific of the humanities and the most humanistic of the sciences. As in humanities subjects, anthropology may focus on the uniqueness of each group and their cultural products. As in science subjects, anthropologists have investigated the substantive processes and contexts that underlie human diversity, delineating these through principles, conditions and rules.

All anthropological investigation and theory is defined by its adherence to two broad principles; first, the great commonalities that all individuals and groups possess - in particular, genetic and other biological traits, sociality, language and a powerful symbolising capability, and second, the diversity and capacity for transformation that is the hallmark of human culture. Reflecting its multidisciplinary nature, the elements of an anthropology programme will depend on whether the degree is in social anthropology, biological anthropology, or a combination of the two. Some degree programmes have a specific focus on a sub area of the subject such as ethnomusicology, museum studies and material culture, development studies or medical anthropology.

Anthropologists enter a wide range of jobs, with the public sector being popular. Further study is necessary for many options. Some options include charity fund raiser, community development worker, human resources officer, information scientist, international organisations administrator, lecturer, librarian, museum officer, journalist, race relations worker, social researcher and social worker.

Archaeology

A graduate in Archaeology typically will have the ability to:

- understand the intellectual vitality of archaeology, its theoretical basis and its relationship to other disciplines
- appreciate the historical, social, cultural, and political context of archaeological interpretation
- apply scholarly, theoretical, and scientific principles and concepts to archaeological problems
- use diverse sources of evidence such as excavated, documentary, representational, observational, artefactual, environmental and scientific material
- appreciate the importance of recovering primary data through practical experience
- critically apply methodologies for quantifying, analysing, and interpreting primary data
- understand the concepts and application of scientific methods used in collecting, analysing and interpreting archaeological data
- interpret spatial data, integrating theoretical models, traces surviving in present-day landscapes, and excavation data
- practise fieldwork and laboratory techniques
- select and apply appropriate statistical and numerical techniques
- marshal and critically appraise other people's arguments
- produce logical and structured arguments supported by evidence
- communicate effectively both orally, visually and in writing to diverse audiences
- use IT, information retrieval and presentation skills effectively in a variety of graphical media
- execute research, working independently
- collaborate effectively in a team
- be sensitive to different cultures and deal with unfamiliar situations
- be able to critically evaluate one's own and others' opinions.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.hca.heacademy.ac.uk.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Archaeology can be defined as the study of the human past through material remains, including evidence in the current landscape, buried material and written sources. It provides a unique perspective on the human past, on what it is to be human. As the only subject that deals with the entire human past in all its temporal and spatial dimensions, it is fundamental to our understanding of how we evolved and how our societies came into being. Archaeology's chronological range is from the earliest hominids to the present day; its geographical scope is both regionally specific and worldwide; its scale of enquiry ranges from distributions and processes of change at the global scale, through to the actions of individuals.

All archaeology degrees are built on the foundation stones of the historical and social, ethical and professional, theoretical and scientific contexts. Throughout its history, archaeology has had a close association with a range of disciplines, initially mainly the humanities but in recent decades increasingly also a broad range of social sciences and sciences. Much teaching in archaeology is therefore multi or interdisciplinary. A key characteristic of archaeological data is time depth, and the ability to examine the effects of process within a tight chronological framework is vital for the study of contemporary concerns, such as human impact on ecosystems.

Permanent posts in archaeology have a low turnover and there are often good candidates with a broad range of experience waiting to apply for posts. The main jobs involving fieldwork are director of archaeological unit, project officer, site supervisor, excavator for an archaeological contractor, county archaeologist, archaeological field officer or inspector of ancient monuments. Other jobs, also of interest, include archaeological conservator, heritage manager, historic buildings inspector, conservation officer, lecturer, curator and museum education officer. The diverse range of skills acquired through an archaeology degree also facilitates graduates entering a diverse range of careers outside of the field.

Architecture

A graduate in Architecture typically will have the ability to:

- work in an interdisciplinary environment and collaborate with others
- respond to a broad range of interests including social and ethical concerns
- communicate effectively using visual, graphic, written and verbal means
- work autonomously in a self-directed manner, thereby developing the practices of reflection and of lifelong learning
- work in teams
- manage time and work to deadlines
- use digital and electronic communication techniques
- analyse problems and use innovation, logical and lateral thinking in their solution
- be flexible and adaptable in approaching an issue, problem or opportunity.

The discipline of Architecture draws on knowledge and skills from the sciences, humanities, and fine and applied arts. It addresses the accommodation of all human activity in all places under all conditions, understanding our place within differing physical, historical, cultural, social, political and virtual environments. Architecture proposes, forms, and transforms our built environment and does so through engaging with the spaces, buildings, cities and landscapes in which we live. Design is the core activity of architectural study. The contested nature of design provokes debate, encourages diversity and advances the subject.

Students come from numerous backgrounds, bringing the very diversity of disciplines and modes of inquiry that an architecture course instils. Architectural education is part of the construction industry and has an important influence on how this industry changes and develops. The knowledge, understanding and skills developed during the study of architecture are broad, holistic and of value in themselves. Most undergraduates aim ultimately for professional accreditation or a related career.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.cebe.heacademy.ac.uk.**

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Other employability related skills that can be developed include the ability to:

- conceptualise, investigate and develop the design of three-dimensional objects and spaces
- create architectural designs that integrate social, aesthetic and technical requirements
- conceive architectural designs on a specific site in the context of urban planning
- research, formulate and respond to programmes or briefs appropriate to specific contexts and circumstances
- form considered judgements about the spatial, aesthetic, technical and social qualities of a design within the scope and scale of a wider environment

- reflect upon and then relate ideas to a design and to the work of others
- produce designs that demonstrate the integrative relationship of structure, building materials and constructional elements and the relationship between climate, service systems and energy supply
- exercise informed and reflective judgement in the development of sustainable design
- use a range of visual, written and verbal techniques to communicate architectural designs and ideas
- select and use design using design-based software and multimedia applications
- listen and engage in informed dialogue.

Area Studies

A graduate in Area Studies typically will have the ability to:

- understand similarities and differences between areas, thus fostering cross-cultural and international perspectives
- critically engage with the area through disciplines such as anthropology, archaeology, art history, cultural studies, economics, film and media studies, geography, history, languages other than English, literature, philosophy, politics and sociology
- integrate a diverse range of appropriate materials such as literary and historical texts, oral interviews, sound recordings, visual screenings and internet sites
- command techniques and methodologies such as bibliographical, library and internet research skills, proficiency in reading and analysis, adeptness in visual analysis, appreciation of theoretical models and alertness to interpretations of issues and events
- read and use materials incisively and with sensitivity
- resolve problems and communicate ideas with clarity, coherence and persuasiveness
- synthesise information, adopt critical appraisals and develop reasoned argument
- critically reflect upon the scope and limitations of what has been understood.
- work with independence demonstrated in self-direction, self-management and intellectual initiative both in learning and studying and in time management
- write clearly with professional referencing, tables, diagrams, graphics and illustrations, where appropriate
- present materials orally in a clear and effective manner, using audio-visual aids where appropriate and answering questions from an audience
- listen effectively and work creatively and flexibly with others
- write and think under pressure and meet deadlines
- use ICT resources
- show proficiency in a language other than English where appropriate to a specific degree programme.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.llas.ac.uk/index.aspx.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Area Studies degree programmes involve study of single countries or groups of countries. The term covers national areas under titles such as American or Australian Studies, or multinational regions under titles such as African, Caribbean, European, Latin American and Pacific Studies.

The principal objective of Area Studies programmes is to study the area itself, using appropriate disciplinary or interdisciplinary approaches to understand the aspects of the area on which they wish to concentrate. The empirical content of Area Studies programmes varies widely. Degree programmes in Area Studies can be multidisciplinary and interdisciplinary.

Any discipline in the social sciences, humanities or arts may be included as a major or minor channel of knowledge in an Area Studies degree programme. Programmes tend to be organised around a combination of arts and/or humanities disciplines and formations, or around a combination of social sciences and/or humanities such as politics and economics or politics and history. There is wide diversity and the boundaries between these broad types are porous. Different spheres of area studies have evolved with different traditions. For example, many programmes in American Studies combine the study of literature with history and politics. Area Studies programmes may work with, across, or challenge, traditional disciplinary boundaries.

Graduates in Area Studies can be found in arts and the media, including radio, television, film, museums, and theatre; in publishing and journalism, including writing for newspapers and magazines, production, editorial, and management; in business, law and financial services, including management and marketing in small and large concerns; in administration and civil service, including international, diplomatic, national and local government work, and employment in non-governmental organisations; and in teaching.

Art and Design

In addition to capabilities specific to the particular discipline studied, a graduate in Art and Design typically will have developed the transferable skills and abilities to:

- apply their learning in different contextual frameworks
- generate ideas, concepts, proposals, solutions or arguments independently and collaboratively in response to set briefs and self-initiated activity
- use convergent and divergent thinking in observing, investigating, enquiring, visualising and making and develop ideas through to material outcomes
- manage the interaction between intention, process, outcome, context and dissemination
- apply resourcefulness and entrepreneurial skills to their own practice or that of others
- employ materials, media, techniques, methods, technologies and tools with skill and imagination while observing good working practices
- study independently, set goals, manage their own workloads and meet deadlines
- anticipate and accommodate change, and handle ambiguity, uncertainty, and unfamiliarity
- analyse information and experiences, formulate independent judgements, and articulate reasoned arguments through reflection, review and evaluation.
- identify personal strengths and needs
- interact effectively with others through collaboration, collective endeavour and negotiation
- articulate ideas and information comprehensibly in visual, oral and written forms
- present ideas and work to audiences in a range of situations
- source, navigate, select, retrieve, evaluate, manipulate and manage information
- select and employ communication and information technologies.

Art and Design is concerned with conceiving, producing, promoting and disseminating the material outcomes which constitute our visual culture. These encompass artefacts for intellectual and aesthetic contemplation to functional products, systems and services. Processes from conception to dissemination are combined with creative skills, imagination, vision, and, at the highest levels of achievement, innovation. One group of disciplines, known as craft, applied arts, decorative arts or designer/makers, includes ceramics, glass, jewellery, metalwork, furniture and textiles. Another group includes photography, film, media production, illustration and animation.

Undergraduate education facilitates the acquisition of knowledge and understanding, the development of necessary personal attributes and mastery of essential skills to prepare students for continuing personal development and professional practice. Some disciplines do not require the student to develop knowledge and skills in producing creative outcomes. These include restoration and conservation; arts, museum and gallery management and administration;

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.brighton.ac.uk/adm-hea.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

curation; design management; and publishing. Many degree programmes attach importance to understanding the historical development of their discipline. Others include in their curriculum business, marketing, modern languages and other professional contextualising subjects.

Artists and designers tend to be independent, creative thinkers and it is common to be self-employed and/or to be in occupations involving project work and short-term contracts with both small and large organisations, working in product or industrial design, communications or digital and multimedia disciplines. Graduates often cross disciplines, for example from fine art to graphic design. They may work part-time as a practitioner while simultaneously fulfilling management and academic roles.

Graduates are well placed to be effective in all sectors of a knowledge-based society through their capacity for creativity through learning. They are typically found in the media, marketing, public relations, arts administration or arts education. Specific roles include advertising art director, arts administrator, art therapist, exhibition designer, fashion clothing designer, graphic designer, curator, teacher, textile designer, visual merchandiser.

Biomedical Science

A graduate in Biomedical Science typically will have the ability to:

- demonstrate knowledge of human anatomy and physiology, biochemistry, molecular genetics, immunology and microbiology
- demonstrate an understanding of cellular pathology, clinical biochemistry, clinical immunology, haematology, immunohaematology and transfusion science, medical microbiology and the biology of disease
- understand the factors and processes which contribute to human health and disease.
- apply their knowledge to analyse, interpret and critically evaluate biomedical data.
- demonstrate laboratory skills and knowledge of planning and designing experiments
- execute independent research centred on data generation
- demonstrate critical analysis and application of results obtained
- take account of and act in accordance with health and safety policies, good laboratory practice, ethical considerations and risk and Control of Substances Hazardous to Health assessments and recognise the importance of quality control and quality assurance
- design research protocols and use statistical techniques to enable valid analysis and interpretations of experimental results
- use effectively transferable skills in communication, IT, numeracy and data analysis, teamworking, critical thinking, setting tasks, problem solving and self-management.

Biomedical Science is concerned with understanding the causes, diagnosis and treatment of disease. It requires the integration of a wide range of subjects to understand the biology of disease; predominantly anatomy, physiology, biochemistry, genetics, immunology, microbiology, pharmacology and molecular biology. More specific knowledge of disease processes comes from studying specialised biology viz. cellular pathology, clinical biochemistry, clinical immunology, haematology, transfusion science and medical microbiology.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.bioscience.heacademy. ac.uk.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Most of the component subjects of Biomedical Science are at the forefront of modern science and therefore attract leading-edge research activity. Biomedical Science is a rapidly evolving subject and highly relevant to investigating and understanding current controversies, concerns and dilemmas of modern life; such as the use of genetically engineered products in healthcare and major health problems of international importance such as food safety, Creutzfeld-Jacob's disease, malaria, human immunodeficiency virus infection, drug resistance of bacteria and cell cloning. Biomedical Science plays a pivotal and essential role in healthcare.

Graduates must understand how diseases develop and how they affect the normal function of the human body.

They will be aware of new methods for diagnosis, treatment and prevention of disease and their relevance in research or diagnostics. The complex multidisciplinary nature of Biomedical Science requires a sound, research-led scientific education. Students integrate the knowledge base of key disciplines to further their understanding of research, diagnosis and management of a clinical disorder. Students will understand the role of epidemiology in identifying risk and protective factors associated with disease development and the latest major advances in the scientific understanding of human health and disease. The education of a biomedical science student should involve a study of pharmacology and toxicology and methods for the treatment and management of diseases.

Graduates in Biomedical Science are employable in a wide range of areas in the public and private sectors due to their education at the boundary between biological science in its broadest sense and medical science. Major employment areas include research in university, government, NHS or charity-funded laboratories; research and development for the pharmaceutical, diagnostics, medical devices and laboratory instrumentation industries; sales and marketing related to healthcare products; and teaching.

Biosciences

A graduate in Biosciences typically will have the ability to:

- demonstrate a wide knowledge of essential facts, major concepts, principles and theories associated with the chosen discipline
- analyse critically and assess information and data, and their setting within a theoretical framework
- deploy appropriate practical and presentational techniques and methodologies including data analysis and the use of statistics to communicate results
- engage with current developments in the biosciences and their applications, and the philosophical and ethical issues involved
- exercise intellectual skills including applying subject knowledge and understanding to address familiar and unfamiliar problems and appreciating the need for ethical standards and professional codes of conduct
- apply practical skills including designing, planning, conducting and reporting on investigations through individual or group projects, paying due attention to risk assessment, relevant health and safety regulations, and procedures for obtaining informed consent
- apply numeracy, communications and information technology skills efficiently.
- use effective interpersonal and teamworking skills including demonstrating an appreciation of the interdisciplinary nature of science and of the validity of different points of view
- self-manage and pursue professional development and think independently, set tasks and solve problems.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.bioscience.heacademy. ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

The biosciences may be described as the study of life at all levels of complexity from molecules to populations. Whilst life-forms are built from relatively few types of atoms, these are assembled into ever more complex levels of organisation in molecules, cells, tissues and organs, organisms, communities and ecosystems.

The biosciences are a family of methods and disciplines grouped around the investigation of life processes and the inter-relationships of living organisms. This may involve studies at a variety of levels from molecules to populations. All students should have at least some appreciation of all of these levels.

The biosciences are divided into many specialisms. In addition to wide ranging degrees such as biology, biological sciences and life sciences, there are sub-disciplines within this area that focus on particular groups of organisms (e.g. entomology).

Other degrees emphasise specific technologies, interactions or systems (e.g. animal behaviour, biochemistry, biotechnology), or the environments that living organisms inhabit (e.g. ecology, environmental biology, marine biology): some are sub-disciplines directed towards particular applications (e.g. forensics, brewing and distilling). The biosciences include areas (e.g. genetics and molecular biology) in which rapid change and development are evident and where new knowledge and technologies are swiftly spread through the subject. This means that there is an increasing requirement to prepare graduates carefully for continuing their self-education and development after graduation to maintain their knowledge and understanding of rapidly changing areas.

Bioscience graduates are employed in a range of posts which may, or may not, be related to the discipline they studied. They include accountancy and other related financial professions, forensic scientist, higher education lecturer, immunologist, scientist, industrial research scientist, process development, research scientist (medical), toxicologist and commercial, industrial and public sector management.

Building and Surveying

A graduate in Building and Surveying typically will have the ability to:

- analyse by critically evaluating arguments and evidence
- manipulate data from multiple sources
- problem-solve and draw on evidence and so exercise judgement
- use IT, statistical and quantitative resources
- present quantitative and qualitative information appropriately
- self manage their learning
- work effectively in a team
- communicate including through the use of IT
- research and acquire knowledge using appropriate methods
- encourage leadership, effective group dynamics and self development
- summarise legal and other documents
- evaluate all relevant aspects of management and other specialisms taking account of regulations, the needs of society and ethical correctness.

Building and surveying provides and analyses information relating to urban, rural and marine resources and improvements including buildings and infrastructure. Degree programmes are multi-disciplinary with a substantive area of specialist or technical knowledge associated with specified learning outcomes, which may include a broad preparation for initial employment.

Undergraduates study a diversity of subjects and learn how to integrate the knowledge acquired to identify and solve problems. They learn how to implement solutions relating to the ownership, investment in, and the use, development, management, maintenance and improvement of land, buildings or estates/portfolios of land and buildings in the context of identifiable physical, urban, rural or maritime parameters.

Degree programmes tend to be identified with a specific specialist area such as building, building design, building surveying, services engineering, construction management, land/property management (including property/real estate finance, investment and portfolio management), hydrography and land surveying, environment and minerals, planning and development, quantity surveying and construction economics, residential or commercial property, rural practice, marine resource management, project management, recreation/leisure management, and facilities management.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.cebe.heacademy.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Business and Management

A graduate in Business and Management typically will:

- be able to demonstrate understanding of organisations, the external environment in which they operate, how they are managed and the future needs of organisations
- have skills in critical thinking analysis and synthesis, including being able to identify assumptions, evaluate statements, detect false logic, identify implicit values, define terms adequately and generalise appropriately
- be effective at problem-solving and decision-making, using appropriate quantitative and qualitative skills and also be able to create, evaluate and assess options, together with being able to apply ideas and knowledge to a range of situations
- be effective in communication, using ICT and a range of media widely used in business, for example, business reports
- have numeracy and quantitative skills including modelling and data analysis, interpretation and extrapolation
- self-manage their time, behaviour, motivation, initiative and enterprise.
- have an appetite for reflective, adaptive and collaborative learning.
- be self-aware, sensitive and open to the diversity of people, cultures, business and management issues
- have leadership, team building, influencing and project management skills
- be effective at listening, negotiating and persuasion
- be able to research business and management issues
- be able to address issues at European and international levels.

General business and management degree programmes focus on the study of organisations, their management and the changing external environment in which they operate, preparation for and development of a career in business and management and enhancement of lifelong learning skills and personal development to contribute to society at large.

These degree programmes provide broad, analytical and integrated study of business and management. It is expected that graduates can demonstrate knowledge and understanding of markets, customers, finance, people, operations, information systems, ICT and business policy and strategy as well as contemporary and pervasive issues such as innovation, e-commerce, enterprise, knowledge management, sustainability, globalisation and business ethics.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.business.heacademy.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Chemistry

A graduate in Chemistry typically will have the ability to:

- demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to Chemistry
- apply such knowledge and understanding to the solution of qualitative and quantitative problems of a familiar and unfamiliar nature
- recognise and analyse novel problems and plan strategies for their solution
- evaluate, interpret and synthesise chemical information and data
- recognise and implement good measurement science and practice
- present scientific material and arguments clearly and correctly, in writing and orally, to a range of audiences
- apply computational and data-processing skills relating to chemistry
- handle chemical materials safely, taking into account their physical and chemical properties, including any specific hazards associated with their use
- conduct standard laboratory procedures involved in synthetic and analytical work, in relation to both inorganic and organic systems
- monitor and systematically record, chemical properties, events or changes
- plan, design and execute practical investigations, from the problem-recognition stage through to the evaluation and appraisal of results and findings; this to include the ability to select appropriate techniques and procedures
- operate standard chemical instrumentation such as that used for structural investigations and separation
- interpret data derived from laboratory observations and measurements
- conduct risk assessments concerning the use of chemical substances and laboratory procedures
- apply problem-solving skills relating to qualitative and quantitative information, extending to evaluations based on limited information
- apply numeracy and computational skills, including error analysis, order-of-magnitude estimations, correct use of units and modes of data presentation
- apply information-retrieval skills including through on-line computer searches
- apply IT skills such as word-processing and spreadsheet use, data-logging and storage, internet communication
- exercise written and oral communication skills plus interpersonal skills and engage in team-working
- apply time-management and organisational skills
- apply study skills needed for continuing professional development.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.physsci.heacademy.ac.uk/home/index.aspx.**

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp.**

Undergraduate courses can cover chemical terminology, chemical reaction, chemical analysis, the different states of matter, quantum mechanics, thermodynamics, the kinetics of chemical change, structural investigations, the properties of elements and their compounds, organic chemistry, the relation between bulk properties and atoms and molecules, including macromolecules.

Typical aims are to instil a sense of enthusiasm for Chemistry and an appreciation of its application in different contexts, to give students a foundation in chemical knowledge and practical skills, and to develop in students a range of transferable skills of value in a wide range of employment.

Classics and Ancient History

A graduate in Classics or Ancient History typically will have the ability to:

- understand another culture and a complementary range of subjects such as language, literature, linguistics, philosophy, history, art and archaeology
- command techniques and methodologies such as bibliographical and library research skills, a range of skills in reading and textual analysis, the varieties of historical method, the visual skills characteristic of art criticism, use of statistics, philosophical argument and analysis, analytical grasp of language, and skills in translation from and/or into Greek and/or Latin
- understand a range of viewpoints and critical approaches
- exercise reflection and critical judgment
- gather, memorise, organise and deploy information
- extract key elements from data and identify and solve associated problems
- engage in analytical, evaluative and lateral thinking and to marshal argument
- present material orally and in writing
- work with others, work under pressure and meet deadlines
- apply modern foreign language skills and basic IT skills
- demonstrate autonomy manifested in self-direction, self-discipline and intellectual initiative.

The subject area of Classics and Ancient History (including also Byzantine Studies and Modern Greek) embraces two distinct, though by no means unrelated, components, which gives it a chronological span of at least four millennia. Classics is a conventional designation for the culture of Greco-Roman antiquity, extending from the arrival of Greek-speakers in mainland Greece around the beginning of the second millennium BC to the end of the Western Roman Empire in the fifth century AD. Byzantine Studies is concerned with the civilisation of late antique and mediaeval Byzantium/Constantinople between its refounding by Constantine in AD 324 and its conquest by the Turks in AD 1453, while Modern Greek designates study the Greek-speaking world (including the Greek diaspora) from the late mediaeval period.

Classics usually designates a degree programme in which students are required to show proficiency in both ancient Greek and the Latin languages and may make Greek and Latin literature their main focus. Latin and Greek signify degree programmes of the same general kind as Classics but confined to the language, literature and civilisation of ancient Rome and ancient Greece respectively. Programmes in Classical Studies offer students a broad understanding of the culture of Greco-Roman antiquity as a whole, in all its different aspects and their interrelations.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.hca.heacademy.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp**.

Programmes in Ancient History are typically concerned with the political, military, economic, social and cultural history of the Greco-Roman world. Programmes in Byzantine Studies pay special attention to literature, theology or culture, or to history, archaeology or art history of the Byzantine period, while those in Modern Greek require proficiency in the modern Greek language and take as their main concern the language, literature, thought and history of the Greek-speaking world since the later middle ages.

There is creative interaction with other disciplines and fields including anthropology, archaeology, art history, drama, English, history, history of science, Jewish and Near Eastern studies, linguistics, modern languages besides Modern Greek, philosophy and religious studies.

The subject has a particularly important contribution to make in a multicultural society and it has done much to shape our conceptions of what an educational system should be.

Many Classics graduates regard the skills they can offer and their interests and motivations as more important than their degree subject. Most Classics graduates enter careers that seek graduates of any discipline. Examples include applications developer, archivist, accountant, Civil Service fast stream, Diplomatic Service, commissioning editor, curator, teacher, solicitor and technical author.

Communication, Media, Film and Cultural Studies

In addition to capabilities specific to the particular discipline studied in this widely diverse group of subjects, a graduate in Art and Design typically will have developed the transferable skills and abilities to:

- understand how identities are constructed and contested through engagements with culture
- evaluate their own work in a reflexive manner with reference to academic and/or professional issues, debates and conventions
- understand communication systems, modes of representations and systems of meaning in the ordering of societies
- be aware of the economic forces which frame the media, cultural and creative industries, and the role of such industries in contemporary political and cultural life
- understand the role of cultural practices and cultural institutions in society
- understand how people engage with cultural texts and practices
- initiate, develop and realise distinctive and creative work in writing or aural, visual, audio-visual, sound or other electronic media
- work flexibly, creatively and independently with self-discipline, self-direction and reflexivity
- use ideas and information to argue cogently in written, oral or in other forms
- retrieve and generate information and evaluate sources in carrying out research
- organise and manage supervised, self-directed projects
- communicate effectively in interpersonal settings, in writing and in a variety of media
- work productively in a group or team, showing abilities to listen, contribute and learn
- deliver work to a given brief and deadline, referencing sources and ideas and using a problem-solving approach
- apply entrepreneurial skills with audiences, clients, consumers, markets and sources
- use IT skills including web-based technology or multimedia and develop specific proficiencies in media technologies.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.brighton.ac.uk/adm-hea**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Communication, Media, Film and Cultural Studies focus on cultural and communicative activities that shape everyday social and psychological life as well as senses of identity, the organisation of economic and political activity, the construction of public culture, the creation of new expressive forms and the basis for a range of professional practices.

Degree programmes aim to produce graduates with an informed, critical and creative approach to understanding media, culture and communications in society and to their own forms of media, communicative and expressive practice. Sources of conceptualisation and practice are aesthetics, art history and art criticism, history, law, literary and textual

analysis, philosophy, theatre and performance studies, anthropology, economics, geography, linguistics, political science, psychology (including psychoanalysis), sociology, design, business, computing, advanced technology and creative practice in the cultural, media and communications industries.

Competition for employment is fierce and graduates are faced with complex career paths. It is common to be self-employed and/or to be in occupations involving a mixture of short-term contracts, employment, further study, part-time and freelance work rather than a predictable career progression.

Long-term options for those who are determined and who have the necessary capability include advertising account executive, advertising art director, copywriter, broadcast presenter, broadcasting journalist, exhibitions officer, film/video editor, information manager, magazine journalist, market researcher, medical illustrator, multi media specialist, newspaper journalist, photographer, programme researcher, teacher, television camera operator, television producer, television production assistant, writer.

Computing

A graduate in Computing typically will have the ability to:

- demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to Computing and computer applications
- use such understanding in modelling and designing computer based systems for the purposes of comprehension, communication, prediction and the understanding of trade-offs
- use criteria and specifications appropriate to specific problems, and plan solutions
- analyse the extent to which a computer-based system meets defined requirements
- deploy appropriate theory, practices and tools to specify, design, implement and evaluate computer-based systems
- present succinctly to a range of audiences (orally, electronically or in writing) rational and reasoned arguments that address a given information handling problem or opportunity
- recognise the professional, moral and ethical issues involved in exploiting computer technology and be guided by appropriate professional, ethical and legal practices
- work as a development team member, recognising the different roles within a team and different ways of organising teams
- operate computing equipment, taking account of its logical and physical properties
- deploy information retrieval skills (including using browsers, search engines and catalogues)
- exercise numeracy skills and use effectively general IT facilities
- manage personal development including using time management and organisational skills.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.ics.heacademy.ac.uk.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp.**

Computing is concerned with the understanding, design and exploitation of computation and computer technology. It blends theories (including those derived from other disciplines such as mathematics, engineering, psychology, graphical design or well-founded experimental insight) with the solution of immediate practical problems; it combines the ethos of the scholar with that of the professional; it underpins the development of both small scale and large scale systems that support organisational goals; it helps individuals in their everyday lives; it is ubiquitous and applied to a range of applications, and yet important components are invisible to the naked eye.

Computing is a highly diverse subject with aspects that overlap with areas of interest to a number of adjacent subjects. Examples are engineering, especially parts of electrical and electronic engineering; physics, with concern for multimedia and device-level development of computing

components; mathematics (logic and theoretical models of computation); business (information services); philosophy and psychology (human computer interaction and aspects of artificial intelligence); physiology (neural networks); linguistics; and art and design (web and multimedia).

Some students are attracted to Computing by the depth and intellectual richness of the theory, others by the possibility of engineering large and complex systems. Many study Computing for vocational reasons or because it gives them the opportunity to use a creative and dynamic technology. Computing promotes innovation and creativity assisted by rapid technological change. It requires a disciplined approach to problem solving with an expectation of high quality. It approaches design and development through selection from a wide range of alternative possibilities justified by carefully crafted arguments based on insight. It controls complexity first through abstraction and simplification, and then by the integration of components. It is a product of human ingenuity, and provides major intellectual challenges yet this limits neither the scope of Computing nor the complexity of the application domains addressed.

Graduates in Computing are found in technical fields such as computer operations, computer systems sales and service, programming, systems analysis, software engineering and technical authorship as well as professions that require a combination of computing and other capabilities.

Computing
The following list of topics is indicative of the scope of Computing. It is not intended to define curricula or syllabi; it is merely provided as a set of knowledge areas within Computing.

Architecture
The CPU/memory/IO model, representation of data and programs in memory, fetch-execute cycle, registers, stacks, data-paths, special IO-support hardware, support for protection and virtual memory, instruction sets, implementation constraints and trade-offs, historical, current and future trends. Peripheral devices. Cache memory and memory hierarchies. High performance and parallel architectures: pipeline processors, array processors and single instruction multiple data (SIMD) architectures, shared-memory multiple instruction multiple data (MIMD) machines, message-passing MIMD machines.

Artificial intelligence
This is a discipline with two strands. The scientific strand attempts to understand the requirements for and mechanisms enabling intelligence of various kinds in humans, other animals and information processing machines and robots. The engineering strand attempts to apply such knowledge in designing useful new kinds of machines and helping us to deal more effectively with natural intelligence, e.g. in education and therapy. Knowledge elicitation and representation. Uncertainty. Cognitive modelling. Reasoning. Deduction and theorem proving. Search. Machine learning. Agent technology. Planning. Vision systems, robotics. Speech and language technology.

Comparative programming languages

The variety of languages and the motivation for this variety. Design criteria for languages. Desirable properties of languages and their implementations. Different programming paradigms: imperative, object-oriented, functional, logic, visual. Concurrency, parallelism and distributed computing. Strengths, weaknesses of different language features including types and data modelling, control structures, structuring concepts, abstraction mechanisms, parameterisation, exception handling, separate compilation, generics. Declarations, naming conventions, storage allocation strategies; parameter passing mechanisms.

Compilers and syntax-directed tools

Aims in compiler construction. Variation in possible users. Features of languages. Phases of development. Lexical analysis. Types of grammars and parsing techniques, parse trees and abstract syntax trees. Symbol tables. Type checking. Semantic analysis. Run-time storage organisation. Code generation. Code optimisation. Illustration of other syntax-directed tools.

Computer-based systems

Definition of computer-based systems. Different kinds of systems: to include embedded systems, real-time systems, distributed systems, client-server systems. Safety-critical and other high-integrity systems: risk analysis and assessment. Systems approach. Modelling. Needs, goals and objectives; requirements definitions; functional analysis and derivation of non-functional requirements; specification development; evaluation of trade-offs and alternatives leading to formulation of system architecture; allocation of responsibilities leading to sub-system design and interface definitions. Co-design issues. Problem of integration, configuration management, quality assurance, operations and maintenance. Performance measures.

Computer communications

Digital communication: standards, media, signalling, reliability, error handling and performance. Device management, input/output considerations. Communications management. Communications software.

Computer networks

Networks: topologies, protocols and standards. Different communication media and data, and related requirements. Reference model, switching, access, security, compression, encryption, mobile operation, quality of service, performance, management, interconnection and architectural models, routing, congestion, firewalls, proxy servers. Network operating system design. Future trends: emerging technologies and applications.

Computer hardware engineering

Specification, design (using electronic computer aided design (ECAD) and Hardware Description Languages), simulation, verification, construction and testing of the hardware of computer systems using appropriate technologies for logic, memory, storage and communication (with users and other machines). Understanding future technology trends and the requirements placed by software systems on computer hardware.

Computer vision and image processing

The design of computer algorithms and hardware to model the structure and properties of visual data. Modelling techniques & algorithms: human vision system based, engineering perspective-based. The extraction and application of information from these models. Image processing: pattern recognition, the manipulation of the image signal to include image analysis: the extraction of semantic data, animation manipulation images.

Concurrency and parallelism

Nature of concurrency, problems. Examples, including input/output. Concurrent processes, inter-process communication. Low level synchronisation primitives. Language primitives for shared memory. Concurrency at operating system, language level. Atomic actions. Resource allocation and deadlock. Concurrency control and recovery. Classification of parallel machines. Algorithms and algorithm design in the context of parallelism. Complexity and performance metrics associated with algorithms in the context of concurrent systems.

Databases

The concept of a database and database management. Database development. Illustrations. Entity-relationship model. Database design: logical design and the relational model, physical design. Normalisation; different normal forms. Client-server model. SQL and database servers. Database access and client applications. Object-oriented systems, multimedia database systems, distributed database systems. Spatial databases and geographic positioning systems. Database administration. Data mining , data warehousing.

Data structures and algorithms

Data types, structures and abstract data types. Efficiency measures (average and worst case), rates of growth, asymptotic behaviour. Algorithmic paradigms (including enumeration, divide-and-conquer, greedy, dynamic programming, tree search, probabilistic). Algorithm design and analysis with correctness proofs. Data processing algorithms (sorting, searching, hash tables etc.); data mining. Numerical algorithms and analysis; statistical algorithms and simulation. Graph theory and graph theoretic algorithms (shortest paths, spanning trees, etc.). Symbolic computation. Other application areas, e.g. sequencing, scheduling and assignment. Parallel and distributed algorithms, implementation issues and efficiency measures.

Developing technologies

For example, quantum computing, bio-informatics, evolutionary computing, medical computing.

Distributed computer systems

Characteristics of distributed systems, client-server model, inter-process communication, remote procedure calls, distributed operating systems, naming and protection, file service design, shared data and transactions, concurrency and control, time co-ordination and time-stamping, replication, fault handling and recovery, distributed system security. Computer supported collaborative work. Mobile computing.

Document processing

Word processing systems, design and development. Related tools: editors, spelling checkers, grammar checkers. Mixed systems including tables, diagrams, pictures. Presentation systems. Electronic publishing, digital typography. Mark-up languages. Multimedia presentation. Contents and index generation. Copyright and other legal issues.

e-Commerce

Nature of e-commerce. Distributed transactions, security and privacy. Particular problems. Major components in such a system. Hard and soft e-commerce. Business-to-business and business-to-customer technologies. Digital signatures and authentication issues. Legal and ethical issues.

Graphics and sound

Human perception of images, display and image-capture technology, storage formats and algorithms for the manipulation of 2D and 3D representation, transformations on images, geometric modelling, animation, rendering with realistic lighting and texture effects. Human perception of sound, frequency vs. time domain representations, sound compression, synthesis, sound analysis. 2D and 3D modelling, animation, virtual reality, multimedia. Scientific and information visualisation. Computational geometry. Object modelling.

Human-computer interaction (HCI)

User interface engineering: user-centred design and evaluation methodologies, architectures, input/output modes (including multi-modal) and devices, development environments, interface managers, construction skills; HCI guidelines, principles and standards; interaction styles, metaphors and conceptual models. User models: human psychology and actions, ergonomics, human information processing. Human-computer applications: including virtual and connected environments (inc. mobile), games, visualisation, multimedia, affective computing, systems for users with special needs. Usability engineering and evaluation.

Information retrieval

Information and its management. Text, graphics, speech, sound and other kinds of content. Methods of retrieval for different content. Methods based on logic, and probability theory, situation theory, computational logistics. Experiments. Web-based considerations. Interactive considerations including feedback issues. Case-based reasoning, hypertext, visualisation.

Information system

Theoretical underpinnings. Data, information and knowledge management. Information in organisational decision-making. Integration of information systems with organisational strategy and development. Information systems design. Development, implementation and maintenance of information systems. Information and communications technologies (ICT). Management of information systems and services. Organisational and social effects of ICT based information systems. Economic benefits of ICT-based information systems. Personal information systems.

Intelligent Information Systems Technologies

Theory, design and development of database systems, database applications, data warehouses, data mining principles, decision support system development including intelligence density (quality, models, constraints, organisational factors), decision trees, genetic algorithms, neural networks, fuzzy logic, case-based reasoning, information presentation.

Middleware

Examples of objects, and object libraries. Characteristics of well-designed and high quality objects. Design guidelines. Methods of ensuring quality. Building new classes in accord with the guidelines. Design patterns. Design languages. Tool support. Mechanisms for interconnection of classes and modules. Integration as a concept and as a vehicle for system enhancement. Mechanisms for achieving integration. Interconnection languages: scripting languages. Building systems in this environment, including distributed systems. Verification and validation of such systems. Applications.

Multimedia

Multimedia seen as the capabilities of modern computer technology to employ multiple-media communication forms (including data, text, graphics, still and video images and sound) integrated into single applications. Distinguished from other forms of multiple-media by the fact that the computer reduces all information into a digital form that can be reproduced, manipulated, stored and transmitted electronically. Consideration of the representation, storage and transmission issues for different digital forms, and the subsequent transformation of these forms. Operations. Design and development issues. User interface and presentational matters. Tools support.

Natural language computing

Advanced computing techniques to enhance the capabilities of systems providing text and speech Communication. Language generation, language models, parsing and understanding, machine translation. Advanced models of interpersonal and human-computer dialogue; advanced methods for language processing by providing robust, accurate and efficient treatment of language in a range of applications and of user-situations. Speech recognition and synthesis. Text analysis.

Operating systems

Role, functions of operating systems. Characteristics, capabilities of single-user systems, multi-user systems. Illustrations. Process concept. Architecture of an operating system: influences of networks, multi-media, security. Resource management. Basic services - memory management, interrupt handling, process scheduling. Concurrency mechanisms. Scheduling. System processes - spooler, network interface; utilities. Security and protection issues including access control, virus protection. Shell programming. Relationship to window systems.

Professionalism

Ethics: consideration of the individual, organisational and societal context in which computing systems are planned, developed and used; deployment of technical knowledge and skills with a concern for the public good. Law: awareness of relevant law and processes of law e.g. data protection, computer misuse, copyright, intellectual property rights, basic company and contract law. Systems: development and operational costs; safety/mission criticality; consequences and liability issues of failure; risk analysis; security; recovery. Professional Bodies: structure, function, restriction of title, licence to practise, codes of ethics/conduct/practice.

Programming fundamentals

The nature of programming. Use of some well-designed and appropriate programming language. The idea of syntax and semantics, and related ideas. Problem analysis, program design, coding including interface considerations. Simple programs and simple algorithms. Abstraction mechanisms, parameter passing. Simple quality considerations, including strategies for testing and debugging. Use of libraries. Different kinds of documentation serving different purposes.

Security and privacy

Security and privacy: the problems. Illustrations of how problems arise. Physical and logical security. Machine access. Protection mechanisms. Encryption and encryption building blocks. Virtual private networks. Legal issues. Firewalls and internet security. Monitoring of traffic and computer use. Digital signatures. e-commerce, e-banking and related applications.

Simulation and modelling

Uses of modelling and simulation. Benefits and drawbacks. Model classification, systems theory. Continuous and discrete simulation. Applications. Simulation languages. Model building. Model validation. Experimental design, hypothesis formulation and testing. Empirical methods. Different approaches and different types of simulation.

Software engineering

Development paradigms; requirements elicitation / specification; analysis and design (including architectural design and design patterns); system models; programming paradigms; prototyping and evolution; testing; verification and validation; assessment and evaluation; software reuse; software measurement and metrics; operation and maintenance; project management; quality assurance and management; configuration management; formal description techniques; software dependability; tools (including computer-aided software engineering (CASE)) and environments; software process models; implementation; documentation.

Systems analysis and design

Systems theory. Systems within an organisation. Different kinds of systems serving different purposes. Systems in support of an enterprise which is potentially complex and may have to adapt. Typical computer systems lifecycles. Systems requirements and specification. Feasibility concerns. System design: strengths and weaknesses of relevant methodologies and techniques. People and interface issues. Compliance with legal and ethical standards. Development, implementation and maintenance. Quality considerations.

Theoretical computing

Models of computation, computability, automata theory, formal language theory, analysis of algorithms, computational complexity, mathematical aspects of programming language definition, logic and semantics of programming languages, foundations of programming, theorem proving, software specification, data types and data structures, theory of databases and knowledge-based systems, models of concurrency, statistical models of system performance, formal methods of system development. The subject also includes the development of the mathematical techniques used in the list above.

Web-based computing

The specification, design, implementation & operation of web-based technologies and services: currently wired and wireless internet protocol (IP) protocol-based technologies, mark-up languages, HCI, branding and brand loyalty. Mobile computing. Enterprise systems: intranets and extranets: access, control, security, authentication, encryption, intellectual property rights (IPR), costing, pricing, charging and funding. Server selection, installations, configuration and administration. Logs and traffic analysis. Searching and search engines. IPR and copyright. Impact of networked economy at regional, national and international levels.

Dance, Drama and Performance

In addition to many capabilities specific to the subject studied, a graduate typically will have developed the transferable skills and abilities to:

- apply performance and production skills to communicate with an audience
- apply group processes in the creation of original work
- communicate in writing, orally and through performance
- exercise critical, analytical and physical skills and conduct research
- apply creative and imaginative skills through the realisation of practical research projects
- think reflectively and independently, and concentrate and focus for extended periods
- develop ideas and construct arguments and present them in appropriate ways
- handle creative, personal and interpersonal issues and negotiate and pursue goals with others
- manage personal workloads and meet deadlines under pressure with flexibility, imagination, self-motivation and organisation
- produce written work with appropriate scholarly conventions
- apply information retrieval skills involving gathering, sifting and organising material
- use IT skills such as word processing, electronic mail, and accessing electronic data

Dance, Drama and Performance comprises the study of dance, drama, theatre, performance and their production, within which each has its own intellectual and practical performance traditions, bodies of knowledge, skills and concepts. These activities may be combined with video, film, TV, radio and multi-disciplinary performance and also with work which integrates a variety of modes of performance and creation, including other media and new technology, and interdisciplinary and inter-media performance. Study is further informed by concepts and methods drawn from disciplines such as anthropology, art and design, cultural studies, ethnography, history, literature, media studies, music, philosophy, politics, social policy and sociology.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.lancs.ac.uk/palatine**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

It is the particular interaction between the investigative, critical, analytical and expressive skills which especially characterise graduates. They should be able to demonstrate understanding and/or ability in a range of the following: histories, forms and traditions of performance; historical and contemporary contexts of production, circulation and reception of performance; key practitioners and practices, and/or theorists, which may include writers, actors, composers, critics, dancers, directors, choreographers, designers, and producers; processes by which performance is created, realised, and managed; text, movement, aural and visual environment, the performer; and significant sources and critical awareness of the research methods used.

Work in the creative industries can be unpredictable and insecure, and there is unlikely to be a linear career structure. After graduation, it is very common to be self-employed with multiple primary and secondary occupations involving project work and short-term contracts, and success is often dependent on actively maintaining networks and favouring opportunities for learning and reputation building.

Determination, wide ranging experience, proven skills and good contacts may open up careers for dance and drama graduates that include: acting; arts administration and management; choreography; community arts; dance performance; dance and drama therapy; lecturing, teaching and training; media, film and television production; technical production and stage management. Employers include arts and cultural organisations, local government, education, film and television companies, leisure, industry and the National Health Service.

A graduate's transferable skills, notably in performance, presentation, and interpersonal communication, can have high value in other activities, and numbers of graduates have careers in retail, finance, social work, travel and tourism, marketing and the voluntary sector.

Dentistry

After obtaining a Bachelors' degree in Dentistry (BDS or BChD) most dental students will remain in practice and some may choose to gain further qualifications recognised by the General Dental Council (GDC). Some will go on to train to become consultants in the hospital setting in dental specialities of orthodontics, child dental health, dental public health and restorative dentistry, with a few becoming doubly qualified as medics and going on to become maxillofacial surgeons. Small numbers may also train in the mono-specialties such as endodontics, periodontics and prosthetics to become specialists in practice or hospital settings. A small percentage may look towards other careers and, in addition to many professional and clinical capabilities specific to Dentistry, they will develop transferable skills so as to be able to:

- exercise initiative and personal responsibility
- communicate effectively in both scientific and professional contexts
- use IT for communication, data collection and analysis and for self-directed learning
- analyse and resolve problems, and deal with uncertainty
- manage time, set priorities and work to prescribed time limits
- make decisions based on sound ethical, moral and scientific principles
- acquire, analyse, process and communicate information in a professional manner to solve problems and to guide decision-making
- communicate effectively with peers, other professionals and the public in general
- apply interpersonal skills appropriate for working within a multi-skilled team
- understand the importance of clinical audit, peer review and continuing professional education and development
- know the broad principles of scientific research and evaluation of evidence that are necessary for an evidence-based approach
- learn and apply a very substantial body of scientific and practical knowledge.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.medev.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Dentistry is a professional clinical discipline concerned with prevention, detection, management and treatment of oral and dental diseases and maintenance of oral and dental health, in individuals and in society. It is based on sound scientific and technical principles with the clinical aspects of dentistry underpinned by knowledge and understanding of the biological and clinical medical sciences. Graduates from dental schools are required to demonstrate a thorough understanding of the importance of ethical practice and professionalism, high levels of ability in communication skills and competence in the clinical and technical aspects of dentistry.

There are 13 dental schools in the UK providing undergraduate dental education under guidance from the

GDC, which regulates the practice of dentistry through Acts of Parliament. Most practical clinical training of students takes place in the dental hospitals associated with these schools. Some clinical education and training is undertaken in community dental clinics and other primary or secondary care settings. Other components of the degree programme take place in the wider university setting, covering the biological and life sciences as well as medical, surgical and related subjects. The clinical components of the latter are taught within primary care facilities and acute NHS Trusts.

The primary dental degree represents the first stage in an educational continuum, which should last throughout a dentist's practising life. As well as vocational or general professional training, the dentist may further choose to undertake a period of specialist training. It is in this context that the undergraduate phase of dental education should be placed.
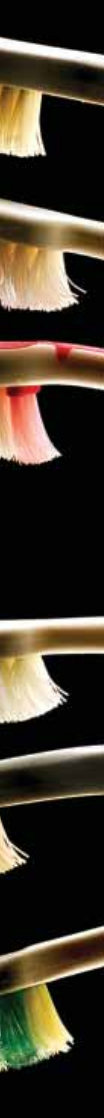
Earth Science

Earth Science and employment

Earth Science graduates have a strong track record in gaining employment both within related industries and across a number of different professions and organisations. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities.

The skills and qualities developed through studying Earth Science are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and in unfamiliar environments, are common skills to Earth scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

What is Earth Science?

Earth Science is the study of past and present processes operating in the solid Earth, its waters and the atmosphere. It includes the scientific study of physical, chemical and biological processes, the history of the Earth over geological timescales, and the structure and composition of the Earth and other planets. Earth scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.gees.ac.uk**.

This profile, produced in 2005, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Knowledge, skills and competencies

Like all graduates, Earth scientists should possess the following skills and qualities: communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical Earth scientist can offer advanced knowledge and skills in many or all of the following:

Knowledge

- Natural hazards/disasters (e.g. volcanoes, earthquakes and tsunami), resources (e.g. water, minerals, fuels), mining, waste disposal etc, and the issues regarding the exploitation and conservation of these natural resources; this knowledge leads to an understanding of the natural environment at small, medium and large-scales, irrespective of political boundaries.

Thinking skills

- Ability to think in an integrated and holistic way and to work with and appreciate complexity and change.
- Capability to think flexibly between different spatial representations (2D – 3D; maps to cross sections) and time-scales (milliseconds to millions of years).
- Decision making – often on the basis of limited information.

Practical skills

- By routinely working in teams on laboratory, desk and research, earth scientists are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Earth Scientists generate and work with numerical, textual and graphical data. They therefore have well-developed numeracy, graphicacy and image processing skills (including mapping) and they are accustomed to manipulating and presenting these various data using a range of ICT formats.
- The field-based 'real-world' nature of Earth Science research requires earth scientists to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

Economics

A graduate in Economics typically will have the ability to:

- abstract and simplify in order to identify and model the essence of a problem
- analyse and reason – both deductively and inductively
- marshal evidence and to assimilate, structure, and analyse qualitative and quantitative data
- communicate concisely results to a wide audience, including those with no training in Economics
- think critically about the limits of one's analysis in a broader socio-economic context
- draw economic policy inferences and to recognise the potential constraints in their implementation
- apply literary and information-processing skills, as well as interpersonal skills.

Economics is the study of the factors that influence income, wealth and well-being. From this, economics seeks to inform the design and implementation of economic policy. Its aim is to analyse and understand the allocation, distribution and utilisation of scarce resources. Study of Economics requires an understanding of how resources are used and how households and businesses behave and interact. The analysis deals with output, employment, income, trade and finance and also with innovation, technical progress, economic growth and business cycles.

Economics engages with other subjects such as psychology, politics, sociology, anthropology, geography, history and law. It uses mathematics and statistics and is engaging increasingly with biology, environmental science and medicine. It is one of the central disciplines underpinning the study of business and management and related areas.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.economicsnetwork.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

A single honours degree in Economics normally comprises a coherent core of economic principles that cover issues of decision and choice, the production and exchange of goods, the interdependency of markets, and economic welfare. Also included are issues such as employment, national income, the balance of payments and the distribution of income, inflation, growth and business cycles, money and finance. Skills particularly valued in studying Economics include abstraction, analysis, deduction and induction, quantification and design, framing, opportunity cost, incentives, equilibrium, disequilibrium and stability, strategic thinking, expectations and surprises, and the relevance of marginal considerations. An economist also has numeracy and presentation skills.

Economics provides significant employment opportunities in a variety of careers in addition to working as a professional economist.

Education Studies

A graduate in Education Studies typically will have the ability to:

- understand theoretical knowledge and research evidence about the processes of learning, including some of the key paradigms and their impact on educational practices
- understand aspects of cultural and linguistic differences and societies, politics and education policies, economics, geographical and historical features of societies and contexts, and moral, religious and philosophical underpinnings and their effects on learning
- understand their own and other education systems, and the underpinning value systems
- understand the complex interactions between education and its contexts, and relationships with other disciplines and professions
- analyse complex situations concerning human learning and development in particular contexts, including their own learning
- accommodate new ideas concerning globalisation on education systems and issues such as social justice, sustainable development, peace education, social inclusion and the knowledge economy
- provide well-argued conclusions relating to these main global issues
- reflect on their individual value systems, development and practices
- question concepts and theories encountered in their studies
- communicate and present oral and written arguments
- use Information and Communication Technology
- interpret and present relevant numerical information
- work with others, as a result of the development of interpersonal skills, to demonstrate the capacity to plan, to share goals, and work as a member of a team
- improve their own learning and performance, including the development of study and research skills, information retrieval, and a capacity to plan and manage learning, and to reflect on their own learning.

Education Studies is concerned with understanding how people develop and learn throughout their lives. It facilitates a study of the nature of knowledge, and a critical engagement with a variety of perspectives, and ways of knowing and understanding, drawn from a range of appropriate disciplines. There is diversity in Education Studies degree courses but all involve the intellectually rigorous study of educational processes, systems and approaches, and the cultural, societal, political and historical contexts within which they are embedded.

Graduates in Education Studies will be able to participate effectively in a number of constantly changing discourses around values and personal and social engagement, and how these relate to communities and societies.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **http://escalate.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp**..

Education Studies provides an academic foundation for practitioners in formal and informal contexts and phases of education, and provides a framework for understanding aspects of human development. These contexts and phases encompass a diverse range of people including community workers, education administrators, health workers, human resource managers, those who care for and educate children of all ages, librarians and information management professionals and other professional educators.

The majority of education graduates enter teaching, whether directly after their degree or following a few years' experience in other jobs. Jobs providing support for children, young people and adults are also popular options. Examples include advice worker, careers adviser, counsellor, education administrator, lecturer, learning mentor, social worker, training and development manager and youth worker.

Engineering

The study of Engineering is concerned with developing, providing and maintaining infrastructure, products, processes and services for society. Engineering addresses the complete life cycle of a product, process or service, from conception, through design and manufacture, to decommissioning and disposal, within the constraints imposed by the commercial, legal, social, cultural and environmental considerations. Engineering relies on three core elements, namely scientific principles, mathematics and 'realisation'. This creativity and innovation to develop economically viable and ethically sound sustainable solutions is an essential and distinguishing characteristic of engineering, shared by the many diverse, established and emerging disciplines within engineering.

In order to operate effectively, Engineering graduates need to possess the following characteristics. They will be rational and pragmatic, interested in the practical steps necessary for a concept to become reality. They will want to solve problems and have strategies for being creative, innovative and overcoming difficulties by employing their knowledge in a flexible manner. They will be numerate and highly computer-literate, and capable of attention to detail. They will be cost- and value-conscious and aware of the social, cultural, environmental and wider professional responsibilities they should display. They will appreciate the international dimension to engineering, commerce and communication. When faced with an ethical issue, they will be able to formulate and operate within appropriate codes of conduct. They will be professional in their outlook, capable of team working, effective communicators, and able to exercise responsibility.

Some of the outcomes Engineering graduates will be able to demonstrate are:

- knowledge, skills and understanding of scientific and mathematical principles and methodologies underpinning an engineering degree and the ability to integrate these to achieve the solution to real problems
- understanding of engineering principles and the ability to apply them to analyse key engineering processes
- understanding of, and ability to, apply a systems approach to engineering problems. Design is the creation and development of an economically viable product, process or system involving significant technical and intellectual challenges and graduates need the ability to:
    - Investigate and define a problem and identify constraints, including environmental and sustainability limitations, health and safety and risk assessment issues
    - understand customer and user needs and the importance of considerations such as aesthetics

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.engsc.ac.uk.**

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

- identify and manage cost drivers
- use creativity to establish innovative solutions
- ensure fitness for purpose for all aspects of the problem including production, operation, maintenance and disposal
- manage the design process and evaluate outcomes.
- appreciation of the social, environmental, ethical, economic and commercial considerations affecting the exercise of their engineering judgement, including:
  - knowledge and understanding of the commercial and economic context of engineering processes
  - knowledge of management techniques to achieve engineering objectives within an economic, social and environmental context
  - understanding of the requirement for engineering activities to promote sustainable development
  - awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues
  - understanding of the need for a high level of professional and ethical conduct in engineering.
- practical application of engineering skills, combining theory and experience, and using other relevant knowledge and skills, including:
  - workshop and laboratory skills
  - understanding contexts in which engineering knowledge can be applied (eg operations and management, technology development, etc)
  - understanding use of technical literature and other information sources
  - awareness of the nature of intellectual property and contractual issues
  - understanding appropriate codes of practice and industry standards
  - awareness of quality issues
  - ability to work with technical uncertainty.
- general transferable skills of value in a wide range of situations, including problem solving, communication, and working with others, as well as the effective use of general IT facilities and information retrieval skills. They also include planning, self-learning and improving performance, as the foundation for lifelong learning/CPD.

The UK Standards for Professional Engineering Competence (UK-SPEC) requirements offer a framework for the design and development of all engineering degree programmes. These requirements form the learning outcomes of a bachelor's degree with honours, and provide a basis for employment, research or for further study to Master's level. The full range of outcomes an engineering graduate would be expected to have can be found at **www.engc. org.uk/UKSPEC/default.aspx.** On the satisfactory completion of one of the many different types of engineering programmes, graduates will look to begin a professional career in some aspect of engineering or technology. However, not all engineering graduates will take this route as the skills and attributes they have developed also make them attractive to many different types of employer within industry, finance, consultancy, and the public services.

English

A graduate in English typically will have the ability to:

- communicate effectively using advanced literacy and communication
- apply written and oral arguments appropriately, cogently and persuasively
- analyse and critically examine diverse forms of verbal and textual communication
- adapt and transfer critical methods to a variety of working environments
- acquire substantial quantities of complex information of diverse kinds in a structured and systematic way, involving the subject's distinctive interpretative skills
- plan and execute essays, reports and project work
- exercise independent thought, judgement, and skills in critical reasoning
- comprehend and develop intricate concepts in an open ended way that involves an understanding of aims and consequences
- exercise interpersonal sensitivity when working with and in relation to others through the presentation of ideas and information and the collective negotiation of solutions
- use judgement so as to understand, interrogate and apply a variety of theoretical positions and weigh the importance of alternative perspectives
- handle information and argument in a critical and self-reflective manner.

English is a versatile academic discipline characterised by the rigorous and critical study of literature and language. It is concerned with the production, reception and interpretation of written texts, both literary and non-literary; and with the nature, history and potential of the English language. The study of English develops a flexible and responsive openness of mind, conceptual sophistication in argument, and the ability to engage in dialogue with past and present cultures and values. Methods of critical reading taught on English courses take account of the form, structure and rhetoric of texts, their social provenance, the cultures of which they are a part and in which they intervene, and their treatment of ideas and material shared with other subject areas.

Students study the inter-relationships between literary texts and they may also consider the relationships between literature, other media and other forms of artistic production. The study of the English language embraces diverse modes of communication, oral, written and mixed, and their distinctive levels of phonology, grammar, lexis, semantics and pragmatics. English is often shared with other subjects as part of combined or joint honours programmes and students are increasingly taking modules in creative writing. Graduates in English possess skills in written and spoken communication, working independently and thinking critically.

All English graduates are expected to be aware of the production and determination of meaning by historical, social, political, stylistic, ethnic, gender, geographical and other contexts.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.english.heacademy.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Environmental Science

Environmental Science and Employment

Environmental Science graduates have a long track record in gaining employment across a number of different professions and organisations, including environment-based industries. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Environmental Science are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and unfamiliar environments, are familiar skills to Environmental Scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

What is Environmental Science?

Environmental Science is the study of present and past processes in the surface and near-surface Earth, its waters and atmosphere. It includes physical, chemical, biological and human processes, the history of the Earth during the period of human occupancy, and the monitoring and management of natural and human-induced environmental changes. Environmental scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.gees.ac.uk**.

This profile, produced in 2005, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Knowledge, skills and competencies

Like all graduates, Environmental scientists should possess the following skills and qualities: communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical Environmental scientist can offer advanced knowledge and skills in many or all of the following:

Knowledge

- Monitoring and management of natural and human-induced environmental changes such as surface and groundwater, human, agricultural and industrial waste, natural and semi-natural environments, environmental impact assessment and environmental legislation.
- An interdisciplinary approach to the awareness of environmental problems that combines breadth and depth of understanding.
- Global awareness and an understanding of earth systems, sustainability and conservation.

Thinking skills

- Ability to think and make decisions in an integrated and holistic way and to work with and appreciate complexity and change.
- Competence in developing arguments from many points of view including scientific, philosophical and ethical perspectives.

Practical skills

- By routinely working in teams on laboratory, desk and field-based research, environmental scientists are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Environmental Science requires the generation and use of a diversity of data types (text, numbers and images). They therefore have well-developed literacy, numeracy and graphicacy skills and they are accustomed to manipulating and presenting these various data using a range of ICT formats.
- The complex 'real-world' nature of Environmental Science research requires environmental scientists to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

Geography

Geography and employment

Geography graduates have a long track record in gaining employment across a number of different professions and organisations. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Geography are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and in unfamiliar environments, are common skills to geographers. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

What is Geography?

Geography is an integrated study of the complex reciprocal relationships between human societies and the physical components and processes of the Earth. It studies interrelationships and significant regional patterns, recognising the differences and links between cultures, political systems, economies, landscapes and environments across the world. Geographers develop their knowledge through fieldwork and other forms of hands-on learning. This helps to promote curiosity about the social and physical environments, discerning observation and an understanding of scale.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.gees.ac.uk**.

This profile, produced in 2005, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Knowledge, skills and competencies

Like all graduates, geographers should possess the following skills and qualities: communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical geographer can offer advanced knowledge and skills in many or all of the following:

Knowledge

- Cultural, political, economic and environmental issues incorporating local, regional and international perspectives.
- Moral and ethical issues arising from an understanding of diversity in people and places.
- Issues of globalisation, environmental sustainability, multiculturalism and citizenship.

Thinking skills

- Expertise in integrating, analysing and synthesising information from a range of sources, gained by working with complex environments and issues.

Practical skills

- By routinely working in teams on laboratory, desk and field-based research, geographers are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Geography requires the generation and use of a diversity of data types (text, numbers, images and maps). They therefore have well-developed literacy, numeracy and graphicacy skills and are accustomed to manipulating and presenting these various data using a range of ICT formats, including geographical information systems (GIS).
- The complex 'real-world' nature of geographical research requires geographers to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

Health Studies

A graduate in Health Studies typically will have the ability to:

- communicate with others in a clear and articulate manner, using word or number, through written work using appropriate academic conventions
- present ideas and arguments verbally in formal presentations and seminars, and conduct informal discussions in a variety of environments
- work with others in the preparation and presentation of group work, and take responsibility for an agreed area of a shared activity
- negotiate informally with peers and formally with members of organisations
- identify and propose solutions to problems, both in relation to the substantive area of health studies and to other educational and social issues
- work independently and identify ongoing personal skill-development needs
- recognise equal opportunities issues and identify appropriate action
- use IT to store, retrieve and produce material for health studies coursework, drawing on skills in word processing, databases and spreadsheets
- gather and analyse information from a wide variety of sources using appropriate manual and electronic systems
- reflect on and review progress in their own studies, and seek assistance or guidance as appropriate in order to enhance their own personal development.

The study of health is concerned with all aspects of human experiences in health and illness. Health studies as a discipline examines those factors that either increase or decrease human wellbeing. It takes a multi and interdisciplinary approach in the critical examination of health and illness in its wider contexts of local, national, and international issues and compares the experiences of different nations, cultures, or groups. It is a research-based subject that constantly seeks to add to current knowledge.

Students of the subject will concern themselves with the exploration of health as a human experience mediated by individual, societal and global contexts, a reflexive and critical evaluation of factors affecting health and its representations and an ability to engage actively in the discourses surrounding the concept of health and its representations.

Subject-specific skills that can be gained by studying Health Studies are the ability to:

- compare a range of health contexts, including individual and institutional, national and international
- analyse health issues and information drawn from a wide range of disciplines
- synthesise coherent arguments from a range of contesting theories

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.health.heacademy.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

- draw upon the personal and lived experience of health and illness through the skill of reflection and to make links between individual experience of health and health issues and the wider structural elements relevant to health
- articulate theoretical arguments within a variety of health studies contexts
- draw on research and research methodologies to locate, review and evaluate research findings relevant to health and health issues, across a range of disciplines.

Health Visiting

A graduate in Health Visiting typically will have the ability to:

- exercise numeracy and ICT skills
- gather information from a wide range of sources including electronic data
- systematically analyse and evaluate information collected and exercise professional judgement with confidence
- communicate effectively with the client or patient, their relatives and carers and the group/community/population, about their health and social care needs
- use assessment techniques and make provisional identification of health and physical, psychological, social and cultural needs and problems
- recognise the contribution of their assessment within health care through effective communication with other members of the health and social care team
- maintain the standards and requirements of professional and statutory regulatory bodies and adhere to relevant codes of conduct
- understand the legal and ethical responsibilities of professional practice
- maintain the principles and practice of patient/client confidentiality
- practise in accordance with legislation applicable to health care professionals
- exercise a professional duty of care to patients, clients and carers
- recognise the duty to maintain fitness for practice and the need for continuing professional development and learning
- contribute to the development and dissemination of evidence-based practice within professional contexts
- uphold the principles and practice of clinical governance.

Health Visiting is a specialist discipline within community nursing practice. It has a significant focus on public health and shares areas of practice and health care goals with colleagues in primary care and other professions. The search for health needs is regarded as the primary function of the profession. Through work with individuals, families, groups and communities, health visitors seek to promote health and well-being and prevent illness. Whilst there is an emphasis within health visiting practice on child and family health, work with populations and communities to address issues of health and social inequalities and social exclusion represents an increasing focus on public health.

The health visiting service is dynamic and health-focused and able to respond flexibly to a range of service and community needs. Health visiting is underpinned by four principles that guide and direct professional practice. These are the search for health needs, the stimulation of an awareness of health

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.health.heacademy.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp**.

needs, the influence on policies affecting health and the facilitation of health-enhancing activities. Degree programmes have an equal balance of theory and practice and graduates must meet professional registration requirements. Learning involves the study of subject specific knowledge, the acquisition of skills and values, the critical application of research knowledge from health and social sciences, and reflection and evaluation in health visiting practice. Students are prepared for multi-professional and multi-agency working.

History

A graduate in History typically will have the ability to:

- demonstrate command of a substantial body of historical knowledge
- understand how people have existed, acted and thought in the context of the past
- read and use texts and other source materials critically and empathetically
- appreciate the complexity and diversity of situations, events and past mentalities
- recognise there are ways of testing statements and that there are rules of evidence which require integrity and maturity
- reflect critically on the nature and theoretical underpinnings of the discipline
- marshall an argument, be self-disciplined and independent intellectually
- express themselves orally and in writing with coherence, clarity and fluency
- gather, organise and deploy evidence, data and information
- analyse and solve problems
- use effectively ICT, information retrieval and presentation skills
- exercise self-discipline, self-direction and initiative
- work with others and have respect for others' reasoned views
- work collaboratively and participate effectively in group discussions
- show empathy and imaginative insight.

History is the aggregate and the continuum of events occurring in succession, leading from the past to the present and even into the future. It is the discipline that records and interprets past events involving human beings and their attempts to organise life materially and conceptually, individually and collectively. History comprises many varieties, each with its distinctive focus and theoretical orientation (for instance, economic, social, political, cultural, environmental history, the history of women, and gender).

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.hca.heacademy.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

The object of studying History is to widen students' experience and develop qualities of perception and judgement. The study of History provides a sense of the past, an awareness of the development of differing values, systems and societies and the inculcation of critical yet tolerant personal attitudes. History involves the cultural shock of encountering and sensing the past's otherness and of learning to understand unfamiliar structures, cultures and belief systems. These forms of understanding also shed important light on the influence that the past has on the present. History's reciprocal relationship with other disciplines can have an important influence on the experience of the student of the subject.

Many historians use the concepts, theories and methodologies of the social sciences, most obviously but by no means exclusively within courses in economic and social history. Where history is taught within the context of the social sciences, students need to devote considerable time to acquiring knowledge of one or more social sciences. In general, students of all types of history – cultural and political as well as economic and social – should have an awareness of relevant and appropriate concepts and theories.

Reading, discussion and writing, and engagement, exploration and discovery are essential. Students need to understand the problems inherent in the historical record, be able to cope with a range of viewpoints, to have an appreciation of the range of problems involved in the interpretation of complex, ambiguous, conflicting and often incomplete material, and a feeling for the limitations of knowledge and the dangers of simplistic explanations.

History graduates are extremely employable as they develop those characteristics many employers seek, and a History degree provides openings to a wide range of careers in business, the church, civil service, diplomatic services, teaching, public relations, politics, literature and arts, law, information technology and so forth. Many historians attain the top jobs in their chosen careers.

History of Art, Architecture and Design

Depending on the focus of their degree programme, a graduate in History of Art, Architecture and Design typically will have the ability to:

- understand aspects of the culture of more than one geographical region and/or chronological period
- understand the processes through which artefacts are designed and constructed
- observe artefacts closely and systematically, informed by appropriate knowledge of materials, techniques and cultural contexts
- record and describe artefacts with clarity and precision, using ordinary and specialist language as appropriate to the topic and the intended audience
- use appropriate methodologies for locating, assessing and interpreting primary sources
- produce logical and structured narratives and arguments supported by relevant evidence
- discriminate between alternative arguments and approaches
- apply knowledge and experience so as to make appropriate decisions in complex and incompletely charted contexts
- retrieve and organise information and carry out research with limited guidance
- communicate information, arguments and ideas cogently and effectively as appropriate to particular audiences, and in written, spoken or other form using visual aids and IT resources
- listen effectively and participate constructively in discussion
- deploy visual material in conjunction with written, oral and other forms of communication, such as illustrated essays and seminars, slide, moving image or multimedia presentations
- be open and receptive to new things and ideas
- undertake and complete familiar and unfamiliar set tasks
- work constructively and productively in groups
- work to briefs and deadlines, including managing concurrent projects
- take responsibility for one's own work
- reflect on one's own learning, and to make constructive use of feedback.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.brighton.ac.uk/adm-hea**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp**.

History of Art, Architecture and Design is concerned with the production, circulation and reception of meanings and values in history. Students may consider artefacts broadly as things which have been made, things which have been designed, things which carry meaning and value, and as things the understanding of which is enriched by contextual study.

The subject area shares history's critical concerns with evaluating archival, literary and other forms of evidence. It develops competence in identifying, evaluating and deploying visual evidence in historical arguments and narratives. It is concerned with the cultural and personal conditions which shape the production, use and valuing of artefacts in the societies for which they were made, and also with the ways

in which such artefacts have been subsequently interpreted and treated. This leads to the study, for example, of patronage, of collecting, of the everyday use of designed objects, of the evolution of the built environment as well as to the study of critical, theoretical and art-historical writing on art, architecture and design.

History of Art, Architecture and Design is also concerned with the way that artefacts form part of wider signifying systems such as in their connections with literature or religion, with medical, scientific, economic, social or philosophical discourses, or with other shared beliefs or behaviours. Degree programmes are characterised by the training which they offer in close, informed and rigorous looking at artefacts and in other forms of sensory attention to objects or performances. This training inculcates competencies which are often called visual literacy.

In common with other graduates in Art, Design and Media, graduates are faced with complex career paths involving a mixture of short-term contracts, employment, further study, part-time and freelance work rather than a predictable career progression. At the same time, the subject is desirable for a career as academic librarian, arts administrator, fine arts auctioneer/valuer, editorial assistant, lecturer, curator, picture researcher, teacher and tour manager.

Hospitality

Degree courses in Hospitality focus strongly on developing critical and analytical problem-solving and general/transferable attributes to prepare students for employment in the business world of the hospitality industry. A graduate in Hospitality typically will have the ability to:

Knowledge
- exhibit the development of knowledge in their particular subject area
- appreciate and apply the need for a multi-disciplinary and inter-disciplinary approach to study, drawing from service, research and professional contexts
- understand the subject through academic and professional reflective practice
- apply relevant theories, concepts and knowledge in an industry context
- demonstrate knowledge of corporate social responsibility issues.

Intellectual skills
- research and assess subject specific facts, theories, paradigms, principles and concepts
- critically assess, analyse and evaluate evidence and interpret data, text and trends using appropriately acquired information
- develop the ability to identify, analyse and develop a range of solutions to routine and non-routine problems and evaluate these solutions within the context of the problem
- identify and solve problems through the use of innovative techniques and approaches
- develop critical thinking skills that enable appropriate responses to industry challenges
- respond to moral, ethical, environmental and safety issues which directly pertain to the subject domain including relevant legislation and professional codes of conduct

Subject-specific skills
- understand the operation and management of a range of physical, financial, human and technical resources
- apply theory to the solution of complex problems within the core areas of hospitality
- analyse and evaluate food, beverage and/or accommodation service systems, their implementation and operation
- understand and apply the theories and concepts underpinning consumer behaviour within the hospitality context and develop appropriate responses to this
- analyse the quality of the service encounter and its impact on the consumer and the service provider
- identify and respond appropriately to the diversity of stakeholders in the hospitality industry such as customers, employees, organisations and government and external agencies
- apply, within the hospitality context, appropriate theories

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and concepts from the generic management areas of operations management, finance and management accounting, human resources and organisational behaviour, services marketing, information systems and technology
- display an insight into the structure of the hospitality industry and the contribution that it makes to the global economy
- evaluate the factors that influence the development of organisations operating within the hospitality industry
- review and analyse the political, technological, social, environmental and economic factors which affect the supply of and demand for hospitality.

Transferable skills
- exercise communication and presentation skills
- make a sustained argument with clear structure and presentation
- interact effectively with individuals and groups, organise a team effectively and treat others' values, beliefs and opinions with respect
- evaluate and reflect on the effectiveness of team and one's performance or contribution, including leadership of a group
- demonstrate learning from work experience, including in some cases an industrial placement
- organise work and learn independently, plan and be responsive to change
- make independent judgements and analyse own performance in relation to personal and career development
- apply numerical tools and techniques for handling figures and statistics using numeracy and ICT skills
- take responsibility for own learning and continuing professional development by developing the knowledge and understanding of how to learn, recognising the importance of personal development planning, the ability to demonstrate skills developed, and to present evidence
- be reflective and self-critical and perceive self in relation to others
- plan, design, execute and communicate a piece of independent work using appropriate media.

The special nature of the hospitality industry has led to the development of higher education provision for students wishing to pursue careers in hospitality management. The diverse richness of hospitality degrees means that while some are rooted in social science perspectives, others are highly pragmatic and focus on vocational elements. This is distinct in its content and delivery from generic business studies programmes as it provides students with an appreciation of the range and complexity of applied management in the hospitality context.

A degree in Hospitality offers graduates a high-quality professional and academic education that equips them with a range of intellectual, business and vocational skills that are required for a career in hospitality and which also have great relevance in many other sectors.

The QAA benchmarking group made use of the UCAS directory in identifying those course titles that properly fall within the remit of the group. The current scope of the group is degrees with the following titles:

Hospitality Studies; Hotel Management; Hotel and Restaurant Management; Catering Management; Hotel, Catering and Institutional Management; Hotel, Restaurant and Bar Management; Hospitality Business; Hospitality Business Management; European Hospitality Management; International Hospitality Management; International Hotel and Catering Management; Institutional Management; Catering Technology; Culinary Arts; Licensed Retail Management; Events and Conferencing Management; Hotel and Hospitality Management and Cruise and Gaming Courses.

Where the subject programme title contains the word 'Management' then students should be able to demonstrate vocationally relevant managerial skills and knowledge. Where a programme title contains the word 'Studies' then students should be able to critique the contributions of relevant academic disciplines and to display an integrated knowledge of the subject domain. The subject community has active links with professional bodies and associations and practical engagement with employers ensuring the area is at the forefront of industry relevance. A graduate in Hospitality will have an understanding of the concepts underpinning the consumer experience and a concern for enriching the life experiences of people, both as consumers, participants and providers.

Information Management and Librarianship

A graduate in Information Management and Librarianship typically will have the ability to:

- understand how the discipline interacts with its technological, social, political, professional and economic environments and understand the professions embraced by the discipline
- understand the flow of information within and across communities, and of methods of managing organisational knowledge
- be aware of local, regional, national and international information policies, organisations and issues, and of professional, legal and ethical concerns
- identify, analyse and evaluate the information needs of different groups and make informed decisions to satisfy them
- know legal and regulatory issues and statutory requirements such that information can be managed appropriately within the statutory and regulatory framework
- identify and use relevant information sources in an appropriate range of media and formats
- select and acquire materials appropriate to the needs of users and make informed decisions about what should be retained and what can be safely discarded
- understand different ways of providing access to materials via resource-sharing, shared acquisition programmes, document delivery and Web access, and make balanced decisions from the range of alternatives available
- preserve information and materials to ensure their future availability
- understand the demands of proprietary information and the responsibility for its creation, authentication and security
- undertake independent research and evaluate the work carried out by others
- communicate and negotiate in a clear, systematic and concise way for a range of different purposes and audiences in the language of study
- write fluently and effectively and interact effectively and impartially with others
- use ICT effectively as applicable to a wide range of professional tasks
- understand and apply, subject to having had experience of work and professional practice, the basic principles of the planning and management of services, including interpersonal skills, performance indicators, budgeting, purchasing, marketing of services, quality and liability issues and staff management and training.

Information Management and Librarianship encompasses the study of information, from its generation to its exploitation, so as to enable the recording, accumulation, storage, organisation, retrieval and transmission of information, ideas and works of imagination.

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This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Historically identified with the organisation of recorded knowledge, articulated through librarianship, computing, information science, archives administration and records management, the subject area has expanded to cover the theory and practice of librarianship and information management in a broad range of environments. A process of continuous evolution has brought the discipline into proximity with other cognate subject areas such as knowledge management, publishing and communications.

Students following the wide range of degree programmes available undertake courses that develop skills relating to identifying, creating, acquiring, organising, retrieving, preserving and disseminating information. This spectrum is reflected in a variety of degrees some of which are cross-departmental. Professional and vocational relevance is an important aspect as is compliance with relevant professional bodies for those programmes seeking professional accreditation. Degree programmes are supplemented by in-service job-specific training.

Graduates are equipped for professional posts in information management, library or record office management and cognate fields. Continuing Professional Development is expected throughout their careers through reflective practice. Employers in this sector cover a diverse community of practice and their needs and the professional profile they require are widely varied.

Languages and Related Subjects

A graduate in Languages and Related Subjects, according to the specific focus of the degree programme, typically will have the ability to:

- read, write, listen to and speak in a foreign language to levels of ability appropriate to the target language and to the learning outcomes of the degree programme
- use effectively reference materials such as grammars and dictionaries and to learn other languages with relative ease
- apply analytical, critical and specialist skills drawn from other areas of study such as literatures, cultures, linguistic contexts, history, politics, geography, social or economic structures, often related to business, legal, creative, technological or scientific contexts
- appreciate the internal diversity and cross-cultural connectedness of cultures and show curiosity and openness towards other cultures
- reflect and judge critically in the light of evidence and argument
- organise and present ideas in a framework of a structured and reasoned argument
- be self-reliant, adaptable and flexible
- deploy skills in ICT, in note taking and summarising, library research, mediation, analysis and problem solving
- write and think under pressure and meet deadlines
- communicate and work creatively and flexibly with others.

The study of a foreign language covers an enormous range of linguistic and intellectual activity.

Fundamental is the recognition that languages are at one and the same time a medium of understanding, expression and communication, an object of study in their own right, a gateway to related thematic studies, and a means of access to other societies and cultures.

The subject range is extremely diverse and includes modern as well as non-modern languages.

The majority of students follow programmes either in more than one language, or in a language in combination with another discipline.

The range of related thematic studies is likewise extremely diverse. Study may focus on the cultures and the literatures, both historical and contemporary, of the societies of the language concerned. It may draw upon linguistics to deepen understanding of the language, or history, philosophy, politics, geography, sociology and economics, to enhance understanding of the fabric and context of the societies of the language. Languages are also increasingly taught in other

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multi- and cross-disciplinary combinations, such as languages with business or accountancy with law, with art and design, with computer science, with engineering, and with the natural sciences. Such diversity and flexibility permits Languages and Related Studies to see itself as both multidisciplinary and interdisciplinary, as well as intercultural and applied in nature.

The subject also includes languages where a classical component may be taught: typically classical Arabic and Chinese, as well as languages indigenous to the UK but which are studied as foreign languages, such as Welsh (as a second language) and Gaelic.

Graduates will have developed a wide range of skills which are of great value in a wide range of careers. A period of residence abroad is often crucial in developing and enhancing many of these skills. In addition to occupations where language is central, such as translation, interpreter and secondary school teaching, graduates can be found in a wide range of occupations including chartered accountancy, the Diplomatic Service, distribution and logistics management, English teaching as a foreign language, event organisation, marketing executive and market research, recruitment, and the law.

Law

A graduate with an Honours Bachelor's degree in Law will have the ability to:

- demonstrate an understanding of the principal features of the legal system(s) studied
- apply knowledge to a situation of limited complexity so as to provide arguable conclusions for concrete actual or hypothetical problems
- identify accurately issues that require researching
- identify and retrieve up-to-date legal information, using paper and electronic sources
- use relevant primary and secondary legal sources
- recognise and rank items and issues in terms of relevance and importance
- bring together information and materials from a variety of different sources
- synthesise doctrinal and policy issues in relation to a topic
- judge critically the merits of particular arguments
- present and make a reasoned choice between alternative solutions
- make a personal and reasoned judgement based on an informed understanding of standards arguments in the area of law in question.
- act independently in planning and undertaking tasks
- research independently in areas of law not previously studied starting from standard legal information sources
- reflect on own learning and proactively seek and make use of feedback
- use English (or, where appropriate, Welsh) proficiently in relation to legal matters
- present knowledge or an argument in a way that is comprehensible to others and which is directed at their concerns
- read and discuss legal materials, which are written in technical and complex language
- use, present and evaluate information provided in numerical or statistical form
- produce word-processed essays and text and to present such work in an appropriate form
- use the World Wide Web and email
- work in groups as a participant who contributes effectively to the group's task.

University education in law in this context covers the study of any legal system for which an English, Scottish, Northern Irish and Welsh university awards its degrees, even if it is not in the law of that jurisdiction. A law school typically will provide a broad and integrated range of academic legal education. Some institutions also offer professional legal education courses.

Within undergraduate law programmes, learning approaches relate to legal practice, including mooting, clinical programmes and client interviewing. Other educational approaches include personal development planning, reflective practice, peer and

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self-assessment, oral assessment and problem-based learning. Portfolios and personal development planning encourage students to become reflective and critical about their learning and to provide evidence of skills development preparing them for the ethos of continuous professional development.

Law is taught both as an academic subject and as a precursor to gaining a professional qualification, though 'foundation subjects' are necessary to achieve a degree that pre-qualifies for a professional career as a solicitor or barrister. The foundations of legal knowledge form the academic stage of legal education and are compulsory for students seeking to enter the vocational stage of training which prepares them for final professional examinations. These seven foundation subjects are Constitutional Law, Criminal Law, Law of Tort, Law of Contract, Land Law, Law of Trusts (Equity), and the Law of the European Union. Students are expected to develop legal research skills as well as skill in comprehension, analysis and presentation. Training contracts or pupillages with law firms or barristers' chambers need to be secured early during academic study as most firms recruit two years in advance of commencing the contract.

With relevant qualifications and experience, options for graduates include barrister (advocate in Scotland), solicitor, and legal executive. Most qualified lawyers specialise to some extent and this can cover human rights, matrimonial, property, corporate, environmental or sports law. Highstreet solicitors' practices offer wide caseloads from criminal and family to probate and business law. Local government and corporate law firms also provide diverse opportunities. Other opportunities include the Government legal service, the Crown Prosecution Service, public sector legal departments, the Courts services and company in-house legal departments.

Approximately 50 percent of law graduates go on to train as solicitors or barristers. Others choose careers in journalism, the police, the armed forces, politics, academia, industry, banking, management and the civil service.

Leisure

Leisure degree programmes combine an understanding of leisure with principles of management. Some focus particularly on business or organisational management and others with management in the title are more concerned with the management of leisure resources through concepts of planning and policy. Leisure programmes that have studies or science in the title will focus more on a range of academic disciplines that have informed the development of the subject as a field of study, the philosophical basis of scientific paradigms and competence in the scientific methods of enquiry.

A graduate in Leisure typically will have the ability to:

Knowledge
- understand the development of knowledge in their particular subject
- understand the need for a multi-disciplinary and inter-disciplinary approach to study, drawing from service, research and professional contexts
- understand the subject through academic and professional reflective practice
- demonstrate knowledge of major theoretical, methodological and professional themes in contemporary leisure studies
- demonstrate awareness of key directions and trends in leisure behaviour and leisure provision
- display the professional knowledge, skills and values appropriate for the needs of a rapidly changing leisure sector
- display knowledge of the historical, philosophical, economic, political, sociological and psychological dimensions of leisure.

Intellectual skills
- acquire, select, interpret, analyse and evaluate information appropriate to their study
- research and assess subject specific paradigms, theories, concepts, principles and facts
- critically assess and evaluate evidence and interpret data and text
- apply knowledge to solve familiar and unfamiliar problems
- develop a reasoned argument and challenge assumptions
- explain the social, economic, political and legislative factors that influence strategic decisions regarding leisure provision
- understand the structure, composition and management of the leisure industries
- take responsibility for own learning and continuing professional development and reflect critically on what is required to work in leisure.

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Subject-specific skills (these may vary depending on whether students are studying leisure management or studies)

- critique the contributions of a range of academic disciplines that have informed the development of the subject as a field of study
- demonstrate an appropriate degree of progression within specialist fields
- display an integrated knowledge of the scope and breadth of the subject domain
- construct the leisure experience in a range of managerial contexts comprising products, services and opportunities
- synthesise the concepts, activities, functions and meanings of leisure with personal and professional actions
- differentiate the various patterns of leisure consumption and use
- respond to moral, ethical, environmental and safety issues which directly pertain to the subject domain including relevant legislation and professional codes of conduct
- display entrepreneurship, business and people management skills required in the management of a leisure organisation
- understand and apply Quality Service Management concepts
- apply operational management skills and techniques
- understand the legal environment for the leisure industry
- programme leisure activities and facilities and run special events.

Transferable skills

- undertake fieldwork with regard to safety and risk assessment (to subject specific category)
- exercise communication and presentation skills, numeracy and ICT skills
- work in teams and contribute effectively to group work
- plan and manage their own learning
- apply motivation and aptitude for intellectual enquiry, critical assessment, creative innovation and a commitment to lifelong learning
- work both independently and collaboratively
- apply customer service and customer satisfaction concepts and best practice to subject studied.

Degree courses in Leisure include: Leisure Studies; Events Management; Facilities Management; International Leisure Management; Countryside Leisure Management; Maritime Leisure Management; Leisure Administration; Leisure Marketing; Adventurous Activities; Leisure Economics; Outdoor Activities; Recreation Studies; Recreation Management; Outdoor Recreation; Entertainment Management; Licensed Entertainment.

Leisure degrees aim to address the practical skills, technical knowledge, planning, operational and environmental considerations which professionals working in leisure and the outdoor sector require to be effective. Many courses incorporate, for example, Environmental Studies, Coaching Analysis, Physiology, Research Methods and the Leadership of Outdoor Activities. The creation and development of knowledge in these subjects is typically achieved both inductively through the development of theory and deductively through an engagement with practice. All programmes are multi-disciplinary with most having an applied and inter-disciplinary focus. There are active links with professional

bodies and associations and with employers.   The depth of knowledge, proficiency of skills and the balance of specific knowledge and skills required from a graduate may differ from one particular programme to another.

Programmes where the title contains the word 'Management' enables students to demonstrate vocationally relevant managerial skills and knowledge and be able to apply these including the operational and strategic management of financial, physical resources and people. Programmes where the title contains the word 'Science' enables students to demonstrate an understanding of the philosophical basis of scientific paradigms, demonstrate evidence of competence in the scientific methods of enquiry, interpretation and analysis of relevant data and appropriate technologies. Programmes where the title contains the word 'Studies' enables students to critique the contributions of a range of academic disciplines that have informed the development of the subject as a field of study. Students will also demonstrate an appropriate degree of progression within specialist fields and display an integrated knowledge of the scope and breadth of the subject domain.

The leisure sector is a dynamic and diverse sector and offers a range of careers for graduates. It is extremely heterogeneous, and in some ways it is better thought of as an area of economic activity than a discrete set of occupations (Keep and Mayhew 1999). The commercial leisure industry is generally divided into three sectors; leisure accommodation, leisure catering and leisure activities (The Leisure Industry Report, 2003). Many companies in the industry recruit graduates and some specifically target graduates and have well developed graduate recruitment schemes.

Leisure graduates have many skills and competencies such as communication and organisation as well as the confidence and versatility that will make them attractive to employers both inside and outside the Leisure sector.

Linguistics

A graduate in Linguistics, depending on aptitude, the particular course of study and the teaching methods experienced, typically will have the ability to:

- appreciate complete analytical systems, rigorous classifications of specific aspects of human behaviour, theoretical frameworks and research methods for planning projects, finding new data and drawing conclusions.
- have an appreciable control of theory and practice in other areas of study including the role of language in society, its cognitive nature, the way it is acquired, the way it changes and the way it forms part of the gamut of communications
- assess contrasting theories and explanations, including those of other disciplines, think hard about difficult issues and be confident in trying to understand new systems
- abstract and synthesise information and develop problem-solving strategies
- manage an argument and think and judge independently
- critically judge and evaluate evidence, especially in relation to the use of language in social, professional and other occupational contexts, translation and interpretation
- acquire complex information from a variety of sources including libraries, the internet and peer discussion, and think creatively about and build complex systems
- write essays and research reports using the appropriate register and style
- apply skills in advanced literacy, numeracy and ICT
- consider the ethical issues involved in data collection and data storage
- communicate effectively and fluently in speech and writing
- understand the dynamics of communication
- work independently, demonstrating initiative, self-organisation and time-management
- be tolerant, open and interested when working with others to achieve common goals
- manage their individual learning self-critically and be self-aware.

Linguistics is concerned with language in all its forms, spoken, written and signed. A key insight of linguistics is that language and linguistic behaviour are highly structured and the nature of these structures can be elucidated by systematic study using theoretical and empirical methods.

Linguists concern themselves with many different facets of language from the physical properties of the sound waves in utterances to the intentions of speakers towards others in conversations, and the social contexts in which conversations are embedded. Sub-branches of linguistics are concerned with how languages are structured, what they have in common, the range of and limits to the differences among them, how they are acquired and used and how they change.

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Since language enters into almost every area of human activity, the application of linguistic analysis can be extremely broad. A sample includes teaching and learning particular languages, language issues in new technologies, the development of writing systems, dictionaries, and standardised technical formats for languages, translation between languages, language issues in globalising multilingual and multicultural societies; linguistic difficulties such as aphasia, hearing or speech disorders, communication between peoples with different sociological, cultural and ethnic backgrounds, the revitalisation of endangered languages and the use and abuse of language in legal contexts.

The use of language involves cognitive, social and interactional skills and competences and so the intellectual tools applied come from a wide range of disciplines. There is a range of formal, sociological and psychological perspectives on language, as well as viewpoints from practical concerns such as language teaching. Because of this, much of linguistics is interdisciplinary in both the issues it addresses and the methodologies brought to bear.

Linguistics graduates gain a broad range of skills applicable in a variety of occupations. These include broadcasting journalist, Civil Service administrator, teacher of English as a foreign language or second language, interpreter, translator, lexicographer, publishing copy editor, proof reader, speech and language therapist and recruitment consultant.

Materials

A graduate in Materials Science typically will:

- have acquired a good knowledge of basic principles of materials, supported by the necessary background science
- have a good understanding of the interaction between composition, processing, microstructure and properties, leading to appropriate application of materials
- have acquired some key practical skills and competence
- are able to communicate effectively, both orally and in writing
- have the ability to design and execute an individual project
- have an awareness of the importance of materials to industry and society
- have an awareness of sustainability and environmental issues
- have acquired the relevant mathematical and computational skills
- have problem-solving skills
- be able to exercise original thought.

The study of Materials Science develops a basic understanding of the part played by selection of materials and choice of manufacturing process in meeting an engineering specification. The study of materials engineering must have its foundations in materials science. Materials are central to the economic wellbeing of the country. This is reflected by rapid developments in new areas of materials such as smart materials, soft solids, nano technology, sensors and biometrics. Materials scientists or engineers help to develop the materials required for new products, find better lower-cost manufacturing routes and enhance the performance of existing materials. They consider the environmental impact and sustainability of their products. They discover how to optimise the selection of materials and create sophisticated databases from which properties and service behaviour can be predicted.

Materials engineers need a foundation of engineering science, mathematics and other sciences in order to understand manufacturing, processing and fabrication methods and to predict the service performance of materials e.g. strength of materials and mechanics of solids, principles of manufacture including computer-aided engineering. Graduates in Materials are also likely to be able to design with materials based on customer requirements and to have practical experience of a range of techniques and materials including computer modelling and project work.

Materials scientists or engineers may work in the manufacturing, processing or user industries, in research, in production, management or in sales. They may be concerned with mass-produced artefacts such as cars, tableware, or building materials, or specialist products such as those needed for micro-electronics, sports equipment, replacement body parts, energy generation or aerospace.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.materials.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Mathematics, Statistics and Operational Research

A graduate in Mathematics, Statistics or OR, depending on their chosen focus of study, typically will have the ability to:

- demonstrate knowledge of key mathematical concepts and topics
- abstract the essentials of problems and formulate them mathematically and in symbolic form so as to facilitate their analysis and solution
- present mathematical arguments and the conclusions from them with accuracy and clarity
- have skills relating to rigorous argument and solving problems in general, and a facility to deal with abstraction including the logical development of formal theories
- have skills relating to formulating physical theories in mathematical terms, solving the resulting equations analytically or numerically, and giving physical interpretations
- focus on statistics that will have skills relating to the design and conduct of experimental and observational studies and the analysis of data resulting from them
- have skills relating to formulating complex problems of optimisation and interpreting the solutions in the original contexts of the problems
- have the ability to learn independently using a variety of media
- work with patience and persistence, pursuing problem solutions to their conclusion
- have good general skills of time management and organisation
- be adaptable, in particular displaying readiness to address new problems from new areas
- transfer knowledge to assess problems logically and to approach them analytically
- have highly developed numeracy and ICT skills
- have communication skills such as the ability to write coherently and clearly
- apply concepts and principles in loosely-defined contexts, showing effective judgement in selecting and applying tools and techniques
- demonstrate appropriate transferable skills and the ability to work with relatively little guidance or support.

Mathematics is rooted in the systematic development of methods to solve practical problems in areas such as surveying, mechanical construction and commerce. Such methods have a wide range of application. Thus generalisation and abstraction became important features and mathematics became a science involving strict logical deduction with conclusions that follow with certainty and confidence from clear starting points. Mathematics is fundamental to almost all situations that require an analytical model-building approach.

Statistics encompasses the science of collecting, analysing and interpreting data and has become much concerned with the design processes for observational and experimental studies.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.mathstore.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Statistics uses probability theory as part of the process of making inferences from limited data to underlying structures - looking for the patterns.

Operational research (OR) is concerned with complex optimisation procedures with significant mathematical underpinnings and non-mathematical but academically rigorous problem-structuring methods. It has applications throughout industry, business and commerce, in government, the health and social services, and in the armed forces. Model building is crucial. Some institutions use titles other than OR for degree programmes in this area. One such title is management science.

Graduates can be found throughout industry, business and commerce, the public and private sectors, with large employers and in small organisations. Employers value the intellectual ability and rigour and reasoning skills that mathematics, statistics and operational research students can acquire, their familiarity with numerical and symbolic thinking, and the analytic approach to problem-solving which is their hallmark.

Medicine

Graduates who obtain a primary medical qualification i.e. Bachelor of Medicine (BM) or Bachelor of Surgery (BS) then undertake postgraduate training for their chosen careers within the medical profession. About 1% of applicants may choose to work in other fields.

In addition to many professional and clinical capabilities specific to Medicine, a graduate typically will have developed the transferable skills and abilities to:

- retrieve, manage, and manipulate information by all means including electronically
- present information clearly in written, electronic and oral forms, and communicate ideas and arguments effectively
- be familiar with basic communication and information technology relevant to their duties
- manage effectively time and resources and set priorities
- study topics in depth and demonstrate insight into research and scientific method
- adopt the principles of reflective practice and lifelong learning
- deal with uncertainty and work within a changing environment
- remain non-judgemental, teach, act as a mentor and work effectively within a team
- adopt an empathic and holistic approach to patients and the problems they present
- mediate and negotiate with patients, carers and colleagues
- demonstrate proficiency in clinical reasoning so as to define and prioritise problems, interpret and prioritise information, and exercise professional judgement
- learn and apply a very substantial body of scientific and practical knowledge.

Medicine is concerned with maintaining and promoting good health and the origin, diagnosis, treatment and prevention of disease and injury, and the impact of illness and disability on patients, their families and on populations. This includes understanding normal human structure and function at all stages of development, understanding the abnormalities of structure and function that occur in the common diseases, and recognising how illness affects both physical and psychological function and the patient's interaction with the environment and society.

Medical education imparts the knowledge and skills required for the prevention, diagnosis and assessment of common and important diseases in a variety of settings, and patient management with respect to control, cure, rehabilitation and support, and palliative care. Students must understand how diseases affect both the individual and the population, and how the environment interacts with disease and impairment to produce disability and handicap. They must understand the principles of disease prevention and be able to undertake health promotion.

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This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Medical degree courses seek to impart appropriate professional and personal attitudes and behaviour, including critical evaluation, curiosity and lifelong learning skills as well as the ethical and legal framework of medical practice. The purposes are to provide an education in the basic and clinical sciences and to prepare graduates for professional practice. Undergraduate degrees in medicine produce graduates able to undertake the pre-registration house officer year. Graduates must be prepared to take part in continuing education and professional development throughout their working lives.

Midwifery

A graduate in Midwifery typically will have the ability to:

- act on own initiative including initiating the action of other professionals and know when to refer
- recognise own learning needs and independently advance learning and understanding
- reflect on and modify behaviour in the light of experience and act where necessary
- apply effective skills in team-building, group activities and organisation of others, liaising and negotiating across organisational and professional boundaries and differences of identity or language
- handle interpersonal and intrapersonal conflict constructively and be aware of effective strategies for coping with personal stress
- understand and manage changing situations and respond flexibly
- challenge unacceptable practices responsibly based on the critical review and dissemination of research and audit findings
- justify practice in the light of risk management frameworks and clinical governance
- exercise judgement and responsibility based on available evidence to work with women in achieving the best possible birth outcomes
- apply IT, numeracy, verbal and written communication skills
- apply the principles of health promotion and education to midwifery practice.

Midwives work with women and their families to assess their needs and to determine and provide programmes of care and support prior to conception and throughout the antenatal, intranatal and postnatal periods. They focus on providing holistic care which respects individual needs, choices and cultures in a variety of contexts. Legislation enables midwives to carry out their role autonomously, while expecting them to work in partnership with others and across professional boundaries when this is in the best interests of women and their families. Midwives work in and across a wide range of settings, from women's homes to acute hospitals. They also make a significant contribution to the wider public health agenda.

Midwifery is an applied academic subject, underpinned by the human biological sciences and the social sciences, in particular psychology and sociology. Its mastery requires proficiency in a range of cognitive, affective and psychomotor skills. It is the integration of these underpinning elements which establishes the basis for midwives to provide care which is woman centred and focused on the premise that childbirth is normally a natural, physiological and important event in women's lives. The

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midwife's role also centres on the woman in the family context. The care of the family during childbearing is central to the definition of the discipline.

The pre-registration midwifery programmes of education and training are built around university and practice-based learning. These two elements enable students to develop autonomy and confidence and to emerge as competent practitioners with the capacity to work effectively in women's homes, hospitals, community clinics or other settings as part of a broadly based health and social care team.

Music

In addition to many capabilities specific to Music and depending on the character of the individual degree programme, a graduate in Music typically will have the ability to:

- employ reasoning and logic to analyse data and formulate arguments and hypotheses
- express, interpret and discuss such analyses, arguments and hypotheses
- apply research skills, exercise judgement and conceptualise and apply concepts
- apply presentation skills including an awareness of audience characteristics
- use problem-solving and IT skills including online information sources
- use language skills including, as appropriate, the study of one or more foreign languages
- work as a team member, respond to partnership and leadership, and lead others
- react spontaneously, manage risk and cope with the unexpected
- be aware of professional protocols and the arts world cultural policy, funding mechanisms, professional arts structures and institutions, and arts within the community
- be self motivated and respond positively to self criticism and to the criticism of others
- understand one's own learning style and work regimes and work independently
- be reliable and manage time and deploy prioritising and managing skills
- be aware of spiritual and emotional dimensions
- be financially and business aware and exercise entrepreneurship
- have flexibility of thought and action and be open to new, personal or alternative thinking
- have curiosity and the desire to explore and carry a creative project through to delivery.

Music study requires engagement with the creative and expressive aspects of music, its experience aurally and its significance for people at different periods and in different cultural contexts. Central to Music study are repertoires, their creation, performance, and transmission, and historical, cultural, scientific and technical issues that inform knowledge about them. Composition, performance and reception are fundamental focuses for study. The performance, analysis and critique of a particular repertoire may be complemented by studies such as music technology, music therapy or music pedagogy. Students develop musicianship that becomes second nature and the ability to understand and theorise their art.

Degree programmes often focus on specific repertoires from Western and/or non-Western traditions such as art music, popular music, jazz, vernacular music and religious music. Aural, analytical and practical skills are fundamental but other disciplines are often drawn on including history, cultural theory, literature, iconography, palaeography, anthropology, ethnography and the physical, social and technological sciences. There are an increasing number of degree programmes that focus on the technology of music and sound production and recording.

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Work after graduation can be unpredictable and insecure, and there is unlikely to be a linear career structure. It is very common to be self employed with multiple primary and secondary occupations involving project work and short term contracts. Graduates can be found working on both a freelance and contract basis, and success is often dependent on actively maintaining networks and favouring opportunities for learning and reputation building.

A graduate's transferable skills, notably in performance, can have high value in other activities.

Career options related specifically to music include (alphabetically) arts administration and management; community arts work; copyright administration in composition and recordings; education and training; librarianship; live performance of music; management, representation and promotion; music for computer games; music publishing; music therapy; production, retailing and distribution of music instruments; production, distribution and retailing of sound recordings; song writing and composition.

Employers include arts, cultural and media organisations, schools and colleges, the National Health Service, law firms, orchestras, the armed forces, IT and commercial organisations.

Nursing

A graduate in Nursing typically will have the ability to:

- apply creative solutions to health care situations
- confidently present information orally, in writing and through the use of technology, to provide coherent and logical arguments in the support of decision-making
- engage in, and disengage from therapeutic relationships through the creative use of theories and skills, demonstrating ethical discernment and clinical judgement
- use practical skills and knowledge with confidence and creativity
- critically analyse and interpret data for care delivery and management
- manage oneself, one's practice and that of others in accordance with the Code of Professional Conduct, and critically evaluate own abilities and limitations
- select and apply knowledge and skills to complex and unexpected situations
- implement strategies to promote and evaluate partnership working
- anticipate potential stressful situations and participate in minimising risk
- demonstrate sound clinical judgement in a range of situations and critically evaluate the effectiveness of clinical judgement in a range of professional care contexts
- participate in quality assurance and risk management strategies to create and maintain a safe environment.

Nursing is an applied vocational and academic discipline practised in a variety of complex situations. Nursing focuses on promoting health and helping individuals, families and groups to meet their health care needs. The work involves assisting people whose autonomy is impaired and who may present a range of disabilities or health-related problems. Nurses work with patients, clients, families and communities in primary care, acute and critical care, rehabilitation and tertiary care settings.

Nurses practise within a social, political and economic context. Through their Code of Professional Conduct, nurses embrace the concepts of inclusion, equal opportunities, individual rights and empowerment of patients and client groups. Professional and patient/client autonomy is a key feature.

The knowledge, understanding and associated skills that underpin the education and training of nurses covers nursing, natural and life sciences, social, health and behavioural sciences, ethics, law and the humanities, the management of self and others' reflective practice and the application of all of these to nursing care of clients and client groups.

Pre-registration nursing education consists of a common foundation programme and four branch programmes to prepare nurses to work in either adult nursing, children's nursing, learning disabilities nursing or mental health nursing.

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Optometry

A degree in Optometry focuses on basic sciences, optometric studies and clinical practice. In addition to the General Optical Council's list of clinical competencies, a graduate in Optometry typically will have developed the transferable skills and abilities to:

- understand and apply scientific principles and methods
- demonstrate a high degree of accuracy
- develop good organisational and administrative skills
- pay attention to detail
- demonstrate manual dexterity
- do repetitive tasks
- display strong interpersonal and communication skills
- command knowledge of scientific principles relevant to area of study
- review the evidence base for interventions and have sufficient statistical knowledge to evaluate critically research findings
- apply flexibility in addressing problems of an unfamiliar nature
- communicate effectively with peers and colleagues
- understand the application of IT to practise management
- maintain clear, accurate and appropriate records
- exercise written and oral communication skills and the ability to relate to the wider society
- use numeracy skills to evaluate data generated through audit and research
- evaluate critically relevant literature
- use problem-solving skills relating to qualitative and quantitative information
- apply sufficient learning skills to sustain lifelong learning and continuing professional development
- learn and apply a very substantial body of scientific and practical knowledge.

Optometrists are primary health care specialists trained to examine the eyes for defects in sight, ocular diseases and problems relating to general health. Optometrists are responsible for detection, diagnosis and management of ocular disease and the rehabilitation of conditions of the visual system. They are also trained to fit and supply optical appliances such as spectacles, contact lenses and low vision aids. The profession is regulated by the General Optical Council. The registered optometrist examines the visual system to establish its state of health and to provide, if necessary, an optical correction to optimise visual performance.

All optometrists follow a similar undergraduate degree programme followed by a pre-registration year working under

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the supervision of an experienced optometrist. This period of postgraduate training is controlled and examined by the College of Optometrists.

Graduates should possess knowledge and understanding of the fundamental scientific principles relevant to the practice of optometry in the context of primary eye care. In particular, they should be able to apply these principles to human biology, ocular and visual biology, visual perception and psychology and optics. They will be aware of the normal development of the visual system and of the disruptive effects on development of congenital and infantile abnormalities. They will be able to apply their knowledge of basic science and their undergraduate clinical experience to the investigation, prevention, diagnosis and management of visual disorders. They will be able to examine patients safely and competently under the personal supervision of an experienced optometrist.

Most optometrists are independent primary care general optometric practitioners though some practise part-time or full-time in hospital eye departments and others are active in research and teaching.

This profile is still subject to consultation with the professional body and will be updated appropriately when the input is available.

Pharmacy

A graduate in Pharmacy typically will have:

- mastery of a substantial body of knowledge, with practical and manipulative skills
- the ability to apply scientific and technical rigour to the use of medicines
- evidence-based decision-making skills and problem solving skills
- independent learning skills, forming the basis for lifelong learning
- a multidisciplinary and integrative approach to solving health care problems.
- an ethical attitude, characterised by assuming personal and professional responsibility for the proper discharge of their role in society
- a thorough understanding of law and ethics relating to pharmacy
- development of a high level of interpersonal skills, which are analytical, critically aware, evaluative, interpretative, empathic and reflective
- numeracy and computational skills, including error analysis, order-of-magnitude estimations, correct use of units and modes of data presentation
- time management and work organisational skills.

Pharmacy combines the pharmaceutical sciences with related aspects of health care. It is a professional discipline, concerned with the provision of evidence based advice to patients and the public on general health matters. Pharmacists are scientists in the health care community, bringing together physical, biological, clinical, social and behavioural sciences in relation to medicines and their usage. The practice of pharmacy can comprise managing medicines at a strategic and individual patient level, the management of repeat dispensing systems, supplementary prescribing, monitoring the effects of medicines, and specialisations such as independent prescribing, diagnostic testing. In the pharmaceutical industry, pharmacists' roles include formulating new products, planning and optimisation of drug development strategies, advising on regulatory issues, marketing, and the management of scale-up and large scale production of medicines.

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Pharmacy degrees are designed to produce graduates who think clearly and systematically but there is also a strong vocational element which prepares them for their pre-registration training. Education takes a minimum five years; four years at university and a year of practical training. Graduates have a strong academic science base, are competent pharmaceutical scientists and are well prepared for a health care role.

Currently, the majority of pharmacy graduates practise in community pharmacies or NHS hospitals, although a growing number work in general medical practitioner practices, NHS primary care organisations and strategic health authorities. Pharmacists also work in the pharmaceutical industry and universities. Small numbers work in other sectors, applying their knowledge of medicines to many issues.

Philosophy

A graduate in Philosophy typically will have:

- the ability to analyse problems in a multi dimensional way
- the ability to think creatively, self critically and independently
- self-motivation
- the ability to work autonomously
- time and priority management skills
- a flexible mind adaptable to managing change.

Philosophy seeks to understand and question ideas concerning reality, value and experience. Concepts such as existence, reason and truth, occur in every sphere of human enquiry. Philosophy is open-ended, constantly questioning and refreshing itself, the very essence of learning and knowledge.

A degree in vocational subjects like Business, Finance, Law, Marketing or Media Studies provides immediate skills and practical tools for gaining entry into the employment market, whereas Philosophy focuses on providing the ideal environment in which to develop the fundamental and essential attributes on which these skills depend. Philosophy teaches the student how to analyse and communicate ideas in a clear, rational and well thought out way. Students of Philosophy learn to develop and defend an opinion, they learn how to learn and how to think. With such in-depth grounding, Philosophy graduates are likely to develop into well rounded, mature, thoughtful and articulate employees.

Studying formal logic helps students acquire skills in symbol manipulation, formal systems and abstract thinking and it also influences the wider skills of analysis and a detailed understanding of argument structure. These skills are of immediate value in computer and information management careers and in all contexts where precision, clarity and high level abstract planning and analysis are required.

Philosophy students will develop general skills like the ability to think logically, analyse critically, communicate articulately and accurately, both orally and in writing. These are the skills that employers indicate are so important for middle management and leadership roles. The skills of vision, creativity and analytical power being developed through the study of Philosophy will have a premium.

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This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Physics

A graduate in Physics typically will have the ability to:

- demonstrate knowledge and understanding of fundamental physical laws and principles and apply these principles to diverse areas of physics
- solve problems in physics by identifying the appropriate principles, using science techniques such as special and limiting cases and order-of-magnitude estimates
- solve problems by making assumptions and approximations explicit
- identify relevant principles and laws of physics when dealing with problems
- plan, carry out, analyse and report the results of an experiment or investigation
- analyse data and evaluate the level of uncertainty in results
- use mathematics to describe the physical world
- understand mathematical modelling and of the role of approximation
- develop the confidence to try different approaches in tackling challenging problems
- develop skills of independent investigation
- communicate well, listen carefully, read demanding texts, and present complex information clearly and concisely
- pay attention to detail and manipulate precise and intricate ideas, construct logical arguments and use technical language correctly
- develop computing and IT skills in a variety of ways, including using appropriate programming languages and packages
- work independently, using initiative, planning and organising to meet deadlines, and interact constructively with other people
- manipulate numerically and present and interpret information graphically
- produce clear and accurate scientific reports
- manage own learning
- use laboratory apparatus and techniques soundly
- analyse critically the results of an experiment or investigation and draw valid conclusions
  - evaluate the level of uncertainty in experiment results and compare these results with expected outcomes, and evaluate the significance of the results.

Physics is concerned with the observation, understanding and prediction of natural phenomena and the behaviour of man-made systems. It deals with profound questions about the universe and important practical, environmental and technological issues. It involves mathematics and theory, experiment and observations, computing, technology, materials and information theory. Ideas and techniques from physics drive developments in chemistry, computing, engineering, materials science, mathematics, medicine and the life sciences, meteorology and statistics.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.physsci.heacademy.ac.uk**.

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Physics is both theoretical and practical. The fundamentals, which all undergraduate students cover to some extent, include electromagnetism, quantum and classical mechanics, statistical physics and thermodynamics, wave phenomena and the properties of matter. Students also study the application of the fundamental principles to particular areas which may include atomic physics, nuclear and particle physics, condensed matter physics, materials, plasmas and fluids. Physics graduates are numerate, articulate and eminently employable in a wide range of jobs.

Planning

A graduate in Planning typically will have the ability to:

- solve problems creatively and collect, analyse, evaluate and synthesise planning data
- apply practical design skills
- influence through negotiation, facilitation and networking
- exercise organisational sensitivity in multi-professional working environments
- present arguments using a variety of formats
- use IT, statistics, numeracy and literacy skills
- take responsibility enthusiastically for their own learning
- manage and produce work to time
- work individually and in groups
- exercise initiative and independence within a range of personal values.

Planning contributes to delivering and safeguarding environmental sustainability, social equity, cultural diversity and economic prosperity, all aspirations that civilised societies hold dear. It generates creative proposals for change by means of negotiation and advocacy within a complex web of competing interests. Positive action is the heart of planning and operates within environmental, social, economic, legal and governance constraints.

Academically, planning is the study of the way societies plan, design, manage and regulate change in the built and natural environment. It therefore includes the study of why and how societies intervene, shape, organise and change natural and built environments so as to secure an agreed range of social, economic and environmental objectives.

The core of the discipline is the study of the rationale for planning and how it is practised. This involves understanding the processes of spatial change in the built and natural environments and also understanding the arguments for intervening in these processes. It requires an understanding of the land, property and development markets, including economic, financial and legal aspects. It also requires an understanding of design and the development of sustainable built and natural environments.

Other skills relating to employability that can be learned include the ability to:

- identify and formulate planning problems and to write clear aims and objectives
- translate theory and knowledge into practical planning policies and actions, including formulating and articulating strategies, plans and designs

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- collect, analyse, evaluate and synthesise planning data
- research in planning
- monitor and evaluate planning interventions and outcomes
- demonstrate an awareness of professional working practices and values
- formulate and propose elementary policies, strategies and courses of actions
- define and analyse planning problems and arguments effectively and appropriately
- demonstrate understanding of the treatment and exposition of subject matter, making connections between the different areas of the planning curriculum.

Politics and International Relations

Depending upon the balance of particular topics studied, a graduate in Politics and International Relations typically will have the ability to:

- understand the nature and significance of politics as a human activity
- apply concepts, theories and methods to analysing political ideas, institutions and practices
- demonstrate knowledge and understanding of different political systems, the nature and distribution of power in them; the social, economic, historical and cultural contexts within which they operate, and the relationships between them
- evaluate different interpretations of political issues and events
- understand the nature and significance of politics as a global activity
- demonstrate an understanding of the origins and evolution of international politics
- gather, organise and deploy evidence, data and information from secondary and primary sources
- identify, investigate, analyse, formulate and advocate solutions to problems
- construct reasoned argument, synthesize information and exercise critical judgement
- reflect on their own learning and seek and make use of constructive feedback.
- manage their own learning self-critically
- communicate effectively and fluently in speech and writing
- use communication and information technology to retrieve and present information, including statistical or numerical information
- work independently, demonstrating initiative, self-organization and time-management
- collaborate with others to achieve common goals.

Politics is concerned with developing a knowledge and understanding of government and society. The interaction of people, ideas and institutions provides the focus to understand how values are allocated and resources distributed at many levels, from the local through to the sectoral, national, regional and global. Thus analyses of who gets what, when, how, why and where are central, and pertain to related questions of power, justice, order, conflict, legitimacy, accountability, obligation, sovereignty and decision-making.

International Relations' focus is the regional and global arenas. Traditionally preoccupied with anarchy, conflicts and cooperation between states, International Relations is increasingly concerned with engagement between states, intergovernmental organisations and non-state actors such as transnational corporations and transnational civil society groups. As with Politics, the study of International Relations

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encompasses philosophical, theoretical, institutional and issue-based concerns relating to governance, but at the regional and global levels.

The scope of Politics and International Relations is broad, the boundaries often being contested. Departments may be called Departments of Government, Politics, Political Science, International Politics, International Relations, International Studies, or some combination of these. Different names may reflect different nuances adopted in degree programmes or the extent to which both aspects of the discipline are taught in conjunction with one another. Politics and International Relations reach out to other disciplines such as anthropology, cultural studies, economics, sociology, geography, history, law or literature.

Graduates in Politics and International Relations are found in a wide range of jobs, with the public sector being popular. Some options include careers in the Civil Service including the Diplomatic Service, charity officer, education administrator, environmental education officer, event organiser, government research officer, lecturer, journalist, lobbyist, market researcher, media analyst, party political agent or research officer and voluntary work organiser. They also work in banking, European Commission administration, international organisations administration, public relations, sales promotion and social research.

Psychology

A graduate in Psychology typically has:

- research skills including the ability to apply multiple perspectives to psychological issues involving a range of research methods, theories, evidence and applications
- analysis skills including identifying and evaluating general patterns in behaviour, psychological functioning and experience, generating and exploring hypotheses and research questions, undertaking empirical studies, data analysis skills using quantitative and qualitative methods, using psychological tools, laboratory equipment and psychometric instruments, and applying evidence-based reasoning
- communication skills including developing a cogent argument supported by relevant evidence and being sensitive to the needs and expectations of an audience
- IT and data handling skills, with familiarity with understanding, analysing, and presenting complex data sets
- effective team-working skills, through research projects and other curricular activities
- problem-solving and reasoning skills
- interpersonal skills, including being sensitive to the importance of enhancing cooperation to maximise the effectiveness of individual skills as shown in group work and team building
- life-long learning skills.

Psychology is an empirical science which aims to understand how and why people act in the ways they do and to apply that knowledge in a wide variety of settings. The discipline spans studies ranging from the observations of basic neural mechanisms to analyses of complex human relationships. The antecedents of modern-day psychology can be found in both biology and philosophy, but its methods of enquiry have developed not only from these disciplines but also from other natural, social and mathematical sciences. Psychology is a broad subject area but, whatever the particular topic of study and wherever the origins of its methods, it attempts to analyse and explain behaviour in a systematic, reproducible way. There is often a virtuous circle between theory and empirical data, the results of which may find their expression in applications to educational, health, industrial/commercial and other situations.

In addition to subject skills and knowledge, psychology graduates also develop skills in communication, numeracy, teamwork, critical thinking, computing, independent learning and research as well as many others, all of which are highly valued by employers. Because of the wide range of generic skills and the rigour with which they are taught, training in psychology is widely accepted as providing an excellent preparation for a number of careers. Psychology students are found in teaching, industry, social services, the media, information technology, computing, marketing and government agencies.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.psychology.heacademy. ac.uk.**

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp.**

Religious Studies

A graduate in Religious Studies typically has:

- empathy and imaginative insight
- self-discipline and self-direction
- independence of mind and initiative and a belief in life-long learning
- teamwork skills including attending to others and having respect for others' views
- ability to gather, evaluate and synthesise different types of information
- analytical ability and the capacity to formulate questions and solve problems
- IT and presentation skills
- writing skills, including accurate referencing and clarity of expression
- ability to attend closely to the meaning of written documents.

The subject's vitality and richness reflects its significance in a world coming to terms with cultural and religious diversity. Beliefs, values and institutions, whether religious or not, are contested. Religious Studies in higher education values cultures, texts, arts and practices of societies within and beyond Europe, interacts with social sciences and contemporary cultural, literary and gender studies, engages with the plurality of religions and compares cross-cultural topics such as beliefs and practices.

Degree courses vary in approach but aim to promote understanding by, for example:

- stimulating curiosity about religious cultures across the globe, both past and present
- study of the sacred texts, history, practices and thought of religious traditions
- creating opportunities to consider the artistic, ethical, social, political and cultural characteristics of religions
- exploring links between religion on the one hand and literature, culture and the arts on the other
- opening up awareness of plurality within societies
- fostering empathetic engagement with familiar and unfamiliar viewpoints
- promoting self critical awareness of presuppositions and encouraging constructive and critical exposition of arguments
- inviting dialogue between different traditions
- encouraging intelligent use of a variety of theories and methods of study
- providing opportunities for critical involvement in changing the way things are e.g. liberationist or feminist approaches
- language studies, fieldwork, social surveys and the visual and performing arts.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.prs.heacademy.ac.uk**.

This profile, produced in 2004, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Religious Studies students are well equipped to enter into many occupations including careers in education, research, law, journalism and the media, social and pastoral care, counselling, mediation and negotiation roles, government, prison services, project management, training and facilitation roles, charity work, personnel and accountancy.

Social Policy and Social Work

Social Policy

The QAA Subject Benchmark Statement upon which the Student Employability Profile for Social Policy will be based is under review. Please refer to the website for up to date information: **www.swap.ac.uk**.

Social Work

Separate QAA Subject Benchmark Statements for England, Scotland, Wales and Northern Ireland are being developed for Social Work. Please refer to the website for up to date information: **www.swap.ac.uk**.

Sociology

A graduate in Sociology typically will have the ability to:

- formulate and investigate sociologically informed questions
- use major theoretical perspectives and concepts and their application to social life
- analyse, assess and communicate empirical sociological information
- identify and comment on different research strategies and methods
- conduct sociological research in a preliminary way
- undertake and present scholarly work
- understand the ethical implications of sociological enquiry
- recognise the relevance of sociological knowledge to social, public and civic policy
- judge and evaluate evidence
- appreciate the complexity and diversity of social situations
- assess the merits of competing theories and explanations
- gather, retrieve and synthesise information
- make reasoned arguments and interpret evidence and texts
- reflect on their own accumulation of knowledge
- apply learning and study skills
- communicate in writing and orally in a variety of contexts and modes
- use statistical and other quantitative techniques and information retrieval skills in relation to primary and secondary sources of information
- apply information technology skills
- use skills of time planning and management and deploy group work skills.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.c-sap.heacademy.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**.

Sociology is concerned with developing a knowledge and understanding of the social world. Its focus is on the relations that connect individuals, groups and institutions. It seeks to understand how societies, institutions and practices of all kinds came into being, how they are currently organised and how they might change in the future. When it looks at the characteristics, understandings and practices of individuals themselves, it does so from the standpoint of their relations with others. Sociology is a core Social Science discipline that feeds many other areas of study concerned with the human world but maintains a distinctive concern for the social dimensions of human interaction. An understanding of the distinctively social features of human life is largely a product of the 19th and 20th centuries but Sociology is not restricted to the study of modern societies. A sociological perspective, once attained, is fruitfully employed in historical and comparative studies of changing forms of human life.

Sociology is both theoretical and evidence based. As a theoretical discipline, its concerns relate to other Social Sciences and also to philosophy and political theory as well as to practical ethics and to social, public and civic policy. There are numerous, legitimate sources of theoretical diversity. As an evidence based discipline, Sociology insists on the scrutiny and evidenced reassessment of everyday understandings of the social world. Its distinctive ways of knowing and understanding are rooted in sociological perspectives and insights. Sociology graduates should understand the distinctively social standpoint of Sociology and the explanatory value of social analysis. This necessarily includes familiarity with the analysis of a variety of forms of human interaction, from micro to macro, their interconnections, and their dynamics.

Sociology graduates are found in a wide range of occupations. Many are attracted to careers that centre on the challenges and demands that members of a society face. This leads to jobs in social services, education, criminal justice, welfare services, government, counselling, charities and the voluntary sector. They include charity fundraiser, community development worker, counsellor, lecturer, housing officer, teacher, probation officer, social researcher, social worker and welfare rights adviser.

Sport

Sport degree programmes are very diverse and come from different philosophical foundations and backgrounds. They have largely emerged from Physical Education Departments, Science Faculties or Leisure and Recreation Departments. Hence a graduate in sport might have knowledge that is predominantly science-based from a sport and exercise science degree, arts-based from a Sports Studies degree, or management-based from a Sports Development degree. They will all share a concern for enriching the life experiences of people through sport and exercise, both as consumers, participants and providers.

In the past, Sports Science degrees were very general (Sports Science, Sports Studies, Human Movement Studies). More recently, the curriculum has been developed to include elements covering exercise and health. Furthermore, there are now numerous highly specialised courses at both undergraduate and postgraduate level in areas such as Water Sports Science, Equine Sports Science and Sport Psychology. Medical students are now able to complete an Intercalated Sport and Exercise Science degree. Since 2000, the focus of Sport and Exercise Sciences degrees has begun to shift from sports performance towards exercise and health in line with recent government initiatives to create a healthy lifestyle.

Where the subject programme title contains the word 'Management' then students should be able to demonstrate vocationally relevant managerial skills and knowledge. Where a programme title contains the word 'Science' students should be able to understand the philosophical basis of scientific paradigms and be competent in scientific methods. Where a programme title contains the word 'Studies' then students should be able to critique the contributions of relevant academic disciplines and to display an integrated knowledge of the subject domain. The creation and development of knowledge in these subjects is typically achieved both inductively through the development of theory and deductively through an engagement with practice. All programmes are multi-disciplinary with most having an applied and inter-disciplinary focus. There are active links with professional bodies and associations and with employers.

The QAA Subject Benchmark Statement upon which the Student Employability Profiles for Hospitality, Leisure, Sport and Tourism will be based is under review. The Employability Profile for Tourism and updated versions of those for Hospitality, Leisure and Sport will be available on **www.hlst.heacademy.ac.uk** towards the end of 2006.

The QAA benchmarking group made use of the UCAS directory in identifying those course titles, which properly fall within the remit of the group. The full range of degree titles can be found in the UCAS directory, but an example of degree titles is:

Sports Science; Sport and Exercise Sciences; Sports Studies; Sports Management; Sports Development; Sports Coaching; Football Science; Sport and the Media; Sport Education; Sports Injury/Therapy; Sports Performance Analysis; Sports Technology; Sports Tourism Management; Coaching Studies; Sports Economics; Exercise Science; Exercise Studies; Exercise Therapy; Fitness Science;

Fitness Studies; Health and Fitness Management; Exercise Physiology; Movement Studies; Movement Science; Sports Psychology; Physical Education.

Depending on the focus of the degree studied, a graduate in Sport typically will have the ability to:

Knowledge
- understand the development of knowledge in human responses to sport and exercise
- understand the performance of sport and its enhancement, monitoring and analysis
- understand the need for a multi-disciplinary and inter-disciplinary approach to study, drawing from service, research and professional contexts
- make effective use of knowledge and understanding of the disciplines underpinning human structure and function
- understand the historical, social, political, economic and cultural diffusion, distribution and impact of sport
- understand the coaching process and factors which influence the coaching process
- understand the study of the policy, planning, management and delivery of sporting opportunities.

Intellectual skills
- research and assess subject specific facts, theories, paradigms, principles and concepts
- analyse, critically assess and evaluate evidence and interpret data and text, applying problem solving skills
- develop reasoned argument and challenge assumptions.
- take responsibility for own learning and continuing professional development.
- understand the subject through academic and professional reflective practice
- plan, design and execute practical activities using appropriate techniques and procedures
- in some cases, undertake fieldwork with regard to safety and risk assessment
- plan, design, execute and communicate a sustained piece of independent intellectual work
- respond to moral, ethical, environmental and safety issues which directly pertain to the subject domain including relevant legislation and professional codes of conduct.

Subject-specific skills
- display a critical insight into the organisations and structures responsible for sport, and the political ramifications arising from these
- understand and apply the theories, concepts and principles of practice from the generic management areas of operations, finance, human resources, economics and marketing to sports facilities and events
- employ strategic planning and development planning skills in analysing, understanding and addressing the development needs and intentions of sport organisations and communities
- employ social, economic and political theory to explain the development and differentiation of sport throughout society
- demonstrate a critical appreciation of sport development and facilitation principles in at least one vocational context

- appraise and evaluate the effects of sport and exercise intervention on the participant
- demonstrate the application of the social and cultural meanings attached to sport and their impact on participation and regulation
- provide a critical appreciation of the relationship between sport and exercise activity and intervention in a variety of participant groups, including special populations such as the elderly, disabled and children
- monitor, analyse, diagnose and prescribe action to enhance the learning and performance of the component elements of sport
- exhibit the skills required to monitor and evaluate sports performance in laboratories and/or field settings
- display a critical appreciation of the integration of the variables involved in the delivery (teaching, instructing and coaching) of enhanced sport performance.

Transferable skills

- demonstrate competence in interactive and group skills
- work within an ethos of teamwork and interdependence
- know how to learn, adapt to changing circumstances, self-appraise and reflect on practice
- plan and manage own development and learning
- apply techniques of safety and risk assessment
- exercise communication and presentation skills, numeracy and ICT skills
- apply motivation and aptitude for intellectual enquiry, critical assessment, creative innovation and a commitment to lifelong learning
- work both independently and collaboratively
- apply customer service and customer satisfaction concepts and best practice to subject studied
- demonstrate appropriate and effective coaching skills where studied
- demonstrate learning from work experience.

Graduates from any of the subjects covered are likely to be reflective and reflexive thinkers, capable of independent judgement, initiative and empowered decision-making. They can work within an ethos of teamwork and interdependence, and are able to offer specific vocational skills and also know how to learn and adapt to changing circumstances and to manage their own development. They are likely to be well prepared for the wide range of professional and vocationally orientated careers in this still growing and maturing sector.

Tourism

The QAA Subject Benchmark Statement upon which the Student Employability Profiles for Hospitality, Leisure, Sport and Tourism will be based is under review. The Employability Profile for Tourism and updated versions of those for Hospitality, Leisure and Sport will be available on **www.hlst.heacademy.ac.uk/** towards the end of 2006.

Veterinary Science

In addition to professional and clinical capabilities as regulated by the Royal College of Veterinary Surgeons, a graduate in Veterinary Science typically will have the transferable skills and abilities to:

- work as a multi-disciplinary team member in delivering services to clients and employers
- communicate effectively with the public, professional colleagues and appropriate authorities
- respond appropriately to the influence of economic and emotional pressures
- foster and maintain a good professional relationship with clients and colleagues, developing mutual trust and respecting their professional views and confidentiality
- act responsibly in the community, particularly in relation to ethical principles
- be competent in IT, including word processing, data handling and information retrieval
- produce reports in a form satisfactory and understandable to the intended audience
- recognise their own limitations: recognise when to seek assistance and understand the protocols for dealing with second opinions
- apply basic financial and accounting practices and record keeping
- understand and practise the obligation for continuing professional development
- learn and apply a very substantial body of scientific and practical knowledge

Veterinary science is the study, diagnosis, treatment and prevention of disease in animals as individuals and in groups. There is a key role for members of the profession as guardians of human health in the context of disease transmission from animal or animal products to man.

The veterinary workplace has changed in the last century with an increasing emphasis on companion animals kept for pleasure and greater veterinary involvement in production animals, public health and food hygiene. The role of the profession continues to grow in protecting the health and welfare of diverse species groups such as laboratory animals, zoological collections, wildlife and the contribution to conservation of endangered species. The comparative approach of veterinary science supports basic scientists and contributes to the understanding of human disease.

The need for all veterinary degrees to meet the requirements of the Royal College of Veterinary Surgeons leads to a broad agreement about course content. Veterinarians have a wide range of knowledge, understanding and skills enabling clinical disciplines to be learnt within the context of a firm foundation in basic science. Most students are attracted by the unique combination of science, art, practical skills, human-animal and interpersonal interaction.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.medev.ac.uk**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa. ac.uk/academicinfrastructure/ benchmark/honours/default.asp**

Graduates are employed mostly in general practice. These are most commonly small animal, equine, farm animal or mixed practices. Veterinary surgeons in general practice undertake all aspects of medical care from primary consultations, diagnostic procedures, including diagnostic imaging and laboratory techniques, medicine and surgery. Further study can be undertaken to attain specialist qualifications in a wide range of disciplines (eg diagnostic imaging, ophthalmology etc.) enabling employment in second opinion referral centres or specialist practices.

Graduates can also choose a career in research and/or teaching, usually after postgraduate training. Veterinary scientists are employed in natural science laboratories, in veterinary and medical schools, in medical research institutes and in those institutions that deal expressly with animal health and disease. Opportunities exist in government services or related agency services as well as in overseas universities, in pharmaceutical companies, with pet food manufacturers or other commercial organisations and supra-governmental organisations such as the United Nations Food and Agricultural Organisation of the United Nations.

Welsh

A graduate in Welsh/Gymraeg typically will have the ability to:

- use Welsh to discuss complex topics in a polished fashion, both orally and in writing
- assemble and convey information about literary texts and to treat them critically
- respond appropriately to the use of language and imagination in literature.
- consider literature in its historical, social and intellectual context
- understand material produced in another language or other languages and reproduce it in Welsh in a way that is consistent with the characteristics of the language
- use skills appropriate to the discipline, such as producing bibliographies and referring to sources in a consistent and standard fashion
- think for themselves and to respond critically, analysing and summarising the arguments and opinions of others
- work independently and in a detailed and thorough way
- gather information in an orderly and purposeful fashion from various sources, evaluate it critically and present it in a coherent, meaningful way
- understand and develop complex concepts and treat them critically and analytically
- work as part of a team
- demonstrate organisational skills in handling set tasks including time management
- use information technology skills.

Welsh is a broad and varied academic discipline involving creating, presenting and interpreting written and oral texts, as well as the nature and history of the language and the opportunities which are open to it in today's world. Studying Welsh fosters a flexible and open-minded attitude and the ability to evaluate different concepts and to present them using appropriate spoken and written language; it enables students to discuss and interpret the cultures and values of the past as well as contemporary developments in the modern world.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to **www.llas.ac.uk/index.aspx.**.

This profile, produced in 2006, is based on the QAA benchmark to be found at **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp**

Welsh is open to the influences of the contemporary international world of which Wales is a part. The attitudes of Welsh speakers are similar to those of the inhabitants of the western world in general and ways of writing literature and of communicating in Welsh are more diverse now than they have ever been. The language faces significant changes that place a particular responsibility on those concerned with the subject to safeguard its basis and attributes as it develops and as the range of opportunities and new ways of using Welsh present themselves.

The heart of the subject is the Welsh language, its nature, history and current position, and Welsh literature in all periods. Literary studies may include drama, film, folklore and creative writing. Welsh is characterised by its long

history and the strength of its literary tradition since the early Middle Ages. Some degree schemes offer the opportunity for detailed study of particular periods, or types of literature, or aspects of language.

A degree in Welsh can include studying one or more of the other Celtic languages and their literatures, works in other languages and similar multilingual situations. Other academic disciplines can be involved including literary theory, linguistics, modern languages, English, classical studies, history, politics and sociology. Some students combine Welsh with these subjects, and many opportunities exist for interdisciplinary and comparative studies.

With the growing demand for a knowledge of Welsh in many fields, particularly in education, the media, local government and the public sector, the degree is a valuable qualification for posts requiring bilingual personnel and Welsh graduates enter a variety of careers. Following the Welsh Language Act (1993), the call for bilingual administrators in local government, health service, police authorities and commerce in general has increased considerably. A number of graduates are employed in the Welsh National Assembly in various capacities.

Gymraeg

Yn nodweddiadol bydd gan berson sydd wedi graddio yn y Gymraeg y gallu i:

- Ddefnyddio'r Gymraeg i drafod pynciau cymhleth mewn ffordd gywrain, ar lafar ac yn ysgrifenedig
- Casglu a chyfleu gwybodaeth am destunau llenyddol a'u trafod yn feirniadol
- Ymateb yn briodol i'r defnydd o iaith a dychymyg mewn llenyddiaeth
- Ystyried llenyddiaeth yn ei chyd-destun hanesyddol, cymdeithasol a deallusol.
- Deall deunydd a gynhyrchir mewn iaith arall neu ieithoedd eraill a'i atgynhyrchu yn y Gymraeg mewn modd sy'n gyson â nodweddion yr iaith
- Defnyddio sgiliau sy'n briodol i'r ddisgyblaeth, fel cynhyrchu llyfryddiaeth a chyfeirio at ffynonellau mewn dull cyson a safonol
- Meddwl drostynt eu hunain ac ymateb yn feirniadol, gan ddadansoddi a chrynhoi safbwyntiau a barn eraill
- Gweithio'n annibynnol mewn modd manwl a thrylwyr
- Casglu gwybodaeth mewn ffordd drefnus a phwrpasol o amryw ffynhonnell, ei gwerthuso'n feirniadol a'i chyflwyno mewn ffordd ddealladwy ac ystyrlon
- Deall a datblygu cysyniadau cymhleth a'u trin yn feirniadol ac yn ddadansoddol.
- Gweithio fel rhan o dîm
- Dangos sgiliau trefniadaethol wrth drafod tasgau a osodwyd, gan gynnwys rheoli amser
- Defnyddio sgiliau technegol gwybodaeth.

Gellir dod o hyd i ddeunydd ychwanegol gan gynnwys y map Sgiliau a Phriodoleddau ar gyfer y ddisgyblaeth yn **www.llas.ac.uk/index.aspx** Gan fod Canolfannau Pwnc wedi, ac yn parhau i ddatblygu amrywiaeth o adnoddau i gefnogi'r defnydd o'r Proffiliau a chyflogadwyedd, mae'n bwysig gwirio gwefan y Ganolfan am y wybodaeth fwyaf cynhwysfawr a'r datblygiadau diweddaraf.

Seiliwyd y Proffil Disgyblaeth (2006) hwn ar faincnod yr Asiantaeth Sicrhau Ansawdd yn **www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp**

Mae'r Gymraeg yn ddisgyblaeth academaidd eang ac amrywiol o ofynion sy'n golygu creu, cyflwyno a dehongli testunau ysgrifenedig ac ar lafar, ynghyd â natur a hanes yr iaith a'r cyfleoedd sy'n agored iddi yn y byd sydd ohoni. Mae astudio'r Gymraeg yn meithrin agwedd meddwl-agored a hyblyg a'r gallu i werthuso gwahanol gysyniadau a'u cyflwyno gan ddefnyddio iaith lafar ac ysgrifenedig briodol; mae'n galluogi myfyrwyr i drafod a dehongli diwylliannau a gwerthoedd y gorffennol, ynghyd â datblygiadau cyfoes yn y byd modern.

Mae'r Gymraeg yn agored i ddylanwadau byd rhyngwladol cyfoes y mae Cymru'n rhan ohono. Mae agwedd y rhai sy'n siarad Cymraeg yn debyg i rai trigolion y byd gorllewinol yn gyffredinol ac mae'r dulliau o ysgrifennu llenyddiaeth ac o gyfathrebu yn y Gymraeg yn fwy amrywiol yn awr nag y buont erioed. Mae'r iaith yn wynebu newidiadau sylweddol sy'n gosod cyfrifoldeb penodol ar y rhai hynny sy'n ymwneud â'r pwnc i ddiogelu ei sail a'i phriodoleddau wrth iddi ddatblygu ac wrth i'r ystod o gyfleoedd a'r dulliau newydd o ddefnyddio'r Gymraeg gyflwyno eu hunain.

Calon y pwnc yw'r Gymraeg, ei natur, ei hanes a'i sefyllfa bresennol, a llenyddiaeth Gymraeg ym mhob cyfnod. Gall astudiaethau llenyddol gynnwys drama, ffilm, chwedlau ac ysgrifennu creadigol. Nodweddir y Gymraeg gan ei hanes maith a chryfder ei thraddodiad llenyddol ers y Canol Oesoedd. Mae rhai cyrsiau gradd yn cynnig y cyfle i astudio cyfnodau penodol, neu fathau o lenyddiaeth, neu agweddau ar iaith yn fanwl.

Gall gradd yn y Gymraeg gynnwys astudio un neu fwy o'r ieithoedd Celtaidd eraill a'u llenyddiaeth, gwaith mewn ieithoedd eraill a sefyllfaoedd amlieithog tebyg. Gellir cynnwys disgyblaethau academaidd eraill gan gynnwys theori llenyddiaeth, ieithyddiaeth, ieithoedd modern, Saesneg, astudiaethau clasurol, hanes, gwleidyddiaeth a chymdeithaseg. Mae rhai myfyriwr yn cyfuno'r Gymraeg gyda'r pynciau hyn, ac mae yna nifer o gyfleoedd ar gael ar gyfer astudiaethau rhyngddisgyblaethol a chymharol.

Gyda chynnydd yn y galw am wybodaeth o'r Gymraeg mewn nifer o feysydd, yn enwedig addysg, y cyfryngau, llywodraeth leol a'r sector cyhoeddus, mae'r radd yn gymhwyster gwerthfawr ar gyfer swyddi sy'n gofyn am bersonél dwyieithog ac mae graddedigion yn y Gymraeg yn dilyn amrywiaeth o yrfaoedd. Yn dilyn y Ddeddf Iaith (1993), cynyddodd y galw yn fawr am weinyddwyr dwyieithog mewn llywodraeth leol, y gwasanaeth iechyd, awdurdodau heddlu a masnach yn gyffredin. Cyflogir nifer o raddedigion yng Nghynulliad Cenedlaethol Cymru mewn amryw o swyddi.

Employers' criteria

Employers have identified the attributes they seek in the graduates they recruit. The qualities or attributes used here have been identified and categorised by employer members of the Policy Forum of the Council for Industry and Higher Education. They are the key components they have observed in those individuals who can transform organisations and add value early in their careers (see the report Graduates Work by Professor Lee Harvey, CIHE 2001) and comprise:

- **Cognitive skills/brainpower**: The ability to identify and solve problems; work with information and handle a mass of diverse data, assess risk and draw conclusions.
- **Generic competencies**: High-level and transferable key skills such as the ability to work with others in a team, communicate, persuade and have interpersonal sensitivity.
- **Personal capabilities**: The ability and desire to learn for oneself and improve one's self awareness and performance. To be a self starter (creativity, decisiveness, initiative) and to finish the job (flexibility, adaptability, tolerance to stress).
- **Technical ability**: For example, having the knowledge and experience of working with relevant modern laboratory equipment.
- **Business and/or organisation awareness**: An appreciation of how businesses operate through having had (preferably relevant) work experience.
- **Practical elements – vocational courses**: Critical evaluation of the outcomes of professional practice; reflect and review own practice; participate in and review quality control processes and risk management.

An individual student may identify examples of their own skills development during the course of study and may map these against the list of attributes and qualities typically desired by employers, so enabling the student to translate their learning experiences into language helpful to employers.

Glossary of competencies

Achievement orientation – Maintains and inspires a results-driven approach, focuses on results and critical performance indicators.

Adaptability/flexibility – Maintains effectiveness in a changing environment.

Analysis – Relates and compares data from different sources, identifying issues, securing relevant information and identifying relationships.

Attention to detail – Accomplishes tasks through a concern for all areas involved, no matter how small.

Commercial awareness – Understands the economics of the business. Understands the business benefits and commercial realities from both the organisation's and the customer's perspectives.

Creativity – Generates and/or recognises how best practice and imaginative ideas can be applied to different situations.

Decisiveness – Makes decisions and takes action.

Financial awareness – Understands basic financial terminology used in organisations and is able to construct and maintain simple financial records.

Image – Presents a strong, professional, positive image to others at all times. This image is consistent with all people (colleagues, management and peers, customers etc.).

Influencing – Influences others by expressing self effectively in a group and in one to one situations.

Initiative – Identifies opportunities and is pro-active in putting forward ideas and potential solutions.

Interpersonal sensitivity – Recognises and respects different perspectives and appreciates the benefits of being open to the ideas and views of others.

Judgement – Determines the most appropriate course of action and draws conclusions that are based on logical assumptions that reflect factual information.

Leadership – Takes responsibility for the directions and actions of a team.

Life-long learning and development – Develops the skills and competencies of self, peers and colleagues through learning and development activities related to current and future roles.

Listening – Shows by a range of verbal and non-verbal signals that the information being received is understood.

Organisation understanding – Understands the organisation's work environment, internal politics, business objectives and strategy.

Organisational sensitivity – Is sensitive to the effect of his or her actions on other parts of the organisation and adopts a mature, direct and up front style in dealing with conflict.

Personal development – Maintains an up to date personal development plan and takes action to ensure personal development takes place.

Planning and organising – Establishes a course of action for self and/or others to accomplish a specific goal. Plans proper assignments of personnel and appropriate allocation of resources.

Process operation – Begins, controls and concludes a complete process or procedure.

Professional expertise – Keeps up to date with developments in own areas of professional specialisation. Applies a breadth and/or depth of professional knowledge.

Questioning – Uses an appropriate approach to questioning in order to gain information from which to draw conclusions and/or assist in the making of decisions.

Teamwork/working with others – Builds and develops appropriate relationships with academic staff, peers, colleagues, customers and suppliers at all levels within an organisation.

Technical application – Has experience of using modern technology.

Technical knowledge – Develops and maintains a knowledge of key trends in technology.

Tolerance for stress – Maintains performance under pressure and/or opposition.

Written communication – Expresses ideas effectively and conveys information appropriately and accurately.

Reflective questions

Raising self-awareness is a prerequisite to building up lifelong learning capabilities. Many courses have key points during study when students are tasked with reflecting on and evidencing their achievements. The results can be fed into the writing of CVs and Progress Files. The following questions may be used by students, guided by tutors or lecturers, to help with reflection and evidencing. Students should also be encouraged to consider any work experience and or voluntary and extracurricular activities.

Students may use these questions in conjunction with the template when reflecting on skill development and undertaking personal development planning (PDP). The list is not exhaustive; it is designed to stimulate the student to reflect on the skills that they are practicing, to raise self-awareness and the ability to articulate these skills. Using this approach will also help students become familiar with competency based interviewing and assessment.

Achievement orientation
Maintains and inspires a results-driven approach, focuses on results and critical performance indicators.

- Recall an important goal that you were set in the past. What strategies did you use to achieve it? What was successful?
- How do you meet tight deadlines?
- Thinking about a difficult task you were required to undertake, what extra effort did you exert to achieve the goals set and accomplish a task?
- Thinking about a time when you did not achieve a goal or meet a deadline, what did you do? What was the outcome?
- Can you recall a time when you were particularly effective on prioritising tasks and completing a project on schedule? How did you approach this and what was the outcome? What did you learn?
- Describe a project or idea that was implemented primarily because of your efforts. What was your role? What was the outcome?
- There are times when we work without close supervision or support to get the job done. Think about a time when you found yourself in such a situation. What did you do? What was the outcome?

Adaptability/flexibility
Maintains effectiveness in a changing environment.

- Consider a time when you had to adopt a new approach or style to accomplish a task. How did you manage the transition?
- Think about a situation in which you had to adjust to a colleague's working style in order to complete a project or reach your objectives. What did you do?
- What do you do when priorities change quickly? Thinking about an example of when this

happened, what did you do? What was the outcome?
- Consider an example of an important goal that you set yourself in the past. Thinking about your success in reaching it, how did you approach it?
- Reflect on a situation in which you had to adjust to changes over which you had no control. How did you handle it?
- What tends to work with one person does not necessarily work with another. Think about a time when you had to be flexible in your style of relating to others. How did you vary your communication style with a particular individual? What was the result?

Analysis
Relates and compares data from different sources, identifying issues, securing relevant information and identifying relationships.

- When you have to analyse information and make a recommendation, what kind of thought process do you go through? What is your reasoning behind your decision?
- How do you ensure you have captured the key information from written or verbal information presented to you?
- What are your considerations when presenting a solution to a work issue?
- When presented with a problem, how do you go about finding a resolution?
- How do you deal with data from a variety of sources, to identify the key information?
- How would you identify appropriate data sources to inform your decisions?
- When presented with several points of view what do you do to ensure you reach the most appropriate conclusion?
- How do you distinguish between different types of information provided to inform your conclusions?

Attention to detail
Accomplishes tasks through a concern for all areas involved, no matter how small.

- How do you deal with minor considerations as part of a bigger task?
- What level of feedback do you request from others on ideas or suggestion you have for a project?
- What checks do you put in place to ensure written work is correct?
- How do you ensure the facts that you have are correct and complete?
- When undertaking a specific project or task, how do you ensure details are not overlooked?

Commercial awareness
Understands the economics of the business. Understands the business benefits and commercial realities from all stakeholder perspectives (customer, supplier, employer, employee, shareholder etc.).

- Consider a commercial activity you have been involved in, either paid work, voluntary work, participating in fundraising and so on. Think about the issues you have come across and how these might influence the wider activity. Do you look at this from one perspective, e.g. monetary, or do you take other elements into account such as marketing

and selling and how these influence each other?

- When considering economic issues, do you consider business implications such as increased revenue/profit, decreased expenditure, increased productivity, and improved company image and market share?
- Have you ever identified a business opportunity? How did you go about it? What did you consider?
- How would you go about developing a business plan for e.g. getting a job? Do you consider the commercial constraints that might be applied when looking at salary?
- Do you analyse financial trends (e.g. income, spend, surplus, deficit) and forecast accordingly when setting your personal budget?

Creativity
Generates and/or recognises how best practice and imaginative ideas can be applied to different situations.

- Think about a problem that you have solved in a unique or unusual way. What was the outcome? Were you satisfied with it?
- When presented with a variety of different scenarios, what is your preferred course of action?
- How do you approach a conventional task?
- How do you attempt to break deadlock situations?
- We sometimes fail to consider new ideas because they seem untried and/or untested. Describe a time when you found yourself in a situation similar to this. What happened?
- What do you do to encourage self / others to think laterally and to generate ideas?
- How do you present an idea that you know may be considered unusual to your family / friends/lecturers/manager?
- Think about the most significant or creative presentation which you have had to complete. How did you approach it? What was the result?

Decisiveness
Makes decisions and takes action.

- When making a controversial decision how do you deal with criticism?
- How do you feel about making work commitments on behalf of other people?
- What do you do when something needs to be done but no one is there to give you guidance?
- How do you go about getting agreement to a new idea?
- How do you make a decision based on incomplete information?
- Whose needs are most important in the decision making process? How do you decide?

Financial awareness
Understands basic financial terminology used in organisations and is able to construct and maintain simple financial records.

- How do you plan the costs of a project or activity?
- What financial aspects do you consider when setting up a project/activity? How do you

measure that you are on target?

- How do you know what financial expectations/demands might be made in the life cycle of a project/activity?
- How might you control over or under spending on a project/activity?
- How do you go about managing your personal finances?

Image
Presents a strong, professional, positive image to others at all times. This image is consistent with all people (colleagues, management and peers, customers etc.).

- How do you present yourself when meeting people for the first time? What do you pay special attention to?
- How do you introduce yourself in social gatherings or new and different situations?
- What do you do to ensure people listen to your ideas?
- What do you reflect on at the end of the working day? Do you spend more time on what went well and why, or do you analyse the problems that occurred?
- How would the people you work with/your friends, describe you?
- How do you know when your boss and / or friends value your contribution?

Influencing
Influences others by expressing self effectively in a group and in one to one situations.

- Describe a time when you were able to convince a sceptical or resistant person to purchase a product or use your skills?
- Think about a specific instance in which you were able to encourage others to take a chance with a new idea or project. What did you do?
- Describe a situation in which you were able to positively influence the actions of others in a desired direction. How did you approach it? What happened?
- Consider a time when you used your leadership ability to gain support for what initially had strong opposition. What was the outcome?

Initiative
Identifies opportunities and is pro-active in putting forward ideas and potential solutions.

- What was the best idea that you came up with in your studies? How did you apply it? What was the result?
- Think about the last time that you undertook a project that demanded a lot of initiative. How did you approach it? What was the outcome?
- Recall a time when you had to use your verbal communication skills in order to get a point across that was important to you. How did you plan for this? What was the result?

Interpersonal sensitivity
Recognises and respects different perspectives and appreciates the benefits of being open to the ideas and views of others.

- It is sometimes difficult to form an amicable relationship with new people. Think about an

example of how you have coped with such a situation. What did you do?

- Give a specific example of a time when you had to address an angry colleague. What was the problem? What was the outcome? How would you assess your role in diffusing the situation?
- Think of an example when you initiated a change in a process or operations in response to feedback. What happened?
- It is very important to build good relationships at work. Consider a time when you built a successful relationship with a difficult person. What did you do? What was the outcome?
- Being successful in a task/activity often depends upon having good relationships with others. Think about a time that you were able to accomplish a task because you had such a relationship with another person. How did this impact your work?
- Consider a time when you built rapport quickly with someone under difficult conditions. What did you do? What was the outcome?
- Consider the key ingredients in developing and maintaining successful formal/business relationships? Think about how you made these work for you. What was the situation? What outcomes did you achieve?

Judgement

Determines the most appropriate course of action and draws conclusions that are based on logical assumptions that reflect factual information.

- What approach do you use to provide a rational solution to a problem?
- How selective are you in the use of relevant, available information?
- When supporting your point of view, what are your key considerations?
- How do you react to complex information when trying to reach a conclusion?
- What information do you take into account before coming to a conclusion?
- What do you do if your course of action is not accepted?
- How do you react to having more than one solution provided to solve an issue?
- What do you do when other people put forward ideas to help solve problems?

Leadership

Takes responsibility for the directions and actions of a team.

- When working on a team project have you ever had an experience where there was strong disagreement among team members? What did you do?
- Describe your leadership style and give an example of a situation when you successfully led a group.
- Tell about a time that you had to work on a team that did not get along. What happened? What role did you take? What was the result?
- Tell about a time when you were able to build team spirit in a time of low morale.
- Tell about a time when you were able to gain commitment from others to really work as a team.
- How have you recognised and rewarded a team player in the past? What was the situation? What did you do?

Lifelong learning and development

Develops the skills and competencies of self, peers and colleagues through learning and development activities related to current and future roles.

- What have you done outside of formal study to develop your skills?
- Have you created a specific development plan? How did you identify your needs? What were the components of the development plan? What was the outcome?
- There are times when people need extra help. Think about an example of when you were able to provide that support to a person with whom you worked / studied. What did you do? What was the result?
- Think about a time when you had to accept change and make the necessary adjustments to move forward. What were the change / transition skills that you used?
- It is important to maintain a positive attitude at work when you have other things on your mind. Thinking about a situation when you were able to do that, what was the outcome?
- Keeping others informed of your progress / actions helps them feel comfortable. What do you do to keep your lecturer/supervisor advised of the status on projects?
- Think about a time when you took responsibility for an error and were held personally accountable. How did you feel? What did you do?
- When you have been made aware of, or have discovered for yourself, a problem in your work performance, what was your course of action? How did you resolve the situation? What did you learn?
- What have you done to further your own professional development outside of your formal studies?

Listening

Shows by a range of verbal and non-verbal signals that the information being received is understood.

- How do you ensure people know that you have taken account of their views?
- Think about a time when your active listening skills really paid off for you. What was the situation? What did you achieve?
- What have you done to improve your listening skills?
- Thinking about a situation when you had to present complex information, how did you ensure that the other person understood?
- Think about a recent successful experience in making a speech or presentation. How did you prepare? What obstacles did you face? How did you handle them?
- Consider a time when you were particularly effective in a talk you gave. What was different in making it effective?

Organisation understanding

Understands the organisation's work environment, internal politics, business objectives and strategy.

- Describe how you are able to contribute to an organisation's / a job's goals. What are the goals/mission?
- How do you keep your knowledge up to date with the ongoing changes in the industry

you are considering working in?

- Consider a politically complex work situation in which you worked. What did you do?
- How do you ensure you are familiar with the relevant internal processes of an organisation?

Organisational sensitivity

Is sensitive to the effect of his or her actions on other parts of the organisation and adopts a mature, direct and up front style in dealing with conflict.

- Consider a time when you made an intentional effort to get to know someone from another culture. What did you do? What was the outcome?
- What have you done to further your knowledge/understanding about diversity? How have you demonstrated your learning?
- Consider how your values and beliefs impacted your relationships with others. How do you know?
- What measures have you taken to make someone feel comfortable in an environment that was obviously uncomfortable with his or her presence?
- Think about a time when you had to adapt to a wide variety of people by accepting/ understanding their perspective. What was the outcome? What did you learn?
- Consider a situation when you successfully adapted to a culturally different environment. What did you do?
- Think about a specific example of how you have helped create an environment where differences are valued, encouraged and supported. What did you do?
- Think about a time when you were particularly perceptive regarding a person's or group's feelings and needs. What did you do? What feedback did you get / seek?
- How have you reacted to conversations between others that were clearly offensive to non-participants? What did you do?
- Think about a time that you evaluated your own beliefs or opinions around issues of difference. What did you do?

Personal development

Maintains an up to date personal development plan and takes action to ensure personal development takes place.

- How do you record your achievements?
- How do you decide whether a task has gone well or not and what you would do differently next time?
- What activities do you undertake to develop your skills?
- How do you find opportunities to develop your skills and competencies?
- How often do you update your learning log?
- What do you do to gain feedback on your performance?

Planning and organising

Establishes a course of action for self and/or others to accomplish a specific goal. Plans proper assignments of personnel and appropriate allocation of resources.

- How do you typically plan your day to manage your time effectively?
- How do you differentiate and prioritise short and long term needs?
- How do you plan for a meeting to ensure the required outcomes are met?
- What processes do you put in place before starting a project?
- What do you do to manage and monitor an assignment or project to a successful conclusion?
- How do you ensure deadlines you are given are met? How do you know?
- What processes do you use to achieve tasks and assignments within the required timescale?
- What action do you take to meet changing work priorities that affect others as well as yourself?
- How do you keep track of work schedules and deadlines?

Process operation
Begins, controls and concludes a complete process or procedure.

- What do you do to ensure you are familiar with relevant company processes or procedures?
- How do you ensure that you are implementing these in the correct way?
- Why is it important to operate processes and procedures effectively? What might be the impact of not doing this?

Professional expertise
Keeps up to date with developments in own areas of professional specialisation. Applies a breadth and/or depth of professional knowledge.

- What do you do to ensure you are up to date in your area(s) of speciality? How do you ensure that any new information is applied effectively into your work?
- Effectively presents professional information to others.
- When planning, designing and implementing solutions, how do you make best use of your professional knowledge?
- How do you share professional expertise with others?
- What opportunities do you create to demonstrate knowledge of the latest methodologies and processes in your specialist area?
- Are you, or are you planning to be, part of a professional network?
- Do you actively seek new people to become part of your professional network?
- Discuss a time when your integrity was challenged. How did you handle it?
- Think about a specific time when you had to handle a tough problem that challenged fairness or ethical issues. What did you do? What was the outcome?
- Think of examples of how you have acted with integrity in your job/work relationships.
- Describe a time when you were asked to keep information confidential. What did you learn about yourself?
- Trust requires personal accountability. Consider a time when you chose to trust someone? What was the outcome?

Questioning

Uses an appropriate approach to questioning in order to gain information from which to draw conclusions and/or assist in the making of decisions.

- Because people have different preferences, what works with one person does not necessarily work with another. Consider a situation where you had to be flexible in your style of relating to others in order to achieve your goals. How did you vary your communication style with a particular individual? What happened?
- Think of a situation when you had to use your verbal communication skills in order to gain information that was important to you. How did you approach this? What was the outcome?
- Reflect on a situation when you had to present complex information. How did you ensure that the other person understood?

Teamwork/working with others

Builds and develops appropriate relationships with academic staff, peers, colleagues, customers and suppliers at all levels within an organisation.

- Think about an example of how you worked effectively with people to accomplish an important result. What did you do? What was the result?
- Consider a situation when you have been successful at empowering a group of people in accomplishing a task. What did you do? Why did it work well?
- Describe a situation in which you had to arrive at a compromise or help others to compromise. What was your role? What steps did you take? What was the end result?
- Think of your best example of working co-operatively as a team member to accomplish an important goal. What was the goal or objective? To what extent did you interact with others on this project?
- Think about the most difficult challenge you have faced in trying to work co-operatively with someone who did not share the same ideas? What was your role in achieving the work objective? What was the long term impact on your ability to get things done while working with this person?
- Gaining the attention of others can be difficult. Think of a specific example when you had to do that in order to achieve a team goal. What did you do?
- Think about a work experience where you had to work closely with others. How did it go? How did you overcome any difficulties?
- Think about a team project. What did you do to contribute toward creating a teamwork environment?

Technical application
Has experience of using modern technology.

- How do you identify your skills in using modern technology?
- What do you do to ensure you have access to the latest technologies in your field?
- How do you keep your information technology skills up to date?

Technical knowledge
Develops and maintains a knowledge of key trends in technology.

- What do you do to ensure you understand how organisations work and how technology supports this?
- How do you ensure you are able to demonstrate a good knowledge of the industries relevant to the degree subject you are studying?
- How do you think technological knowledge can support the planning, designing, or implementation of solutions?
- How do you keep up to date with what is happening within your technological field over and above what is required for the degree programme?
- How do you demonstrate your knowledge of technological advances and the impact of these on working practices and organisational strategies?

Tolerance for stress
Maintains performance under pressure and/or opposition.

- Describe a time when you were able to effectively communicate a difficult or unpleasant idea to a superior. What did you do? What was the outcome?
- What do you do when priorities change quickly? Think of a situation when this happened. How did you react?
- Think about a time when you were particularly effective in prioritising tasks and completing a project under tight time constraints. What did you do?
- Thinking about a time when you achieved a great deal in a short amount of time, how did you feel? What was the outcome?

Written communication
Expresses ideas effectively and conveys information appropriately and accurately.

- We often need to document what work we have done in writing. Think of an example of how you have done that in the past. What was the outcome?
- Consider a time in which you had to use your written skills in order to get an important point across. How did you approach this? What was the result?
- Think about the most significant written document/report/presentation which you had to complete. What was difficult? What was easy? How did you feel about the result? What would you have done differently?

Further considerations and links

The Bologna Declaration: Tuning Project.

In the summer of 2000, a group of universities took up the Bologna challenge collectively and designed a pilot project called "Tuning educational structures in Europe". The Tuning project addresses several of the Bologna action lines and notably the adoption of a system of easily readable and comparable degrees, the adoption of a system based on two cycles and the establishment of a system of credits. More specifically, the project aims at identifying points of reference for generic and subject-specific competencies of first and second cycle graduates in a series of subject areas: Business Administration, Education Sciences, Geology, History, Mathematics, Physics and Chemistry. Competencies describe learning outcomes: what a learner knows or is able to demonstrate after the completion of a learning process. This concerns both subject-specific competencies and generic competencies like communication skills and leadership.

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The Council for Industry and Higher Education
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Acknowledgements

Student Employability Profiles

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The Council for Industry and Higher Education's mission is to advance all kinds of learning and research through the fostering of mutual understanding, co-operation and support between higher education and business. The CIHE is a Council of leading people from a wide range of businesses, universities and colleges. They lead in developing an agreed agenda on the learning issues that affect our global competitiveness, social cohesion and individual development, commissioning research so that policy can be better based on evidence, debating their agenda and research with Government and its agencies, and working with them and other organisations to effect change.

Graduate Prospects works in partnership with the most prominent official bodies in higher education. It has been bringing students, graduates and recruiters together for over 30 years. Graduate Prospects works in partnership with the Association of Graduate Careers Advisory Services (AGCAS) to maximise the opportunities and support available to all students and graduates throughout their career search.

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APPENDIX 3   Examples of models of practice for Personal and Professional Development in the University's courses at each College

PPD	Stage 1	Stage 2	Stage 3
Camberwell BA Photography	PPD aims to help you understand how to make choices, and to understand and direct the consequences of those choices – both academic and professional; it establishes understanding of the general community of visual arts and develops skills and awareness fundamental to any creative future. PPD addresses the need to prepare you for leaving college from the outset of the course, to support and make explicit the development of key skills and your sense of yourself, giving you the ability to take responsibility for your own learning and professional development. PPD works by providing a core learning experience, which you can fully exercise in your engagement with the course as a whole. Having successfully completed PPD you will be able to: - Adopt an approach to work that is professionally informed - Envisage, pursue and create realistic opportunities for employment, self-employment, research or further study. - Use the study skills acquired, in a commitment to, and a capacity for ongoing learning and continuing professional development.		
	Level 1 Skills for Study 10 credits - Demonstrate awareness of an ability to capitalise on opportunities offered by the course and its context - Demonstrate skills in personal organisation and evaluation, oral and written communication, working in a group, presentation, and basic IT.	Level 2: The Professional Context 10 credits - Review your development and establish personal objectives - Made decisions in relation to academic profile and future plans - Demonstrate development of personal skills and understanding of professional contexts.	Level 3: Transition Planning (integrated) - Demonstrate an understanding of the relationships between professional context, individual practice, research/further study and identify yuour current position/career plan in relation to these or other areas. - Demonstrate awareness and knowledge of professional practice and the ability to prepare related plans.

PPD	Stage 1	Stage 2	Stage 3
Central S M BA Fine Art	Personal and Professional Development (PPD) is intended to help you: • become a more effective, independent and confident self-directed learner • understand how you are learning and relate your learning to a wider educational or professional context • improve your general skills for study and career management • articulate your personal goals and evaluate progress towards their achievement; and • encourage a positive attitude to learning throughout life From the beginning, the Course addresses the need to prepare you for professional life by supporting you in acquiring the key skills and attributes that will enable you to take responsibility for your own learning and career development. Throughout the course PPD is embedded in many aspects of both studio work and contextual studies as a planned part of their structure and learning content. The study of fine art develops many transferable skills, such as creative thinking, communication skills and the ability to work collaboratively. Such attributes are highly valuable to employers and in the freelance arena where they play their part in equipping you for a professional career and the generic activities of creative practice		
	PPD is an explicit focus of Unit 2 in Stage 1 where the focus is on generic study skills and orientation (10 credits)	Unit 11 in Stage 2 when it becomes more closely related to professional practice in fine art (10 credits)	In Stage 3 PPD is integral to your studies.

PPD	Stage 1	Stage 2	Stage 3
Chelsea BA Textile Design	Each course within the undergraduate framework aims to support its students' ability to take responsibility for their work, their learning and their professional development. The PPD objectives are: demonstrate key transferable skills that will enhance ability to undertake career opportunities within a changing professional environment; envisage, pursue and create realistic opportunities for employment, self-employment, research, or further study; use the study skills acquired in a commitment to, and a capacity for ongoing learning and professional development. PPD is (embedded) delivered and assessed through the core units. PPD Indicative Map: Progressive outcomes in 4 areas: 1. Learning to learn; 2. Communication skills; 3. Using IT; 4. Career and employment skills		
	- Recognise learning skills required for academic development and take responsibility for your own learning. - Demonstrate basic communication and presentation skills. - Demonstrate basic IT skills - Evidence a basic knowledge regarding future professional opportunities	- Apply learning skills and demonstrate self-directed learning. - Demonstrate communication skills and use within the context of self-directed learning. - Demonstrate discipline related IT skills and use within the context of self-directed learning. - Identify personal goals, strategies and opportunities for career development.	- Evidence efficient specific personal learning strategies - Demonstrate competence in communiction skills - Demonstrate competence in a comprehensive set of discipline related IT skills - Demonstrate key transferable skills that will enhance ability to undertake career opportunities. - Evidence capacity for ongoing learning, planning and professional development.

PPD	Stage 1	Stage 2	Stage 3
LCC BA Graphic Design	Each year of the Core Unit programme includes Personal & Professional Development. The function of Personal and Professional Development (PPD) is to promote and enhance Key Skills (KS) delivery within the curriculum including independent learning. PPD promotes and supports key skills within the course. It provides an area for diagnostic assessment of student skills, encouraging students to analyze their own learning styles. It also assists students to develop a professional and personal portfolio, which illustrates learning progress, critical reflection and career direction. The key PPD skills have been mapped across to the subject disciplines. Self-assessment, team-working, reflection, independent learning, enterprise, adaptability, freedom of expression, research and analysis have been designed to provide support to develop study skills, monitor and evaluate performance and set learning and career goals. These skills play an important part in supporting and extending learning within the pathways give competencies in appropriate technical, production and computing areas. The acquisition of these skills will support you and underpin your studies in the pathways. **Key Skill areas: KS-A Communication Skills; KS-B Numerical Skills; KS-C Information Technology; KS-D Working with Others; KS-E Managing Learning; KS-F Career Skills.** The focus of development in each year of the degree programme is as follows:		
	PPD1 10 credits Managing learning and study skills KS-E* Communication skills KS-A Computer and workshop skills KS-C	PPD2 10 credits Career management skills KS-F Enterprise skills KS-D Research skills KS-C4 E3 5 Communication skills KS-E	PPD3 10 credits Career management skills KS-F Enterprise skills KS-D KS-B Research skills KS-C4 E3 5 Communication skills KS-E

PPD	Stage 1	Stage 2	Stage 3
LCF BA Fashion Design Technology	At LCF we are committed to giving you opportunities to develop a range of skills and attributes necessary for your future plans, including further study and employment. The development of these skills comes under the heading Personal and Professional Development (PPD). Through PPD we offer you a structured and supported process which will help you reflect upon your own learning, performance and/or achievement and plan for your personal, educational and career development. Many opportunities for PPD are embedded within your course and are currently visible as a set of principles which are developed and assessed as part of your assignments. There will be a natural progression in the way in which you approach your PPD during your course. PPD Principles: **Employability** – recording and promoting your own skills, experience and attributes; planning and review your career pathway; building your portfolio of experience in a variety of ways; developing both specialist and general skills. **Learning to Learn** – Strategies for a range of learning styles; information gathering, selection and research; understanding own learning preferences; analyzing and evaluating; including self and peer assessment. **Underpinning skills** – using IT; working with others; numeracy; effective communication (written/presentational); **Personal development** – confidence and self-esteem building; pursuing personal objectives (travel, language learning, etc.); personal values and beliefs; linking own learning across different domains of experience.		

PPD	Stage 1	Stage 2	Stage 3
Wimbledon BA Fine Art: Painting, Print and Digital Media, Sculpture	All the BA provision at Wimbledon College of Art aims to prepare you for professional practice and includes specific teaching, learning and assessment to facilitate your preparation. While PPD is not delivered separately (except at Stage 2), there are specific assessed learning outcomes relating to it for each unit (within the four core areas of learning) • Subject knowledge and understanding • Intellectual and academic skills • Practical and subject skills • Key attributes and transferable skills		
		Professional Studies (15 credits) involves testing your skills, focus and experience of the subject via placement opportunities: • Situate your own work and interests within a professional context; • Demonstrate critical awareness of your personal abilities, your needs for development, and of the need to manage your career.	