Who is best placed to teach courses for employers?

Professor Christopher M Snowden
Vice-Chancellor and Chief Executive
University of Surrey

Background

- Personal experience as a CEO of an international FTSE-based company, together with other roles in UK and US companies….
- With many years experience in UK and US universities with a background of collaboration with industry including short courses
- Chair of the UUK Employability, Business and Industry Policy Committee.
- Surrey – research-led university but with extensive links with over 500 business and industry partnerships including CPD and short courses, with one of the the highest graduate employment records in the UK.

What do companies want from their graduates at the start?

Skills that companies want and universities impart to their graduates:

- problem-solving and creative skills
- communication and people skills
- information technology and information management skills
- science, engineering, mathematics, technology skills
- in some areas relevant core professional skills
- business management, economics, financial management skills
- skills in languages - Chinese, Korean, Japanese, Spanish, French and German
- **Above all …ability to learn quickly and apply knowledge.**

What skill development do companies want for their employees?

- Beyond the qualifying stage of careers there is the need to maintain the level of expertise and an increasing need for continuing professional development (CPD).
- This is likely to become increasingly important as the pace of technological change and international competition increases and practitioners need to update or broaden their skills throughout their careers.
- In addition to the personal desire for employees to develop their knowledge base, employers are increasingly recognising the need to develop the work-related skills of their staff at all levels.

What do companies want from courses for their employees?

- **What level?**
  - Does it rely on secondary/FE/HE/vocational/specialist prior knowledge?
- **What mode of delivery?**
  - Short/long. Modular/short course? E-learning?
- **Outcome?**
  - Is a qualification/certification required? NVQ … MBA?
  - Training or learning?
- **Scale?**
  - 1:1 tuition, through small groups to whole workforce?
- **Cost and availability?**
- **Quality?**

What choices are there for employers?

- **In house – the employers themselves!**
  - Larger companies – training focused.
- **Professional Training Companies**
  - LearnDirect (Ufi Ltd), BPP, ePath, PSS, CPDchannel, Carlton Training (CIEH) … Some offer certification
- **Colleges**
  - Training, CPD, short courses. Certification available.
  - Modern apprenticeships
- **Universities and colleges**
  - CPD, short courses, bespoke courses. Certification & credits.
  - International engagement.

Incentives for companies to train their employees?

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Train to Gain

- Designed to help businesses of all types and sizes get the training they need to succeed.

-Managed by the Learning and Skills Council (LSC) across England

-Train to Gain has been developed from the Employer Training Pilots and uses experienced Skills Brokers who will work closely with individual businesses to:

- Identify the skills the business needs
- Pinpoint the right training
- Agree a tailored training package
- Find available funding
- Review progress

What universities offer employers

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- Higher skills for the workplace - public and bespoke short courses, CPD, modular courses. Many modes of delivery, on-site, university, E-learning and Distance Learning. Dedicated and joint delivery.

- **University of Surrey**: communications, electronics, nuclear radiation, satellite technology, automotive … leadership and management programs (RDA support) ….

- **Manchester Metropolitan University**: Fashion industry, communications, control engineering, automation ….

- **University of Central Lancashire**: Journalism, nuclear engineering ….

Case Studies of University Courses for Business and Industry

at the University of Surrey

Barbara Steel, CE Manager, University of Surrey

General Statistics for Short Courses 07-08
Engineering and Communications

- 13 Public short courses run in 2007-08, with topics from image processing to nanotechnology.

- These courses are open to anyone from industry who wants to attend. The courses vary in level from Beginners to Advanced.

- 9 Bespoke courses including:

o Payload Engineering for Astrium
o Spacecraft Systems Design for Malaysian Space Agency
o Satellite Communications for Suparco Pakistan
o Nuclear Radiation Physics Safety for Atkins Plc
o CSP Computing for the Atomic Weapons Establishment (AWE)
o Electronics Principles, Theory and Practice for a Motor Racing Company

Business Development and Liaison with Industry – Electronics and Comm's

- 500+ current Managers from industry associated with training on short courses database.

- Over 3500 electronics/comms engineers from industry have attended courses over the past 11 years
    - 85% attendees from UK, 8% EU, 7% Overseas

- Support for Surrey Satellite Technology Ltd (SSTL) continues to grow and from 2007-2009 includes courses for:
    - Malaysian Space Agency,
    - IST Pakistan,
    - MSU (Mississippi State University),
    - NATO,
    - NARSDA from Nigeria and others.

Bespoke Courses – Astrium UK Ltd

- Astrium major international manufacturer of space satellites.
- Over the past five years we have run an average of two courses per year on Satellite Payload Engineering for Astrium with an average of 20 engineers attending per course
- This course is seen as part of essential training for engineers new to Astrium
- This academic year, Astrium required 4 bespoke short courses
- The course is run over 5 days

Bespoke Courses – Atkins Plc

- The Faculty of Engineering and Physical Sciences (FEPS) runs several courses for Atkins on Safety in Nuclear Radiation Physics

- This course involves both lecturers from the University of Surrey, led by expert Professor Paddy Regan and lecturers within Atkins

- Members of the Atomic Weapons Establishment (AWE) also attended

- The course had a comprehensive syllabus which covered many aspects of safety in the building and running of Nuclear Power Stations and also included a case study on Chenobyl.

Public Course – Digital Terrestrial Television

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- Surrey runs a very popular course in Digital Terrestrial Television and many engineers from UK and overseas have attended. Companies attending include:
  - BBC
  - Channel 4 Television
  - ITV plc
  - Radio Telephone Eireann (RTE)
  - Sony
  - Toshiba
  - Arqiva
  - Cabot

- The course uses presenters from the industry including the Digital Television Group, Sony, Pace, Dolby, Sky and is constantly revised to reflect changes in industry. Another course on High Definition Television is also run along similar lines.

Public Course – Satellite Communications

- This course runs once a year at Surrey and is a flagship course for the University.

- Companies who have attended in the past include:

  - Astrium
  - DSTL
  - MoD
  - NATO
  - RAF
  - SES Astra

- The course attracts an average of 40 delegates per year and is a combination of taught theory and projects. There have been many bespoke spin-offs from this one course alone.

Professional Institutions Interaction
IET Endorsement Scheme – Quality Control

- Surrey is a founder member of the Institution of Engineering and Technology (IET) Endorsement scheme which has a stringent quality control procedure.

- The participants are subject to a major review every three years and Surrey has been awarded the Endorsement until 2010

- The QA procedures include an annual random survey by the IET of their members taking our courses. Feedback received suggests that the courses are delivering in respect of what industry requires and constructive criticism is passed on to the lecturers for action.

Continuing Education for Electronics Systems Integration scheme CEESI

- Surrey is part of 6-year joint-university programme with the "Continuing Education for Electronics Systems Integration" scheme (CEESI) as part of a combined Postgraduate programme for industry with grants funded by EPSRC.

- Grants available to individuals from UK and EU companies of £400 per course

- Surrey contributes 7 modules towards the joint MSc scheme

- **The scheme won the EuroAsia Semiconductor global prize for "*Educational Initiative of the Year 2006*"**

- The scheme is due to end in 2009 due to changes in EPSRC funding

Panel Debate
Who is best placed to teach courses for employers?

- **Dr Malcolm McVicar**
- **Vice-Chancellor, University of Central Lancashire**

- **Susan Anderson,**
- **Director of Public Services, CBI**

- **Professor John Brooks,**
- **Vice-Chancellor, Manchester Metropolitan University.**

- **Professor Christopher Snowden,**
- **Vice-Chancellor and Chief Executive, University of Surrey**