Employability and Entrepreneurship: the Role of Universities

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Aston University Birmingham UK

- Founded in 1895
  - College of Advanced Technology 1956
  - University Charter 1966

- 4 Schools
  - Aston Business School
  - Life and Health Sciences
  - Engineering and Applied Science
  - Languages and Social Sciences

- Strong reputation
  - Professionally accredited degrees
  - Industry focussed programmes
  - Employable graduates
  - Graduate entrepreneurship
Aston University:
Employable Graduates, Exploitable Research

► Industry focussed programmes where undergraduates get significant exposure to business
► Aston has been consistently in the UK’s top 10 for Graduate Employability for the last 20 years (HESA and Sunday Times rankings)
► Ranked 8th in the UK and 1st outside London for graduate employability - beating Oxbridge (2013 Sunday Times University Guide)
► Highest percentage of students taking a placement year or year abroad (HESA PI data 2010 and 2011)
► Ranked in the top 25 UK Universities most likely to be targeted by the UK’s top graduate recruiters (2013 High Flyers survey)
► Graduate recruiters rank Aston 51st in the world for the employability of graduates (2012 QS rankings)
► Top 10 UK university for producing millionaires

http://www1.aston.ac.uk/study/undergraduate/placements/
UK Policy Environment

- Universities come under the Department for Business, Innovation and Skills (BIS)
  - Government recognises the strong correlation between participation in higher education (HE), innovation and economic growth
  - Policy to improve engagement between business and HE

- Sir Tim Wilson Review 2012 for BIS
  - Better links between universities and business to improve employability and drive economic growth

- National Council for Universities and Business (NCUB) formed in 2013
  - Case studies, research, sharing best practice, policy advice

- Perkins Review 2013 for BIS
  - Increasing the numbers of scientists and engineers for industry
Wilson Review for BIS 2012: Recommendations

► Strong University-Business links are critical for innovation

► Sandwich degrees should be encouraged
   ▶ compact between students, universities, government and employers

► All full-time undergraduates should experience a structured internship

► Universities should provide opportunities for students to develop employability skills
   ▶ through the formal learning methodologies
   ▶ through placements and internships
   ▶ ensure that students can articulate the skills that they have developed

► Foundation degrees should be reaffirmed as a qualification
Typical Links with Industry and Business: Input to and Advice on Teaching Programmes

► School, Department and Course Industrial Advisory Boards
  ► Advise senior academics on course content, relevance etc

► Accreditation by Professional Institutions
  ► Accreditation panels with active business/industry participation
  ► Engineering, Pharmacy, Accountancy etc

► Bespoke and Sponsored Degree Programmes
  ► Content agreed with company, maybe partly delivered by and in the company
  ► Automotive engineering at Warwick with Tata and JLR
  ► Accountancy at Birmingham and Bristol with KPMG
  ► Foundation Degree in Power Engineering at Aston with Scottish and Southern Electricity, E.on, and National Grid
  ► Higher Apprenticeships
  ► Bespoke Masters and professional development courses
  ► ...
Typical Links with Industry and Business: Exchange of Staff

- **Visiting Academic Staff from Business and Industry**
  - Royal Academy of Engineering Visiting Professors of Design
  - Visiting Fellows, Adjunct Lecturers...
  - Lectures and laboratory classes
  - Visits
  - Design projects around actual industry problems
  - Real-life case studies

- **Industrial Secondment Schemes for Academics**
  - eg Royal Society
  - Academic staff spend 3 months to 1 year doing projects in industry
Typical Links with Industry and Business: Opportunities for Students

- **Placements**
  - Thick and thin sandwich degrees
  - Thick sandwich is a key part of the Aston model: student spends 2 years at university, 1 year in industry, final year at university
  - Sandwich year project assessed as part of final degree result
  - Thin sandwich: shorter periods spent in industry

- **Work Experience**
  - ‘Year in Industry’ students spend a year in industry before taking up degree place
  - Long vacation jobs in major companies
  - Company sponsored students: spend each vacation working with their sponsor company
  - Internships – before and after graduation - short placements with companies

- **Lectures, Visits, Worked Examples**
  - Delivered by visiting industrial speakers

- **Mentoring**
  - By alumni/alumnae and business partners
What do Employers want from Graduates? The Latest Useable, Academic Expertise +

**Employability**
- Problem solving
- Team working
- Concepts of programme management and customer service
- Confidence
- Communication skills
- Work ethic
- Understanding of business drivers and environment

**International Outlook**
- Intercultural awareness
- Language skills
- Experience overseas

**Entrepreneurship/Intrapreneurship**
- ‘Make it happen’ attitude: persistence and solutions, not problems
- The importance of the Business Case
Employability

Placements
Graduate Advantage
Curriculum
Engaging with Employers

Over 70% of Aston’s undergraduate students take ‘sandwich’ courses
* Target 2014 80%
* Target 2020 100%

International work placements
30% of total 30 + countries
International student exchange

Over 1,000 Aston undergraduate students take a 12 month industrial placement

Placement Office database advertises over 5,000 opportunities each year

Greater integration of placements into degrees
Wilson Review, 2012

Over 40% of placement students offered a job by the placement company, about half accept
Does a Placement Improve Degree Performance?

- *Placements and degree performance: Do placements lead to better marks, or do better students choose placements?*, (2011) Driffield, N.L, Foster, C.S., and Higson, H.E., Aston University.


Does a Placement Improve Career Prospects?

Further References

- Green, J.P. (2009), *The Impact of a Work Placement (or Internship) Year on Student Final Year Performance: An Empirical Study*, Paper presented at Higher Education Academy BMAF Subject Centre Conference in Cardiff
Research Conclusions

- Undertaking a placement increases degree performance
- Generally the better, more engaged students undertake placements
- Less academically strong students benefit most from a placement
- It is not the placement *per se*, but the quality of the placement that enhances academic performance
- The placement experience also confers early career benefits
Case Study 1

John McLaughlin BEng Electric and Electronic Engineering
National Instruments

“I chose to study at Aston because of the proven success the University has for placements and the high percentage of graduates employed not long after they graduate.”

“The Placements Team were extremely helpful when it came to sorting out the necessary paperwork. They also provided support and guidance whilst I was on my placement.”

“The placement experience has helped me to improve how I manage my time, strengthened my ability to work under pressure, has aided my problem solving… I have learnt how to be more professional when conducting business… one of the most noticeable changes is my presentation skills.”

“I have been offered a Graduate Scheme and Scholarship by National Instruments following my placement. Given the skills I learnt over the year I will definitely stay within this sector.”
Case Study 2

Foundation Degree in Power Engineering

- Sector Skills Council, Energy and Utility Skills (EU Skills) approached the University
- Major utility companies did not have the skilled workers they needed: cutting edge, making a considerable contribution to the industry
- Two year block release
- “The course has been useful for my work because it has been designed specifically for the industry … influenced heavily by major companies.”
- “Massive investment programme to modernise the industry infrastructure.”
Engaging with SMEs: Graduate Advantage

- A consortium of 10 universities led by Aston University
- Part funded by European Regional Development Fund
- Unique one-stop shop for Small and Medium-sized Enterprises (SMEs) to find a graduate intern
- Our interns gain real world, graduate level experience
- 2003-date: over 1700 paid internships
- Particularly successful in getting graduates into employment: 75% go into long term roles
GA Case Study: manufacturer improves quality standards

► Recruited Imran to conduct a detailed analysis of daily production output and improve their current manufacturing processes
► Imran spent a lot of time on the manufacturing lines, recording and analysing output, to establish the main causes of scrap and inconsistent production
► Imran put forward a number of suggestions some of which were adopted and led to considerable cost savings for the company
► As a result of Imran's impact, he has recently become the product development manager for their new flexible connector business
Building on Conceive, Design, Implement, Operate:

- Includes **multidisciplinary partnership opportunities** to build teamwork skills and appreciation
- Includes **commercialisation** to extend the experience into the market and explore impact
- Integrates **competitive opportunities** to add interest and simulate real-world challenges
- Encourages **entrepreneurship** by extending CDIO to encompass the whole innovation chain from concept to customer
- Integrates **sustainability** as a theme throughout the curriculum
Computing: Student Consulting Company: design, build, test, sell, support: satisfy the customer!

Delivering services to SMEs in the region
Formula Student: design, build, test, compete – and be sustainable
Employers on Campus

Pay £200 to have a stand at a Careers Fairs where 700 students attend

Offer free skills training or mock interviews (Peugeot, Enterprise Rentacar)

Offer prizes and incentives (Nestlé, Mars)

Run prestigious competitions (Npower, Undergraduate of the Year)

Guest lectures or co-deliver in the curriculum

Pay to email students
Seeking and using employer feedback to improve employability

Email received March 2012 from David Martin, Graduate Recruitment Manager

Your guys have achieved a record pass rate of 72%! In terms of prospective employability, this puts Aston in the lead versus the other UK universities.

Your mock interview sessions have clearly helped the students to prepare for assessment and selection events which is great news.
International Outlook
Growing Global Citizens

- Aston: 120 languages spoken by our Students: over 20% are from overseas
- 30% of Academic Staff from outside UK
- Opportunity for all first year students to study a foreign language
- Over 30% of placements are overseas
- Innovative cultural awareness training for staff
- Cultural awareness sessions for students
- Active Students’ Union celebration of ‘International Week’
Enterprise
Enterprise at Aston University

Global Entrepreneurship week
Santander
Business plan competitions
Aston Entrepreneurs Society
Enterprise workshops and speakers
Engineering Yes
Research

Innovation

BSEEN
UnLtd
Business Game

Start-up

Funding
E4F Incubation space
IP support

Growth

Goldman Sachs

Inspiration

Over 1000 students attended enterprise workshops in 2013/14
3 of Aston’s graduates have participated in BBC television programme, The Apprentice

15 new social enterprises set up by Aston students and staff in 2013/14
80 BSEEN businesses started in 2013/14
139 companies have graduated from the Goldman Sachs programme

http://www1.aston.ac.uk/business/graduate-entrepreneurship/
Ben and Karolina set up BSKK Inspire, a social consultancy firm who work with young offenders and people from low income, low attainment backgrounds.

Mike set up several businesses including Probox, which supplies high quality fitness supplements by subscription.

Anisa set up Beatfreeks, a social enterprise engaging young people in arts, training and leadership opportunities.

Mike was a finalist for the 2013 Birmingham Chamber of Commerce Future Face of Business Award

Sam and David set up Codevate, which is developing a tool that will teach secondary school students computer coding by using audio visual cues.

"We are so grateful to Aston for all the support. Our involvement in BSEEN and support from UnLtd has helped to give us the confidence boost to start a business."

"There is no other place like this; the people who work at BSEEN are passionate about enterprise."

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"BSEEN and UnLtd helped me develop technical and professional skills for my social enterprise and various ventures. Aston’s on-going support has been invaluable."

"The advice from BSEEN is bridging the gap between aspiration and success. Our ambitions to become self-sufficient now feel like they could soon be a reality."
Why is this so important?

► This is the future

► Degrees need to be relevant: for students and their investment and for companies and their investment

► And to drive economic growth

► Implications for curriculum and policy