Reflection on MSci Integrated Master with Industrial Experience

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Overview

- Programme overview, placement modules
- Students’ attainment and employability
- Challenges
- Implications for MSci curriculum design
MSci Computer Science Programme

• First 3 years, shared structure with BSc CS
• Fourth year modules:
  – Advanced Human-Computer Interaction
  – Data Mining
  – Elements of Distributed Systems
  – Research Methods
  – Industrial Placement
  – Fourth Year Project
Placement Modules

• Industrial Placement (10 weeks)
  – Matching companies’ briefs with students’ interests and academic expertise
  – Support: Industry mentor, academic supervision
  – Assessment: project proposal (25%), project report (discussion of the technical work as well as reflective elements) (50%), project presentation (25%)
Placement Modules

• Fourth Year Project (7 weeks placement)
  – Real world problem: design, implementation, evaluation
  – Suggestions made by industry will be discussed by a team of academics to ensure appropriate depth
  – Support: Industry mentor, academic supervisor, KBC mentor
  – Assessment- dissertation (100%) + Showcase: poster session with employers and academic staff
Students’ Attainment

• Projects outcomes
  – App development (used within company’s product suite)
  – Design and implementation of a customer portal (still in use)
  – Design of a business information system (still in use)
  – Security assessment and users’ perception of security tasks

• Degree classification: 1st and 2:1
Students’ Employability

- Employability prospect: 1st in the UK
  - All MSci students are in graduate jobs or postgraduate education
  - Most of received job offers from their placement companies
  - High level of engagement confirmed through companies’ feedback

  “I was very happy with the online service app I have developed. It is going to be used by the company”
Challenges

• Students’ overcommitment
• Students’ conflicting academic and placement’s demands
• Companies’ increased expectations wrt students’ work
• Companies’ perceived risk wrt disruptive students
• Companies’ disappointment when no student is allocated
• Academics’ limited input into students’ daily work
Opportunities

• Managing students’ expectations
  – Setting boundaries workshop
  – “Smaller companies have got a tendency to overburden students”
Opportunities

• Managing companies’ expectations
  – Flyers outlying the costs and benefits of offering placements
  – Feedback on EoI regarding feasibility:
    – “They don’t buy consultancy, they get the students to work with”
  – Introduction workshop for getting to know the students
  – KBC mediating conflicts
Opportunities

• Benefits
  – Companies advertised as offering summer interns
  – “Partner company” status

  – “Companies liked the students and what they did for them, they got parts of products or areas of investigation they didn’t know about”

  – Getting to be known in order to recruit best students
Opportunities

• Managing academics’ expectations
  – Injecting academic rigour:
    – “making sure there was some kind of research component; guide towards a solution that was more generalized“
  – Industry mentors provide feedback on students’ work
Implications for Curriculum Design

- KBC roles:
  - recruits companies
  - maintains network of existing companies
  - deep knowledge about companies
  - monitors and negotiates placement issues
  - provides additional mentorship
Implications for Curriculum Design

- Process of matching student-employer-academic
  - time scale
  - number of companies
  - students’ equal opportunities

Students’ CV and cover letter

Introduction workshop

Companies’ EoI

Academic supervisors

Students’ three choices

Student-company-academic supervisor
Framework for Designing Placement Modules

- Companies are sought to match students’ interests
- Projects proposed by companies – but their scope is sharpen with academic input
- Multiple mechanisms for ensuring communication among all stakeholders and managing their expectations:
  - Student - Industry mentor (daily)
  - Student- Academic (weekly)
  - Student, Industry mentor – KBC (when needed)
  - Academic- Industry mentor (seldom)
- Negotiating tension between development and academic rigour/ academic research.
Questions?

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