

Industry Sponsored Degree Programmes in the Department of Civil and Building Engineering, Loughborough University

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This case study explains how a consortia of construction companies sponsor undergraduate degree programmes where the University provides the technical education and the sponsoring companies provide professional and commercial development.

Reasons for engagement

In the late 1980s the Department only had degree programmes in Civil Engineering and a small programme in Building Services Engineering. This was a narrow base from which to serve the construction industry. The department, as part of its commitment to serve its industry and to be the most industry-friendly University department globally, was keen to expand its portfolio of degrees to cover the broad spectrum of skills required by the industry (see Newman – CS13).

The experience is that construction companies every ten years or so become discontented with the quality and skills of graduates available. The late 1980s was such a time. In particular the industry was complaining about the graduates from building degrees and from quantity surveying degrees which were, at that time, more focussed on professional practice rather than construction companies.

The engagement

As then Head of Department my colleagues joined me in inviting the major contractors to a meeting and proposed the concept of sponsored degrees. After this meeting three champions from industry emerged: Mike O'Reilly from Wimpey, Andrew Marr from Laing and Eric Ireland from Tarmac. These champions provided the industrial leadership that encouraged the industry to follow.

After many months of negotiations two consortia were formed; one sponsoring a degree entitled 'Construction Engineering Management' accredited by the Chartered Institute of Building and one entitled 'Commercial Management and Quantity Surveying' accredited by the Royal Institute of Chartered Surveyors.

The arrangement was that the day the student started their degree programme they also joined their sponsor's company. The sponsoring company would provide to the student:

- an annual bursary
- a year in industry
- help with project or other coursework
- a job offer on graduation

The sponsoring companies also provided a 'top-up' fee to the department which enabled enhancements to be provided to the degree programme.

Issues

Industry is nervous about dealing with Universities and are frequently put off by what they would see as a lack of professionalism. Thus to deal with industry, University staff have to behave professionally, meet deadlines, attend meetings on time, dress as executives and adopt industry values. Competitor Universities tried to develop alternative proposals during the negotiation period when we were setting up these arrangements. We were vulnerable to another University attracting our sponsors away from us. However the most satisfying comment came from one sponsor referring to another University said 'they dressed as if they were on holiday, they spoke as if they were on holiday, they didn't seem ready to do real business', and then added 'I think we have all got used to dealing with well dressed people from Loughborough.' To some that comment may seem trite but embedded in it was the implication that we had achieved the professional respect of our industrial colleagues. A key and important industry value is for work to be invoiced. If industry isn't prepared to pay for a service they don't value that service.

Benefits

For 18 years we have had a flow of 60-100 sponsored students each year. During a downturn in national demand for our subjects in the 1990s our student recruitment figures stayed buoyant.

A similar consortium model was adopted by the Department of Electronic and Electrical Engineering for their Systems Engineering

degree programme and Wolfson School of Mechanical and Manufacturing Engineering for their Innovative Manufacturing Engineering programme and later in our Department we achieved a sponsored Civil Engineering Degree.

The relationship between the Department and industry is strong and ongoing.

Other outcomes

The Department has gone on to build other relationships with industry including the European Construction Institute, Centre for Innovative and Collaborative Engineering, Innovative Manufacturing and Construction Research Centre, Off-Highway Plant and Equipment Research Centre, Health and Care Infrastructure Research and Innovation Centre.

All this experience has taught us that the best way to manage industrial interactions is to embed them so that you have a clearly identified and badged unit or centre performing a function that industry can relate to, influence, help manage and deal with. When asked to deal with the 'University' the relationship is not focussed enough. When left at the level of personal relationships it is unlikely to be sustainable.

Academic/Industrialist/Student perspective

Academic: we have no questions relating to the modernity or relevance of our degrees. As industry is part of the programme design and management modernity and relevance are built in.

The industrialists get the quality of graduates they require. In 2008 two of our graduates won the Chartered Institute of Building's Gold and Silver medals in the Project Manager of the Year award.

Industry's engagement can be seen on graduation day when the training officers come to see 'their' students graduate, note 'their' students, not 'our' students.

Students obtain a good education linked to a sound training. Only industry can offer careers to students, thus to the benefit of the student the University and industry work together. The students' annual bursary, salary for summer vacation work and salary for the year in industry means that students can graduate without debt as well as having secured a job.

Reflections

If we had to do it all again we would do it 10 years earlier. We might even have privatised the Department and attracted even more industrial investment and industrial focus into our work.

Context

Professor Ronald McCaffer was the Deputy Vice-Chancellor of Loughborough University from 1997 to 2002, Dean of the Faculty of Engineering from 1992 to 1997 and Head of Civil and Building Engineering from 1987 to 1993. His previous employers include Babbie, Shaw and Morton, The Nuclear Power Group and Taylor Woodrow. Three undergraduate degree programmes in the department are currently sponsored by industry which include: Amec, Balfour Beatty, Bovis Lend Lease, Carillion, Costain, GallifordTry, hbg, Laing O'Rourke, Kier, ROK, Norwest Holst, Shepherd, Sir Robert McAlpine, Skanska, Taylor Woodrow and Walter Lilly.

