A CASE STUDY: HOW TO ADDRESS THE CRITICAL ISSUE OF EMPLOYABILITY FOR CONSTRUCTION PROFESSION STUDENTS

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Abstract

Employability is a critical issue in construction education. Employability is more than students obtaining employment upon graduation.

The concept is far more ranging, and should encompass enabling students to acquire the knowledge, personal and professional skills and encouraging attitudes that will support their future development and employment.

This paper describes two case studies relating to how the true concept of employability can be incorporated into the construction higher education curriculum.

Case study 1 was a collaborative venture with contributions from a higher education provider, employers, students and a professional body (Association of Building Engineers). It outlines the whole process from course inception through to graduation and feedback. Thus it presents a valid model for other higher education providers of construction courses to adapt or adopt.

Case study 2 outlines how the opportunity of a degree programme revalidation process was utilized to introduce modules which would enhance students' employability on graduation.

Key words: Continuing Professional Development (CPD), Employability, and Learning Outcomes.

1. INTRODUCTION

The approach adopted by Sheffield Hallam University (SHU) in relation to 'Employability' is distinctive because it is based upon a long tradition of providing professional and vocational awards.

This paper outlines the aspects of the approach, and utilises a case study to prove its validity. Part of this valid approach was the establishment of SHU's 'Employability Framework' in 2004.

Further in 2005 Sheffield Hallam University was awarded national recognition as a 'Centre for Excellence in Teaching and Learning in Employability'.

2. DEFINING EMPLOYABILITY

'Employability' refers to a range of potential work activities and these can include:

- Paid/self employment
- Creative/artistic work
- Work in/for the community
- Family responsibilities

Thus the definition adopted by SHU is "Enabling students to acquire the knowledge, personal and professional skills and encouraging attitudes that will support their future development and employment".

In order to address the issues encompassed within the SHU definition we have incorporated a strategy based upon a distinctive approach. SHU's approach is distinctive because it concentrates on 'integrating and embedding' a coherent set of curriculum features within all of its awards.

Integration: bringing together all the features (e.g. through a vehicle such as placement) so that students are able to make the relevant connections.

Embedding: having learning outcomes with relevant learning and teaching methods and assessment, which are all aligned, presenting a truly holistic approach.

Therefore it is vital to have a valid curriculum designed with an input from all relevant sources, and linking learning outcomes to appropriate methods of assessment. The teaching methods should enable the material to be delivered and tested, hence the utilisation of a 'teaching vehicle'.

The Construction Industry Council (UK) which represents construction professionals is a partner in Construction Skills, the Sector Skills and Construction Industry Training Board (CITB) Northern Ireland. Construction Skills represents the whole of the UK construction industry. The four key goals of Construction Skills have been established as:

- Reducing skills gaps and shortages
- Improving performance
- Boosting skills and productivity
- Improving learning supply

Employers and employees benefit from this approach by improving the quality of training and education on offer to meet both employers and employee needs. Further it ensures that the future skills needs of employers and employees are addressed (in line with SHU's definition of employability).

The above noted goals raise three vital questions:
1) How can employability enhance the curriculum?
2) How can employability enhance graduate employment?
3) How can employers be engaged. [1]

Figure 1 provides a pictorial guide for addressing these critical questions, it also depicts their interlinking. What is evident from the inspection of Figure 1 is that the three issues/questions cannot be treated as mutually exclusive. Employer contact and consultation influences the curriculum content which in turn impacts upon the employability agenda.

2.1 Case study 1: the Association of Building Engineers (ABE)

Employers require graduates that can transform their organisations; this in turn requires higher education awards (courses) to transform students so that they have the attributes required for employment.

In order to transform graduates have to transfer their learning to employment. However, this transfer is not automatic. An aid to transfer is setting the learning in a relevant context, i.e. allowing connection to be seen and made. This aspect was a critical fact in the case study, now described in detail.

2.1.1 Overview

The Built Environment Division at SHU, UK was approached by the ABE with regard to investigating the possibility of developing and providing a specifically tailored, professionally-relevant degree (fully addressing the employability agenda) for its non-graduate membership. Employers through the ABE had identified the education, skills and competencies required of their employees, also members of the ABE had noted what they needed in order to further their careers. The requirements of employers and employees were not incompatible. SHU was keen to work with employers, employees (students) and the ABE in addressing their requirements under the umbrella of our employability framework.

Therefore a new award of BSc (Hons) Building Engineering was advocated. A further innovation was incorporated into the degree in that it was a part-time award aimed at

practicing professionals from a broad geographical area. It was proposed that modules be delivered off-site in suitably equipped accommodation facilitated by the ABE. Thus the final form of delivery was agreed as block workshops delivered at weekends at ABE head office in Northampton, UK. On-line and telephone support is a key aspect of the learning and teaching strategy. The course induction programme includes Life Long Learning and Study Skills Workshops. The following sections of the paper describe the process of development and the key issues encountered in this new innovative collaborative venture.

2.1.2 Proposing and supporting rationale

The proposed award sought to accept mature, professionally and academically qualified candidates for advanced entry (to level 6, final year of BSc Hons degrees) based on the equivalence of skills, qualities and knowledge gained in professional practice and a HNC/HND qualification. As advocated in Figure 1 our curriculum content was very much influenced by employer input. However, in addressing SHU's employability agenda the course planning team were congruent of the necessity to use diverse methods of assessment.

2.1.3 Course development process

The first stage of the development process was to establish a course planning team. The team consisted of:

- The Subject Group Leader for Construction, Cost and Environmental Management;
- a Course Leader and Chair of Planning team;
- the Course Leader for BSc (Hons) Quantity and Surveying;
- the Course Leader for BSc (Hons) Building Surveying;
- the Built Environment Programme Leader.

The team had extensive experience of course development, management and delivery. In undertaking this development, the planning team consulted and were guided by the Association of Building Engineers' Chief Executive, Mr. David Gibson and the (then) Association's president, Mr. Arwell Griffith. The ABE's contribution was most valuable, especially in the key areas of curriculum content and delivery mode.

The ABE had obtained valuable inputs for employers and prospective students, related to the skills and competencies required in addressing the employability agenda. Figure 2 provides a flowchart of the process.

Throughout the planning process reference was made to the UK's Quality Assurance Agency's Building and Surveying Benchmarks and professional and academic

requirements of a building engineer graduate. Assessment procedures and classification of outcomes follow the University's Assessment Regulations.

The result of this extensive consultation process was the establishment of the curriculum content. At SHU it is University practice to develop learning outcomes for each module in line with the University's Learning and Teaching strategy. Thus, modules were developed containing specific learning outcomes. These learning outcomes provide a focus for module delivery and setting appropriate assessment criteria.

In line with setting a contextual framework, further both the concepts of integration and embedding were fully addressed.

For most students this new degree represents the first formal education process they had engaged with for many years. However, they have years of accumulated relevant experience. The new award sought to utilise these experiences by providing academic credit for mature experienced students. The credit is based on their ability to actively reflect upon occupational experience, and learn form the experience in line with the concept of transferability. The work based learning element cemented the notion of the value of the practical application of knowledge in the work place and further developed the situational skills [2] or contextual knowledge [3] that these authors opine as being essential for the performance of an occupational role.

Therefore a module was designed around 'competencies', this module being 'Reflection of Professional Experience'. The language of competencies has similarities to the language of academic learning outcomes. The extensive work undertaken by Drew & Bingham [4] was used to interpret the professional competencies into academic learning outcomes. Assessment of this new approach to providing academic credit was considered and it was decided (guided by the fundamental principle that assessment must be linked to learning outcomes, via embedding) that students should provide a 'Portfolio of Evidence' covering the required learning outcomes/competencies. For students it provides an accelerated means of obtaining credit towards the degree and encourages integration.

Having established the course content and timeframe the course planning team had to produce the necessary documentation to satisfy the University's Validation Panel. Most of this demanding work was undertaken by the Course Leader in consultation with all interested stakeholders. One of the key components of the Validation Submission document was the section on 'Student Learning Experience'.

It is not possible to identify all aspects of the development within this paper; however, it is worth noting that the new award conformed to the School's Assessment Strategy by:

- using diverse methods of assessment that are consistent, practicable, timely and effective in helping students demondstrate the achievement of intended learning outcomes;

- specifying clear assessment criteria to help ensure standards are enhanced and to let students know what is required to improve their performance;
- utilising formative and summative assessment to drive the students' learning process;
- aiming to provide consistent, constructive and prompt feedback on both coursework and exams to students, focussing on how to improve their work

The teaching, learning and assessment strategy of this Building Engineering award is harmonious with that of other construction-related awards within the Faculty of Development and Society at Sheffield Hallam University. The LTA strategies at level 6 of the Building Engineering award is one focused on a sound student centred approach, an approach requiring high levels of independent, deep learning. Unlike levels 4 and 5 where recall and comprehension strongly underpin assessment - the level 6 modules of this part-time award are characterised by application, analysis, synthesis and evaluation of complex vocationally-related data and processes. Again this is in keeping with our employability framework.

With regard to learning resources, this course seeks to utilise established on-line learning support facilities such as Blackboard, Sheffield Hallam's student intranet, on-line discussion forums and various Adsetts Centre (Learning Centre) on-line databases.
The above provides an overview of how the employability issue raised by employers/and employees through a professional body were addressed within the Employability Framework at SHU.

The award which now has graduates and hence feedback from Professional Body (ABE), Graduates, SHU staff and Employers can be said to have:

- Developed the students's intellectual, subject and key skills (e.g. problem solving, communication and IT etc.)
- Transformed students by the planned and supported progression from dependent to independent learners.
- Provided the correct context by the use of real world examples throughout the award, especially in the Reflection on Professional Experience Module.
- Enabled transfer by encouraging reflection on their use of skills and knowledge between contexts.

2.2 Case study 2: revalidation of the Built Environment degree programme at SHU

The degree programmes offered by SHU require revalidation every five years to maintain currency both in technical content and approaches to teaching and learning. During this process cognisance is also taken of the requirements of the relevant industries and professions associated with the programmes.

2.2.1 Overview and strategy

The degrees offered by SHU within the Built Environment Programme are BSc (Hons) Building Surveying; BSc (Hons) Construction Commercial Management; BSc (Hons) Construction Management and BSc (Hons) Quantity Surveying. Additionally within the Faculty there are two architecture degrees, namely Architecture and Environmental Design and Architectural Technology.

Following the successful piloting of the Reflection on Professional Experience module featured above together with the success of a similar module, Assessed Industrial Experience, which has been running on the Construction Management degree for a number of years, the decision was taken by the revalidation planning team to introduce a Reflection on Professional Experience module across the whole Programme. This module requires students to produce a portfolio in which they critically reflect on their professional work experience against the competencies set by the main professional bodies accrediting the degrees within the programme, namely the Chartered Institute of Building (CIOB) and the Royal Institution of Chartered Surveyors (RICS). It is anticipated that this module will assist students in the preparation for membership of the CIOB and RICS. The application for membership requires the students to critically reflect and/or analyse aspects of their work. Members of these professional bodies involved in the assessment for membership process have found these reflection skills to be weak in the majority of applicants.

It is generally acknowledged that membership of a recognized professional body will greatly enhance an individuals' career and employability. Any preparation that students can undertake whilst at university to rapidly progress the process towards membership can only be advantageous to those concerned.

Feedback from employers prior to the recent Built Environment Programme revalidation had highlighted that raw graduates exhibited a lack of understanding of the role and function of other related professions. To address this concern two new modules have been introduced into the programme degrees.

The Interdisciplinary Project module at first year level requires the students to work on a particular project in groups consisting of students from all the degrees within the programme. This involves an overnight residential stay away from the University.

The Integrated Project at final year level again requires the students to work on a particular project in groups but now including students from the architecture degrees.

3. CONCLUSIONS

Within the paper an overview of the developmental processes of the employability agenda linked to a professional body has been provided. The development is innovative in the UK by forging links with professional bodies, employers and students, built upon a flexible

learning model. The provisions of a Reflection on Professional Experience credit bearing module based on Work Based Learning provides a new and useful dimension in 'employability development'.

It is expected that as the award becomes common knowledge in the UK, other professional bodies will seek similar developments.

The revalidated Built Environment Programme commences in the academic year 2006/7 and it is anticipated that the introduction of the Reflection on Professional Experience module will greatly enhance the critical reflection aspect of the students' applications for professional body membership, thereby increasing their future employability.

Similarly the introduction of two modules which directly address employers' concerns in respect of inter-professional understanding will enhance their current (i.e. on graduation) and future employability.

References

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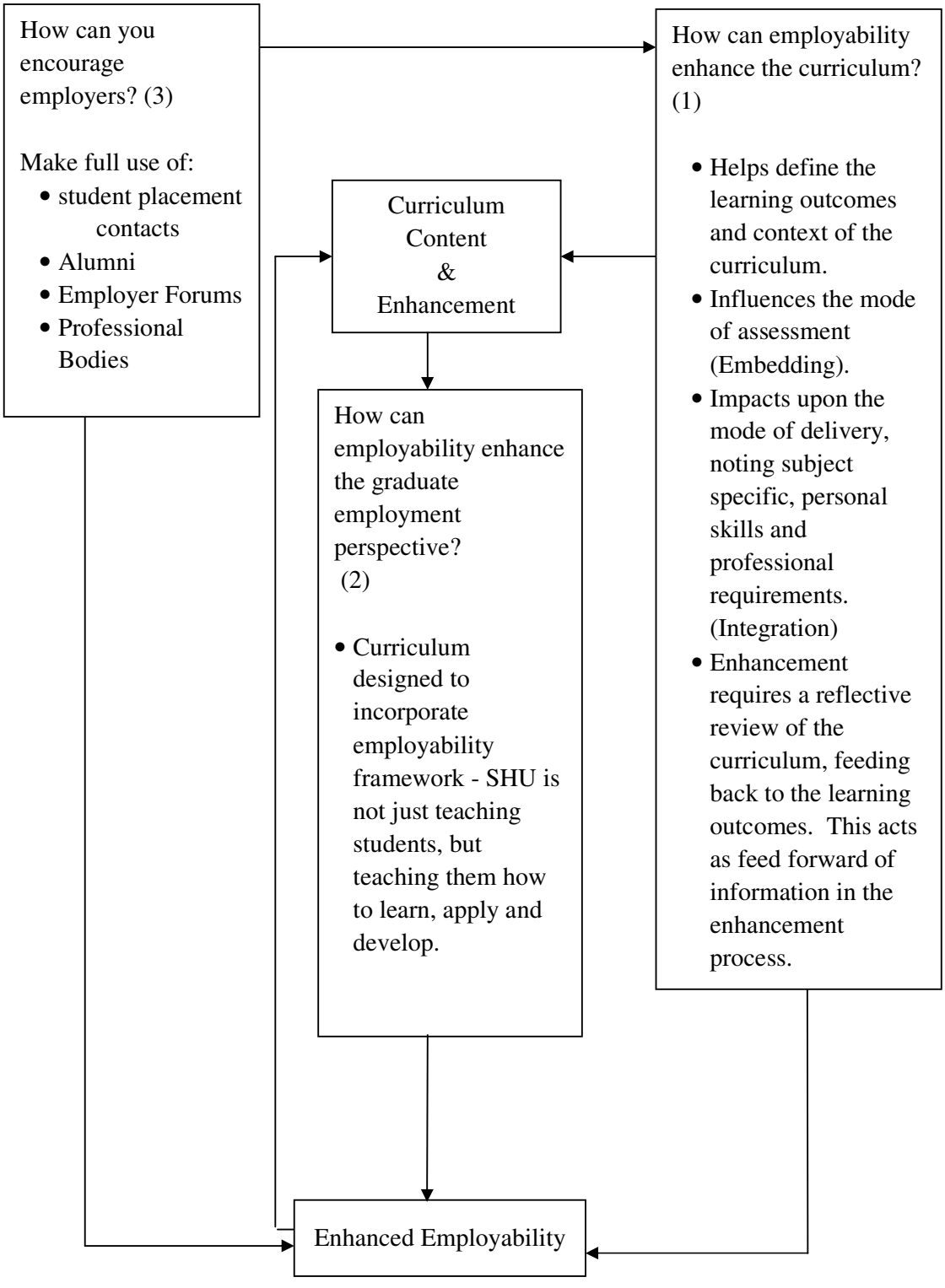

Figure 1: Employability Entering the Curriculum

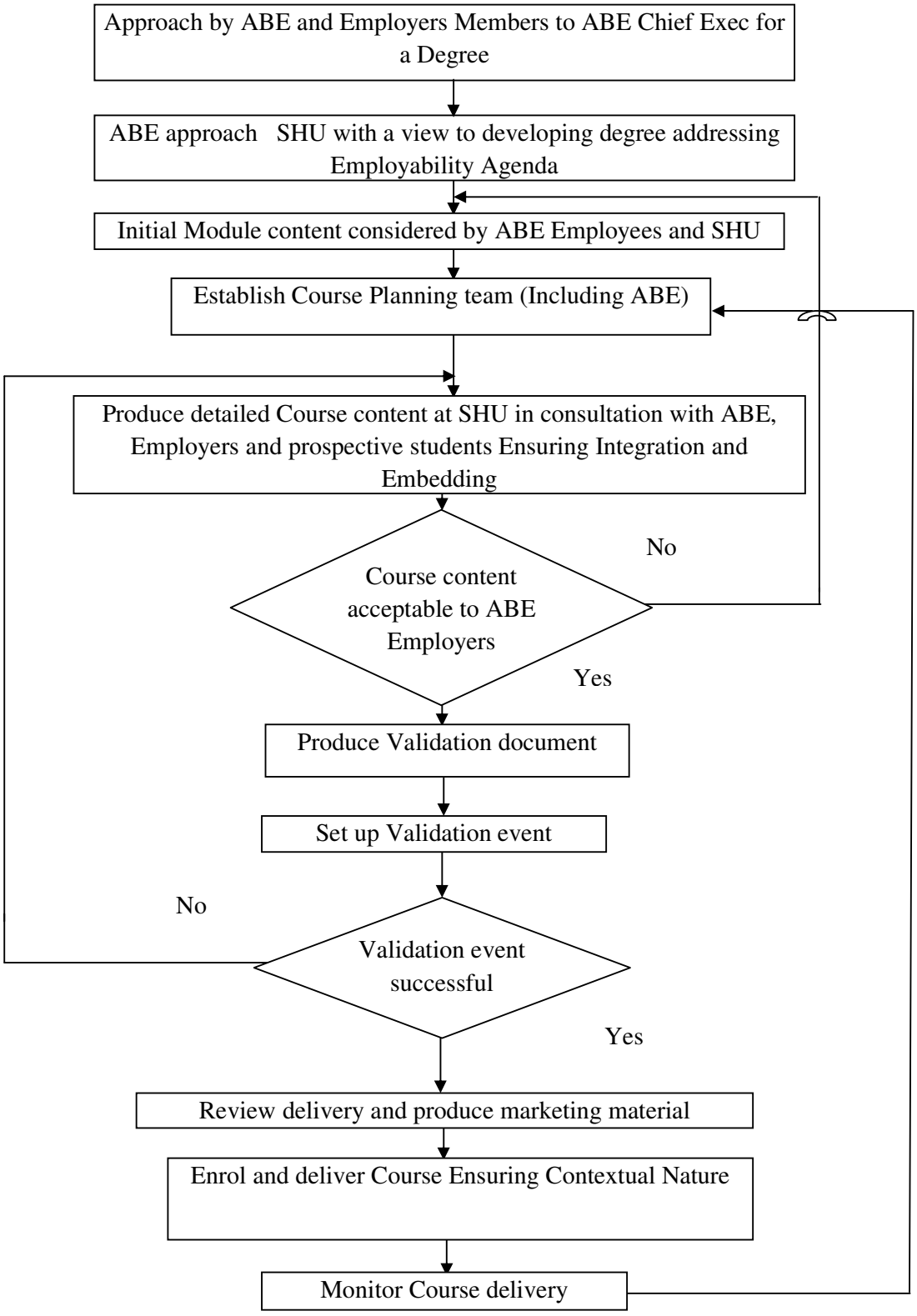

Figure 2: Developmental Flow Diagram