

PROFESSIONALLY ACCREDITED INDUSTRIAL EXPERIENCE: A PROPOSAL

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The publication of the Chartered Institute of Building's Professional Development Programme has focused attention on the professional competencies expected from graduates entering construction employment and subsequently attaining professional status. This paper reports a proposal from Sheffield Hallam University to incorporate elements of the CIOB requirements for professional competencies within the industrial experience period for sandwich and part-time students on the B.Sc. (Hons) Construction Management course. Many employers have experience of employing industrial placement students, and several enter into formal learning contracts with the students. The Professional Development Programme reflects this 'best practice', and the proposal from SHU intends to promote the scheme for all students and for all employers. Although the experience of students will vary to some degree, the learning outcomes will be directly linked to the competencies denoted in the Professional Development Programme. The intention of the proposal is to promote the scheme to students, as a direct means of assuring entry into the professional body, and to the employers as a formalised framework for students to follow in their industrial placement period.

The intention of the research is to examine the applicability of the CIOB professional competencies to students employed for industrial placement periods. This applicability will be judged against the students' ability to achieve these competencies at this stage in their career, and the employers ability to facilitate the opportunity for students to develop the range of competencies within the industrial placement period.

Keywords: accreditation, CIOB, education, competency

INTRODUCTION

The value of industrial experience within sandwich courses has long been accepted and supported by academic institutions, employers, students and professional bodies. However, for the majority of construction and construction management related disciplines, the sandwich element has been treated, in terms of assessment or academic credit as an 'add-on' rather than an integral part of the academic course. The possible reasons for this treatment have included questions of academic rigour, the difference between education and training and the lack of control over the experience. However, these issues have been comprehensively dealt with elsewhere (Hill and Howarth 2000).

In addition, this treatment of the sandwich element does not reflect the value given to the industrial placement by other stakeholders, particularly employers.

"The strongest single message which we received from employers was the value of work experience. This is particularly emphasised by small and medium sized enterprises who need new employees to be able to work

effectively in the workplace from their first day. Further development of work experience opportunities requires action by both employers and institutions. (Dearing, 1997 p16)”

It is worth reflecting that small and medium enterprises (SMEs) make up 95% of companies involved in construction activity. (Key Note Report, 1997 p15,).

Within an educational framework, the sandwich period allows for the student to reflect upon the theoretical knowledge gained during the academic portion of the course, and to examine its’ relevance in the context of real life working situations. This reflection becomes even more important in the context of vocational education, wherein the future role of the graduate is, to a large extent, predetermined. Whilst not wishing to ‘straightjacket’ the future graduate into a limited and focused number of job opportunities, it is realistic to say that the future role of the graduate does influence both the topic areas studied and the means of assessment of the course. This process in turn is assisted by the professional body, in this case the Chartered Institute of Building, who provide a means of translating the wishes of future employers into the requirements of current courses.

It should be noted that this process has developed considerably in recent years, with the widely accepted view that the ‘half life’ of technical knowledge is becoming more and more limited. Graduates are considered more for their ability to learn reflect and develop transferable or ‘key’ skills than their ability to commit to memory a body of core topic knowledge. This development can be seen clearly in the publication of the Professional Development Programme with its’ range of generic competencies.

The paper reports an ongoing development of the B.Sc. (Hons) Construction Management course at Sheffield Hallam University. This development is essentially the proposal to accredit the period of industrial placement through the Chartered Institute of Building Professional Development Programme. This is intended to reinforce the industrial experience a core element of the course.

“How can supervised work experience be in any other place than at the very heart of vocational education?(Adams, 1991 p21)”

Other educational stakeholders have also informed the debate:

“The joint efforts of the Committee of Vice Chancellors (CVCP), the Standing Conference of Principals (SCoP), and the Quality Assurance Agency (QAA) in forming a strategy to develop an agreed policy on progress files, for implementation in the autumn of year 2000, has significantly raised the profile of ‘recording achievement’ and ‘progress files’. (Maddocks, 2000 p1)”

Whilst not referring directly to the recording of industrial experience, Maddocks (2000) has linked the strategy reported to the recording of Professional Development Programme competencies through a web based system (RAPID).

CHARTERED INSTITUTE OF BUILDING PROFESSIONAL DEVELOPMENT PROGRAMME

The recent publication of the CIOB professional development programme (CIOB, 1999) offers the opportunity for student to gain credit for competencies learnt during the industrial placement period, or other periods of work experience (typically, post graduation). This in turn offers academic institutions as partners in the process, or as

assessment centres the opportunity to reinforce the core values of the industrial placement period. The overall stated intention of the PDP is to simplify the route into full membership of the Institution. However, by identifying and expressing the requirements for membership, the CIOB has also provided a list of competencies which is both comprehensive and 'rounded'. The list of competencies, as drawn up, has avoided the highly technical or subject specific areas, with their aforementioned associated problems of currency, but concentrated on 'ideals of professionalism'.

CIOB Professional Competencies (CIOB, 1999):

1. Decision Making
2. Communicating.
3. Managing Information
4. Planning Work.
5. Managing Work Quality
6. Managing Health and Safety.
7. Managing Resources
8. Assess Environmental Risk Factors
9. Managing Costs.
10. Personal Management at Work

The CIOB, as a representative of employers in construction, is able to inform the academic Institutions providing graduates for employment in the industry of the requirements for successful entry and employment. This has long been achieved by the accreditation of courses, such that, on successful completion, a graduate is exempted from the requirements of professional examinations for membership. In addition, the Institute is well represented through external examiners to ensure that the academic contents of courses, and their delivery meets with the requirements of employers, both professional and non-professional. It is open to debate how widely the industry is represented, as employers, by the CIOB, but that debate is beyond the scope of this paper.

In the wider context, the connections between education, particularly vocational education, and employment are becoming the focus of greater attention.

"learning should be increasingly responsive to employment needs and include the development of general skill, highly valued in employment (Dearing, 1997 p5)"

The development of the PDP competencies is a further development of this process, such that graduates are advised as to which key competencies they will be required to demonstrate for full membership, and by implication, what the CIOB would expect as 'key skills' from prospective employees.

The PDP as a guide to accreditation of Industrial Experience

By identifying and expressing a list of competencies, the CIOB have provided a ready-made framework for assessment of learning outcomes from the industrial placement period. The simplicity and robust nature of the competencies makes it difficult to see how any employer, from the smallest specialist subcontractor to the

largest multinational firm or consultancy practice could not provide opportunities for the acquisition and development of some of the relevant competencies.

Effectively, the incorporation of the CIOB guidelines completes a circle in which the academic institute promotes the vocational nature of its' course, the CIOB provides a list of requirements for key competencies for membership and, the CIOB also represents the needs of the employers in a broad and comprehensive manner. The students, on embarking on the PDP during the placement period, are embarking upon the process of evidence gathering for full membership, as well as producing a portfolio for prospective employers.

This has been recognised at Loughborough University which has embarked on a web based means of recording PDP competencies (RAPID) for sandwich students on Construction Engineering Management courses. (Maddocks and Sher, 1998) This scheme has been supported and funded by the DfEE. However, the Loughborough scheme as currently undertaken does not incorporate the PDP as an academic credit. Feedback from this scheme has suggested that there is some reluctance from students in embarking of tasks which bear no academic credit.

The linking of academic 'learning outcomes' to professional competencies achieved during work experience is also seen as a positive development for the course:

"Occupational competences relate specifically to an occupational area and its functions which are not necessarily appropriate in relation to much of the work and ideals of higher education. Learning outcomes, however, do not have to relate directly to narrowly defined work-related functions. They may, for instance, include areas of knowledge and transferable intellectual skills. (Fenwick and Nixon, 1992 p2)"

The incorporation of the PDP into the course also provides a vehicle to refocus the students on the relationship between theoretical learning and practical experience:

"Very often students, having been exposed to a lengthy period of classroom based theoretical learning, only see learning in terms of the acquisition of concrete 'knowledge'. However, since in many placements it is the case that the development of more intangible skills, attitudes etc. are often the most beneficial, it is important the students recognise the value of these things. (Ashworth and Saxton, 1989 p51)"

This is a more fundamental issue of learning and reflection upon knowledge and the learning process. Rather than simply recognising the coming together of both the intentions and the language of the professions and academic institutions, this concerns the development and maturation of the student as an individual.

Terminology

There is some clarification required between the intentions of the different parties involved. This is more an issue of language and terminology than of fundamental differences in approach. For some time now academic institutions, driven by the Higher Education Funding Council for England has adopted the term 'learning outcomes' and the processes by which these may be acquired and assessed. This has informed the process of course and curriculum development, and can be seen to be deeply embedded in the B.Sc. (Hons) Construction Management Course at SHU. For the professions, the terminology of 'key skills' and 'competencies' is a more acceptable form of words, and these are directly linked to notions of 'employability'.

When one examines the framework which includes 'learning outcomes' issues of 'transferable skills' are also raised, and this provides the common ground for bringing the two disciplines - education or academia on the one hand, and the professions or employers on the other - together. It is quite clear to see that there is scope within academic frameworks to adopt professional competencies into educational courses. Indeed the latest HEFCE strategies, which emphasise the notion of employability, advise just such a course of action. Furthermore, the language in which the professional bodies put forward their requirements, in this instance the CIOB Professional Competencies, is entirely in line with academically developed transferable or 'key' skills.

THE TEST OF THE PROPOSAL

Having prepared the ground for the incorporation of the PDP into the B.Sc. (Hons) construction Management course at SHU, there remains the question of applicability. Most of the conceptual problems envisaged with the incorporation have been dealt with elsewhere (Hill and Howarth 2000), but this leaves the practical test.

Hypothesis:

The Chartered Institute of Building Professional Development Programme *will* provide a workable framework for the assessment of industrial experience within a sandwich course placement.

Null Hypothesis:

The Chartered Institute of Building Professional Development Programme *will fail to* provide a workable framework for the assessment of industrial experience within a sandwich course placement.

Alternative Hypothesis:

The assessment of industrial experience within a sandwich course placement will be possible, without reference to the CIOB Professional Development Programme.

The proposal at SHU at present is that the PDP should be tested by students embarking on industrial placement in summer 2000. The test of the scheme will be as follows:

The student will demonstrate the ability to

- identify the relevant competencies or learning outcomes
- gain experience in a range of competencies or learning outcomes
- record necessary information about the competency or learning outcome
- demonstrate that competencies or learning outcomes have been developed in the period

All according to criteria set prior to the test and with relevant and documented evidence.

It is not intended that the learning outcomes should follow exclusively the competencies as provided by the CIOB, rather that the PDP should provide a basic framework for individuals to develop as is appropriate to their work experience.

Each student will be required to compile a portfolio in which each of the four issues noted above will be recorded. This portfolio is central to the proposal and students will be given considerable support and advice on its format. This support will include

reflection by students who have already undertaken industrial experience upon what sorts of experiences may be encountered.

Within the test process the student will have to demonstrate not simply that a competence has been practised, but that it has been developed over time. For example, a student may have some experience of health and safety management from the academic years prior to industrial experience. Subsequently the student may be involved in induction of staff to a site - demonstrating acquisition of a competence. However, a student may then be involved in the production of a site health and safety policy document, including risk assessments. This would demonstrate a development in a specific competence.

Methodology

As the intention is to incorporate the scheme as an accredited part of the B.Sc. (Hons) Construction Management course, it is necessary to have student participation throughout. It must be noted however, that any lack of success of the PDP will not be reflected in the students progression through the course.

The methodology, as the industrial placement itself, will reflect the broad range of experiences particular to the individual employment position. It is likely therefore that there will be discrepancies in the outcomes of individuals experience and the portfolios. However each student will follow the same series of stages: identification of competencies, gathering evidence for those competencies, demonstrating development and levels of achievement in the competencies. Assistance in all these stages will be provided by academic members of staff, and with the cooperation of the employer.

At the end of the industrial placement period, the results will be compiled from all the students to test the hypothesis or null hypothesis. Consideration must be given as to whether a majority would be acceptable, or whether the totality of the sample would be necessary to support the hypothesis. At this stage, a majority is considered as a valid test. The limitations of the sample in terms of numbers is accepted, given that this forms part of an ongoing course, and the facility to repeat the test, with or without modifications, is expected to remain for the foreseeable future.

As this will become an assessed unit, the possibility for a student to perform at an unacceptable level must result in the awarding of a failure or referral. This will be included in the assessment strategy for the unit, but is more likely to be reflected in the poor recording and documentation of the experience rather than the experience itself.

CONCLUSIONS

The nature of this proposal is that conclusions are difficult to draw at this stage in the project. The test, as outlined, will provide more authoritative information at the end of the placement period. However, it is worth making some 'bold' assertions on the nature of the project. The robust nature of the competencies provided by the CIOB, together with their role as representatives of the industry employers, makes the success of the scheme a very likely outcome. The conceptual obstacles concerning the incorporation of assessment of industrial experience have to be acknowledged, but they can be realistically addressed and overcome (Hill and Howarth, 2000). Indeed, the feedback from prospective and current employers, students and academics involved in the SHU development underlines the feeling that this scheme will be a

positive development in the field of vocational education. In addition, experience from other academic institutions, notably Loughborough where a web based system (RAPID) has been adopted, has provided positive support.

The testing of the scheme will allow experience to be gathered and disseminated on both good and bad practice, opportunities and techniques for gathering evidence for portfolios, and methods of assessment. The test will also provide feedback to the CIOB, to employers and to students as to the applicability of the CIOB Professional Development Programme.

Furthermore the enlargement of the scheme is likely to foster a much more active link into Continuous Professional Development, more self learning and reflective employees, and the possibility of 'learning organisations' (Pedler *et al*, 1991).

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