

WORK BASED LEARNING FOR CONSTRUCTION MANAGEMENT COURSES

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Some criticisms of work based learning have raised the issue that such learning is essentially an employer focused activity intended to train an individual for a specific role in an organization. In this sense the organization (employer) has benefits to gain from the process which are perhaps greater than the individual. The academic perspective of education *per se* is that it is a social good, for the benefit of the individual, and for the benefit of the society in which that individual is a constituent.

The paper reports the initial experiences of staff, students and employers on a BSc (Hons) Construction Management course which incorporates a period of assessed industrial experience. The assessment of this experience uses the competence framework provided by the Chartered Institute of Building Professional Development Programme as its basis.

This paper claims that the incorporation of the Professional Competencies as a frame of assessment addresses this issue. The competencies are vocational in nature and have been developed to reflect the needs of most employers involved in construction. Furthermore, the Professional Institute in its' charter, has to reflect the overall social good of the activities of its' members. These activities are in turn reflected in the competencies described in the PDP.

Keywords: professional, competence, work based learning.

INTRODUCTION

Having determined to introduce a unit of assessed industrial experience into an existing BSc (Hons) Construction Management course at SHU, the course team adopted the CIOB's Professional Development Programme as a guideline and framework for assessment of that unit. The perceived benefits of this were the increased vocational and professional standing of the course, and the use of a readily available, current and appropriate means of assessment.

The Professional Development Programme is intended to form part of a more straightforward route to full membership of the Chartered Institute of Building. As such, the PDP provides a breakdown of competencies, which the Institute considers to be the necessary minimum requirements for their members. It should be noted that the Institute in declaring the competencies was performing a dual role: representing the interests of construction employers in their requirements from prospective employees, and representing the Institutes' interests for minimum standards of membership.

CIOB Professional Competencies:

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

(CIOB, 1999)

The introduction of assessed industrial placement represented something of a challenge to the University, as it fell outside the standard framework and policy for assessment. In this case, the use of an appropriate existing model taken from the professional body through which the course is accredited, provided a strong persuasive argument.

The actual assessment of the placement is in two forms: each student prepares a portfolio of experience and a seminar presentation to an assessment panel and their peers. The portfolio will include evidence of experiences, validated by employers and cross-referenced against specific competencies. It is quite possible for one piece of evidence to demonstrate competence in two or more areas. The student is encouraged to value the quality of the evidence over the quantity, and guidance is provided on the editing and compilation of the portfolio. The seminar presentation is a brief review of the placement experience.

Conceptual issues

In implementing this proposal, the course team had to acknowledge a number of issues. Amongst these were the reservations held in some academic quarters of the academic value and academic rigour of work based learning.

One charge laid against work based learning in terms of academic value was that the topic content, the technological knowledge was outside the control of the HE Institution. It is widely accepted that considerable variations will occur between the experiences of different students working with different employers. However, against that there is the acknowledgement that much of the topic content of any academic course, including Construction Management, has a limited 'half-life' and the currency and validity of 'factual knowledge' is bounded. Further, the nature of the competencies as provided by the CIOB avoid, to a great extent, the emphasis on factual knowledge. The emphasis is placed upon the process of learning rather than the topic knowledge of that learning. Acknowledging that the topic knowledge gained by each student will vary considerably as determined by the placement circumstances, it was both realistic and appropriate to move the emphasis in this manner. It should be noted also that the topic content of different Higher Education courses will be subject to some variation, even though all may lead to the same title qualification.

A second concern was the lack of control from the HE Institution over the learning process. As the learning process takes place in a remote environment, the circumstances of which are governed more by the employer than by the HE Institution. The response to this was to stress that the HE Institution was responsible for the facilitation and assessment rigour of the learning process, but not in all cases for the process itself. An example of this, which is common in many undergraduate courses is the dissertation Unit. Commonly, the dissertation will be a piece of research driven largely by the student, with advice from tutors and guidance as to the assessment criteria. As all students are provided with assistance in gaining a

placement, and with guidance on the assessment criteria for the Unit, the facilitation process is achieved.

A more fundamental concern is notion that work based learning is fulfilling the needs of the employer rather than the needs of the student (employee) or wider society. The liberal understanding of education is that it fulfils the needs of society, the needs of individuals and the common good. (for example Gibbs and Morris p2 2000).

A placement position may be geared towards training a specific student to fulfill a specific role within a specific employing organization. Therefore, the employer will benefit from the contribution of the placement student as well as preparing that individual for full-time employment.

In the first place, responding to this charge, it must be re-emphasized that the BSc (Hons) Construction Management course is explicitly and intentionally vocational in nature. That is, the course is intended to prepare graduates for active contributory roles in construction. Although the course would claim that there is a degree of flexibility of the roles a graduate may take up, and a variety of employment opportunities to match, the preparation for employment is still a stated aim.

This in turn raises a number of connected issues such as the definitions of vocational education, notions of employability, and the understanding of work based learning. All these issues are subject of current extensive discourse (e.g. Boud and Garrick, 2000, Portwood, 2000, Garnett, 2000, Bellamy, 2000).

Essentially, the field of work based learning, experiential learning and learning in work is dynamic, and many different definitions and understandings are applied to the terms above. For the purposes of this paper, this ongoing discourse is acknowledged, and for this author to be encouraged.

The ownership or location of knowledge is one of the issues raised by this discourse. Traditionally, knowledge has been developed and resided within universities, but this view has been challenged (Barnett 1997, Coffield and Williamson 1997). Conversely the process of managerialism in higher education has led to the position where knowledge has become commodified, to be traded (Lyotard 1993).

“Credentials not personal growth through learning have become the focus of educational institutions.....” (Gibbs and Morris p2 2000)

These extreme views both threaten the legitimacy of assessed placement experience. On the one hand, all the knowledge should be provided from the Higher Education Institute, which has a monopoly over the facility to label something as valid knowledge. On the other hand, the validity of knowledge is given by its value in the free market economy: ‘is it saleable?’.

Between these two arguments it is still possible to find legitimate support for assessed placement experience. To begin with, as stated above, the argument that legitimate knowledge resides only within educational institutions has been strongly challenged, and the notion of knowledge production through continuous negotiation of many parties has replaced it. (Portwood 2000). These parties, active in the production of knowledge include Educational institutions, employing organizations, social groupings and so-on.. The notion of organizational knowledge, that is, the combination of knowledge as an asset of an organization, demonstrates one alternative location of knowledge (Jackson and Carter 1999, Easterby-Smith *et al.* 1999).

This leads to the notion of ‘contextual knowledge’ (Portwood 2000). Contextual knowledge may be described as that knowledge which has reference in, and relevance to, its environment. This notion provides legitimacy both to the understanding of organizational knowledge, and to the validity of context-based learning: work based learning or placement experience.

Further legitimacy for the specific unit at SHU is provided by the use of the Professional Development Programme as a means of assessment. As this framework of competencies was developed externally from any individual employer, it cannot be accused of providing simply for a restricted role performance within that individual employer. Further, as the CIOB represents all the employers (or at least attempts to) in the sector, the competencies cover a far wider scope of abilities than for an individual employer. The intention for the competencies must have been to form a consensus of employment attribute requirements.

Examination of the competencies suggests that these would fulfil the description of ‘contextual knowledge’ outlined above.

As noted above, the Chartered Institute of Building has its’ role as an educational charity with a Royal Charter to uphold, along with its’ representation of employers needs. Quoting from that charter:

“The objects of the Institute shall be:-

1. *the promotion for the public benefit of the science and practise of building;*
2. *the advancement of public education in the said science and practise including all necessary research and the publication of the results of all such research;*

(CIOB website 2001)

This charter states quite categorically that the education and practise of building activity (by its’ members) should be for the benefit of the public as a whole. This returns the argument to the traditional liberal view of education: of value to the individual and to society as a whole. That employers organizations may make up part of that society as a whole is acceptable, realistic and unavoidable. And, that students in gaining relevant experience and developing relevant competencies through the experience will benefit both themselves and their employers is also encouraged.

We would suggest that the conceptual validity of the assessed industrial experience is legitimate, given all the issues discussed above, and given the practical experience we have gained in the last year.

THE EXPERIENCE OF ASSESSING THE UNIT

The unit of assessed industrial experience has been running on the BSc (Hons) course for twelve months. The findings presented include comments from academic and support staff, employers and the students themselves. As a key part of the scheme is active reflection, the views and comments of the students is of great value.

Implementation

The implementation of the scheme is as follows: second year students, prior to taking up placement positions attend three or four seminar presentations given by final year students. These presentations cover the general experiences of the placements, together with more detailed analysis of the learning outcomes and competencies developed therein. The students (both presenting and attending) use the framework of

competencies provided by the Professional Development Programme to identify what specific learning outcome has resulted from what specific experience. Evidence of the experiences is also presented, and the means of authentication demonstrated.

When the student enters the placement, they are encouraged to actively seek out experiences which will contribute to their development of competencies. Given the previous encounters with placement students of the majority of employers, such opportunities are readily available. Certainly, the reports from the current placements would support this assertion. Some students will enter into a formal learning contract, and some employers will appoint a mentor. However, it is the student who must be proactive in the process.

The student will then begin to compile a portfolio of evidence of placement experience. This portfolio must be cross referenced against the framework of competencies as described in the Professional Development Programme. The student is encouraged to use whatever variety of evidence is appropriate to the submission. Support and guidance is given through the Key Skills On Line package which is available to all SHU enrolled students both on and off-campus, and through placement visits.

When the student returns to the University, the final editing process on the portfolio takes place. Students are encouraged to look at each others' work, although originality is emphasized above conformity. The portfolios are then submitted to contribute the majority of the assessment of the Unit.

The students then present their experience as a seminar to second year students, effectively closing the loop in disseminating experience and knowledge through the student group. The seminar is assessed against standard criteria to contribute the remainder of the marks.

Assessment methods

Both assessments are undertaken by a panel made up of academics from both within and outwith the School. The panel has also included representation from the CIOB. This 'group-marking' has advantages in terms of spreading load and ensuring equity of treatment of different candidates. It should be stressed that the mark will reflect the quality of the portfolio and the ability to identify and demonstrate development in competencies rather than on the inferred quality of the experience.

Expectations

The process of final year students presenting to second year students undoubtedly helped in ensuring the expectations of placement students were realistic. The range of experiences revealed was considerable. However, the ability both for the presenting students and for the second year students to identify learning outcomes and competencies unequivocal. This demonstrates the ease with which students can translate the CIOB competencies to occupational settings.

The expectations of the employers were also assisted by the adoption of the framework of competencies. Some employers had prior knowledge of the PDP scheme and had adopted it for graduate training. In these cases the prior knowledge of the placement student assisted in fitting in to the placement experience. For those employers without prior knowledge, the framework provided a basis for negotiation for the students. The student has to be proactive in this process, and that action is one of the items of evidence which may be appropriate for the portfolio.

Compatibility

Whilst the course has always claimed a good compatibility between the needs of employers and the needs of the placement students, it is fair to claim that the adoption of the assessed industrial experience has further enmeshed this relationship. It is important that the employer gets a useful contribution in terms of productive output from the placement student. They are after all paying the wages. Equally it is vital that the student has the opportunity to develop their abilities whilst in the working environment. The vocational nature of the course is emphasized by this process.

Suitability of Professional Development Programme as a framework for assessment

The test of the suitability of the PDP was both immediate and successful. This is claimed only for the limited sample involved so far. Essentially, the test came when, equipped with the framework of competencies, the second year students listened to presentations made by final year students. Given that the first set of students presenting had little prior knowledge of the framework (due to their cohort going out on placement before the Unit was accepted) the ability to identify experiences and show their relevance was very positive.

The framework provides a straightforward means of reflecting on experience. That is, students are able to make the connection quite easily between the experience gone through, and the competence relevant to that experience. The students are encouraged to attribute more than one competence to any experience. For example, many placement students become involved in administering site induction for new site personnel. This activity corresponds to both the Management of Health and Safety and to the Communication competency. As this activity took place with all the students present, during the seminar presentations, individuals were able to contribute.

The language and terminology of the framework of competencies is akin to the terminology of learning outcomes adopted by many Higher Education Institutes. Again this proved useful for the students as they were familiar with the terms and processes involved. It should be stressed that the unit is intended to develop the students' reflection on experience. But, we would acknowledge that most students will be to a certain extent reflective in their learning, this unit simply makes this more explicit. Similar frameworks of competency may be found from sources such as the CISC.

CONCLUSIONS

The number of students passing through the unit, together with the limited amount of time it has been running make generalized conclusions impossible to make at this stage. All the conclusions noted here are both tentative and specific to the experience at Sheffield Hallam University. However, as the interest in work based learning generally is on the increase, and likewise the interest in professional competencies specifically in construction, such conclusions may be of value to others considering following this course.

Firstly, the robust nature of the framework of competencies has provided a guideline for portfolio presentation and assessment which has been effective. None of the students were unsuccessful in their portfolio presentations, and the academic staff were comfortable in interpreting the framework for assessment purposes. The group marking process adopted undoubtedly helped in this matter.

Similarly, the seminar presentations have been successful. The abilities of students' to reflect on their experiences and to be able to disseminate this reflection to others has been very rewarding, both for the students attending and for the presenters themselves. This acknowledges the recognition that such processes have always been present in placement opportunities, but that they have not been effectively explicit.

As the unit is now an integral part of the course, further testing of the framework will take place in future years.

A significant issue raised by the investigation is the emphasis upon the *process* of learning rather than on the *topic* being learnt. This point is not so much encouraged by the assessed industrial placement unit as enforced. At the outset, we recognized that each student would have different experiences on their industrial placement. The possibility that all students would gain identical, or even equivalent knowledge on any specific topic was negligible. Acknowledging this, the process of learning and maturation in the student undergoing placement experience has long been recognized. The framework of competencies provided by the Professional Development Portfolio reflect the emphasis on the process of learning over the topic knowledge. In this, it can be claimed once again that the framework of competencies has proved an ideal tool for the development of assessed industrial placement.

Much of the emphasis of the discourse on work based learning, contextual knowledge and so forth is on the value of knowledge in organizations. This value is considered to be the greatest asset both in the present and for the future. However, this knowledge is not bounded by factual description of past events, but denotes the interactive nature of knowledge production within and between organizations. Continuous Professional Development both for the CIOB and other professional institutions has followed a similar course although not so overtly.

Accepting these changes in the way we conceive knowledge, we would argue that the model described in this paper, at least in a limited sense, will engender the learning processes most appropriate for students and graduates to enter and contribute to this process.

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Hill

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