

The reconfiguration of the higher education experience and its implications for work based learning (WBL)

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Abstract

The British system of higher education is in the process of a rapid transformation from an elite to a massified system. The increasing necessity for students to engage in paid employment to finance their studies means that 'most students are part-time students' This has led to a rapid shift away from the traditional sandwich work placement, pioneered in the post-1992 universities, towards new patterns of work-based learning. The role of IT in developing and sustaining this new pattern is explored and suggestions made for the ways in which IT can now support and sustain work-based learning.

Key words: work based learning, WBL, sandwich education, higher education, work placement.

Introduction

British higher education has undergone a series of profound and interlocking changes in the last decade and the cumulative affect of these has been to force an examination of the ways in which higher education prepares new generations of students to emergent needs of the labour market. In particular, a new prominence is being given to work-based learning (WBL), now increasingly defined as an essential component of the undergraduate curriculum. The role of information and communication technologies in helping to deliver these new imperatives will be explored.

The move from an elite to a massified system of higher education

At the time of the seminal Robbins Report into higher education in 1962, approximately, 4.6% of the relevant age cohort experienced higher education (Robbins 1962, Appendix 5, Table 3, p.9). Since that time, higher education has been progressively expanded in a series of initiatives since the expansion of higher education following the Robbins Report. This initially involved expanding the intake of existing universities, the creation of new universities and the translation of Colleges of Advanced Technology into universities. Other significant policy developments have been the creation of the polytechnics (now known as the 'post 1992 universities') and a sustained policy of expansion in the 1980's. The proportion of the age cohort now entering higher education is 32% and the official target for expanding the sector is to achieve a 50% participation rate by the 2010. This has been classified as the transition from an elitist to a mass system of higher education and the social processes involved were described several decades earlier as the move from a 'sponsored' to a 'contest' system of social mobility (Turner 1962). In sponsored systems, students are subjected to rigorous selection procedures at a variety of levels and then are not expected to fail. In contest systems, however, more in keeping with the American democratic ideal, all students are encouraged to start the race, knowing that only some will succeed. Both systems are 'wasteful' of talent, sponsored systems by excluding many individuals of talent as a result of the 11+ examinations and contest systems by massively high failure rates in the first year of a massified higher education system. There are signs that the UK system of under-funded expansion is now in a severe financial crisis as the sector went into a deficit of £50.6m in 2000/2001 and a similar deficit is expected in 2002/2002 (MacLeod 2002)

If the political ambition to expand the higher system is to be successful, there is an acknowledgement that 'much of the planned expansion is likely to be concentrated amongst non-traditional students' (MacLeod 2002). An American observer of the UK higher system notes that

'even the term *undergraduate* as known is no longer common. The mature student, the non-traditional student, the part-time student and the working student are now more visible. Most American students are commuters'
(Rothblatt 2002)

The DFES has recently commissioned research contracts to explore the funding implications for the planned expansion and it is a significant clue to departmental thinking that one of them is to compare the costs of distance learning, part-time study, work-based and other types of courses and the costs of teaching different types of students. As it states in its website:

‘.. much of the planned expansion is likely to be concentrated amongst non-traditional students. It is important for the achievement of the 50% target that the department understands how the expansion can and is likely to occur and what the costs of alternative ways of achieving the target are’
(quoted in MacLeod, 1992)

In this context, work-based learning takes on a particular salience as it appears to be the thrust of government policy as it evolves that it should assume a much enhanced role both for existing students and also for any new cohorts of students envisaged by expansion.

The changing student experience

Not only are there more students in the system but the experience of higher education is likely to be radically different even from their teachers. Some of the salient factors that might be considered are

A semesterised and modularised course

Students will typically study a curriculum divided typically into about 8 modules, each typically comprised of some 135 hours of work. Four modules will be taught and examined in each of the two semesters in the academic year. Students themselves generally favour this pattern of ‘bite size chunks’ and are increasingly experiencing the same in the GCE ‘A’-levels they have studied to gain university admission. Some of their teachers are equally enthusiastic but there are some who complain that semesterisation and modularisation encourages a degree of fragmentation of disciplinary knowledge that inhibits critical thinking and interdisciplinary understanding
(see the discussion, for example, in Rowland, 2000)

New demands for key skills, transferable skills and/or critical thinking skills

Whereas the universities as the apex of the educational system used to largely determine the shape and context of the school curriculum, this hegemony has come under increasing challenge in recent years by organisations such as the Qualifications and Curriculum Authority who have been active in promulgating key skills. Some parts of the higher education system have accepted these new agendas whilst others are more concerned with the centrality of critical and analytical thinking in a higher education context.

Developments in electronically-mediated learning and Virtual Learning Environments

Higher education has embraced the opportunities offered by ICT enthusiastically. The availability of the Internet as a resource that can be utilised both in a college context and increasingly at home has greatly increased the facility of students to locate and to access much wider ranges of source materials. There is a possibility that the accessibility of such materials comes at a price e.g. the increasing possibilities of plagiarism, the decline of traditional bibliographical research skills. However, some recent research conducted amongst a sample of business students at King Alfred’s College, Winchester, indicated that the most common ways in which students volunteered that they learnt were the traditional methods of reading materials in books/articles and writing assignments (Hart and Haslam 2002).

The combination of academic work and part-time employment

Whilst students have traditionally tended to support themselves during the long vacation, the introduction of loans to replace grants in 1997 has led to a pronounced increase in the extent to which students finance their studies by part-time employment. The authoritative large scale study by Callender and Kemp (2000) shows that in the 1998/99 academic year, some 62% students had engaged in some type of paid employment. Exactly the same figure was reported by Hart and Haslam (2002) but their sample excluded first year students and included some third year students who had decided not to undertake paid employment in order to concentrate on academic work in their final year. As the full impact of student loans would not be felt until the 1999/2000 academic year, it is likely that this figure may itself be an underestimate which may now be closer to two thirds. It is therefore almost true to say that 'every student is a part-time student' given the competing demands upon an undergraduate's time.

The equally interesting question is whether such employment impact adversely upon academic attainment. The evidence here is mixed. A DfEE funded study reported in Little(2002) found that just over two fifths of students felt that their term time work had a bad effect on their academic performance and this proportion rose to a half for those who were working more than 11 hours per week, the median. By way of contrast, a survey of undergraduates across eight UK universities (split between students on hospitality courses and a matched sample) found that over a half did not consider that their academic performance had been effected and a further quarter were undecided (Hort and Rimmington 2000) The survey of business studies students by Hart and Haslam (2000) found that in an open-ended question on effects of working during term-time one half of the responses indicated that it would have an adverse affect. Of this half, however, only a minority of responses indicated that students felt that their academic performance was *actually* adversely affected (11 out of 56 responses or 20%) The remainder of the responses indicated that working had a poor effect upon their social lives or that there was a feeling that if they were to be working, then it *would* have an adverse effect. A further 20% of the responses indicated that paid employment had a *positive* effect upon their academic work and they actually complemented each other, with the knowledge gained from the course actually helping them at work and vice versa.

The traditional 'sandwich' degree

The former polytechnics (post-1992 universities) did not invent the 'sandwich placement' but they deployed them extensively right across the ranges of courses that they offered, particularly in vocational subjects. In some areas, such as business studies, a placement year was mandatory and it was unlikely that a course would have been validated (initially through the auspices of CNAAB) were a degree programme to be constructed without a placement element. Some of the former CATS such as Brunel and Bradford also embraced the sandwich model enthusiastically. The system norm was that students should be employed for 48 weeks of the year in paid employment i.e. doing an actual job of work and not work-shadowing or observation. The funding for such a four year programme was effectively based on 4 x 0.9 FTE so the placement year effectively resourced at the rate of 0.6 FTE. Brown (nd) reports that students on sandwich degrees currently pay £510 a year that 'some believe that requiring students to pay fees while undertaking work placements sends the wrong messages and some students, and their tutors, view it as a tax'. However, sandwich placements were expensive. Those universities who took their responsibilities seriously

funded a placement tutor whose task it was to prepare and place some 50 students a year and organise a team of tutors to visit students regularly and to keep track of host, tutor and student reports to monitor the placement.. Some universities centralised their placement processes in an attempt to reduce costs but with the inevitable complaints that the centralised placement staff were not fully appraised of the individual student's strengths and weaknesses, of their course design or of the particular occupational niche for which they were most suitable. The move towards modularisation and semesterisation may well have sounded the death knell for this traditional type of placement in many institutions. Not only was the unit of resource inexorably declining but in some areas of the country, employment opportunities were particularly limited particularly in the large manufacturing centres. When many critical employment interviews were typically scheduled, students were undertaking end of semester exams and were unavailable for briefing or for interview. Many universities, freed as they saw it from the shackles of CNAA and with constantly declining units of resource, took the opportunity to make placements optional when they modularised their courses. Even so, as Brewer (1998) reports, there were some 45,000 students on Work Placements in the mid-1990s but this figure may only be a fraction of the estimate he makes of 400,000 students undertaking paid employment during term time. Brown quotes HESA statistics that some 180,000 students were enrolled on full-time or sandwich courses, some 17.5 total of the full-time undergraduate population. This figure will include all the students on all of the years of the course and will therefore not be an accurate representation of the numbers of students undertaking work experience at any one time.

It is interesting to contrast the traditional model of sandwich education with the newly developing models of Work Based Learning. For example, Watton and Little (2002) report on the JEWELS project (Joint Systems to Enhance Work Experience Levels of Support and Satisfaction) that seeking external accreditation for independent work experience is rejected because 'the additional assessment and accreditation costs were unlikely to be sustainable'. The traditional sandwich model of 48 weeks in duration would translate into six weeks (30 days) per module. Whilst acknowledging that the quality of work experience is not solely dependent upon the number of hours served, the typical placement lengths reported by Watton and Collings (2002) is illuminating. They provide data showing that for *independent* i.e. not college organised work opportunities there was a variation ranging from 20 days minimum suggested by the University of Luton to the 50 hours (six days) suggested by the JEWELS team with a system average in the region of 10-15 days. It is therefore evident that the amount of work experience needed to satisfy the requirements of validating bodies has been approximately halved over the years. Moreover, given the pressure upon students to find their own placements, independent rather than college-organised and supervised work experience is becoming increasingly common.

New models of work-based learning

The Dearing Report explicitly endorsed the value of work experience in higher education as students are potential workers who need awareness, knowledge and skills in order to eventually become employable and effective employees (NCIHE 1997). Stimulated in part by this, the higher education institutions have responded by instituting a variety of models of incorporating work-based learning into their curriculum. Tricky issues of validation and APEL requirements have had to be negotiated, with the University of Middlesex to the fore with the development of its National Centre for Work Based Learning Partnerships and a construction of an institutional Work Based Learning Programme (detailed by Portwood and

Garnett, 2002). It appears that there is a growing consensus that WBL needs to encompass the following elements:

- A process of planning and construction of the personal objectives to be achieved in any specific period of WBL
- the maintenance of a personal learning log or contribution to a PDP (Personal Development Planning)
- knowledge of a range of typically qualitative research methodologies (case study, ethnography, action research, action learning) in order to systematically research facets of their working environment
- evidence of a process of self-reflection on experiences, typically involving models such as Kolb's model of learning and double loop learning (Watton and Collings 2002)
- a research project as a culmination of the WBL experience
- the construction of a *claim* for the accreditation of the module i.e. going significantly beyond descriptive elements of what has been learnt/achieved.

The role of ICT in the developments of WBL

The changing dynamics of undergraduate experiences whilst combining work and academic study can be assisted considerably by the judicious use of ICT. Moreover, given the ease of accessibility and affordability, low-cost and low-technology solutions are available to assist the developments of WBL programmes. It is possible to identify the following, amongst others:

Job seeking and employer/employee matching

Many HEIs operate 'Job Shops' to facilitate the search for work by undergraduates. Some institutions have gone further and are now instituting systems involving databases and linked websites. Collings (2002) in a review of current developments reports that in the 'Job Surfing' launched by the University of Plymouth in October, 2000 there had been 10,000 visitors to the site in the subsequent year. Members of staff found the software easy to use and students were enthusiastic about the possibilities of finding jobs that matched their skills and interests. There is scope for very rapid developments in this field but the evidence points to the fact that even simple and easily developed systems can yield enormous benefits.

Learning materials

It is now possible to use websites that bring together the variety of learning materials which are to be utilised in WBL. Some of these will give direction and advice on the particular methodologies deployed in experiential and WBL learning, including the use of reflection. Other materials are equally useful for both students and employers (potential or existing) who wish to become quickly informed about the mechanics and the requirements of a WBL programme, particularly if a claim is subsequently to be made for a credit rating. Also the range of materials under the research rubric, generally drawing upon the qualitative methodologies, can be made accessible together with exemplars of good practice.

Student employees and Employers use of websites

An observation often made in connection with the traditional sandwich placement was the feeling of isolation typically encountered by students despite tutor visits and occasional phone calls. Rapidly developing websites and the possibilities afforded by email allow for a much tighter integration of students into a mutually supporting community. Although universities have typically supplied 'Employer Packs' to potential employers, the availability of on-line materials supplemented by other documentary material such as the college prospectus enable new employers to become quickly apprised of the benefits of WBL. Through judicious hypertext links, it is also possible for employers to appreciate the possibilities for short courses, consultancy, CPD and similar functions provided under the umbrella of the 'outreach' functions of the HEI.

Virtual Learning Environments (VLEs)

Many colleges now routinely deploy a VLE using computer-mediated communication to complement face-to-face discussion. The potential of this comes into its own when students become widely geographically dispersed on WBL activities. Sometimes there are technological problems to be faced e.g. some large organisations employing a student may have firewalls to inhibit the use of 'on-line chat rooms' which means that the interface between an organisation and the college VLE may be problematic. However, it is important to stress that the methodology implicit in a VLE can be deployed even where a VLE is not in place. For example, a technique typically deployed to good effect (see M. C. Hart's website <http://final-year-projects.com>) is to encourage site users to send in a 'Frequently Asked Question' by email that can be inserted with a suitable response in to the file of *Frequently Asked Questions*. This is essentially a 'low-tech' solution and does presuppose that a committed tutor will access and respond to queries typically within a 24 hour period but its potential should not be minimised.

Communities of practice

WBL tends to assume a network of students with each other, their tutors and with their employing organisations. However, as Garner and Portwood (2002) show it is possible to improve the learning of communities of practice by deploying WBL philosophies and practices. It is interesting given the prevalence of the concept of the *reflective practitioner* (Schön 1983; Schön 1987) that the skill that was most felt to be missing or undeveloped was that of reflection. Students may well find themselves within a community of practice if allocated to a project team or given a research brief. It is also interesting to note, in passing, that work of this type does not necessitate attendance at an employee's premises and can be actuated at home or in a college environment. We report elsewhere on the ways in which communities of practice can develop out of courses initially designed as a part-time Certificate/degree programme (Haslam, P. and Hart, M.C. 2002)

Synergies and Possibilities

If one were to survey the mission statements of HEIs, one would find somewhere a phrase such as 'responsiveness to the local community' although given their origins and roots one would expect this to be a higher degree of prominence in the post 1992 universities (see, for example, the history of the polytechnics provided in Pratt (1997) or the account of the 'modern university ethos' given by Gledhill, 2001). WBL may well be one of the principal

ways in which an HEI and its economic hinterland may learn more about each other. The sandwich model of education was often predicated upon mutual understandings between an HEI and a few well-established large firms, which, at the start of sandwich education in the 1940's were often in the manufacturing sectors. But recent decades have seen the relative demise of such industries and their replacement by more footloose industries typically in the financial and IT sector. Added to this we can see that even established links between large HEIs and long-established forms or organisations are subject to constant processes of renewals as managers and their academic contacts change jobs or responsibilities. The new computer-mediated models of WBL will help to energise the possibilities of contacts between HEIs and employers in rapidly changing environments.

Conclusion

This paper has argued that education has undergone significant shifts in the numbers of students they enrol and the ways in which they are taught. In the environment created by rapid advances, new models of work-based learning are being advanced. If successfully implemented, such models open up the possibilities for much greater and more fruitful collaboration between HEIs and the organisations in the communities that they serve. The new models of WBL suggested will require some re-thinking of the ways in which the relationships between academic and paid work may be integrated with each other, but suggested solutions are not necessarily expensive in an era when resources are increasingly limited. The role of ICT in helping to facilitate such developments is explored and relatively 'low-cost' and 'low-tech' solutions can still generate enormous benefits, both actually and potentially, for students, their tutors and the local employment markets.

REFERENCES

- Brewer, M. (1998), "Sandwich Courses - the university's role in organising practical experience for students" Paper presented to the *6th Professional Training, British Council, Hamburg*, 8th December.
- Brown, R. (nd) "Work-related Learning" Report commissioned by Department for Education and Skills in November, 2000.
- Callender, C. & Kemp, M. (2000). *Changing Student Finances: Income, Expenditure and the Take-up of Student Loans Among Full- and Part-time Higher Education Students in 1998/99*, London, Department for Education and Employment Research Report
- Collings, J. (2002), "Helping Students to find Work" in P. Watton, J. Collings, J. Moon (eds), *Independent Work Experience: An evolving Picture*, Birmingham, Staff and Educational Development Association (SEDA), Paper 114
- Garner, J. and Portwood, D. (2002), "Applying Work Based Learning to Communities of Practice" in D. Portwood and C. Costley, *Work Based Learning and the University: New Perspectives and Practices*, Birmingham, Staff and Educational Development Association (SEDA), Paper 109
- Gledhill, J. (2001), "The Modern English Universities" in D. Warner and D. Palfreyman (eds), *The State of UK Higher Education*, Buckingham, SRHE & Open University Press
- Hart, M.C. and Haslam, P. (2002), "How Business Students Learn". Paper presented to the *Bristol Business School Teaching and Learning Conference*, 24th-26th September.
- Haslam, P. and Hart, M.C.. (2002), "Developing a "Community of Practice" in Local Authority Information Workers". Paper presented to the *Bristol Business School Teaching and Learning Conference*, 24th-26th September.
- Hort, J. and Rimmington, M. (2000), *Results of a Survey investigating part time and vacation work undertaken by higher education students, with particular reference to the hospitality Industry* (Appendix to HAVE report) London, DfEE
- Little, B. (2002), "The Extent of Independent Work Experience and its impact on Student Performance" in P. Watton, J. Collings, J. Moon (eds), *Independent Work Experience: An evolving Picture*, Birmingham, Staff and Educational Development Association (SEDA), Paper 114
- Macleod, D. (2002) "Funding Crisis deepens", *Education Guardian (Higher)*, September 3rd
- NCIHE (1997), *Committee of Inquiry into Higher Education Report* (Dearing Report), Sheffield, DfEE.
- Portwood, D. and Garnett, J. (2002), "The Construction and Validation of an Institutional Work Based Learning Programme" in D. Portwood and C. Costley, *Work Based Learning and*

the University: New Perspectives and Practices, Birmingham, Staff and Educational Development Association (SEDA), Paper 109

Pratt, J. (1987), *The Polytechnic Experiment 1965-1992*, Buckingham, SRHE & Open University Press

Turner, R.H. (1962), “Modes of Social Ascent through Education: Sponsored and Contest Mobility” in A.H. Halsey, J. Floud and C.A. Anderson (eds), *Education, Economy and Politics*, Glencoe, Free Press

Robbins, L. (1962), *Report on Higher Education* (Robbins Report), London, HMSO.

Rothblatt, S. (2002) “Down the US route”, *Education Guardian (Higher)*, September 3rd

Rowland, S. (2000), “Teaching for Democracy in Higher Education” Paper presented to *Faculty of Education, Centre for Research in Education and Democracy (CRED)*, University of West of England, 30th November

Schön, D. (1983), *The Reflective Practitioner*, New York, Doubleday

Schön, D. (1987), *Educating the Reflective Practitioner*, London, Jossey-Bass Publications (also accessible at <http://hci.stanford.edu/other/schon87.htm>)

Watton, P. and Collings, J. (2002), “Developing a Framework for Independent Work Experience” in P. Watton, J. Collings, J. Moon (eds), *Independent Work Experience: An evolving Picture*, Birmingham, Staff and Educational Development Association (SEDA), Paper 114

Watton, P. and Little, B. (2002), “Issues of Recognition and Accreditation” in P. Watton, J. Collings, J. Moon (eds), *Independent Work Experience: An evolving Picture*, Birmingham, Staff and Educational Development Association (SEDA), Paper 114