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Workforce Engagement in Lifelong Learning (WELL) Project

A Literature Review

Ibrar Butt

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1. What is WBL?

Work-based learning (WBL) is open to a variety of different definitions (Connor 2005). However, in the context of the WELL project and for the purposes of this review, we shall employ the definition used by Garnett (2007), which is: “learning which is at a higher education level which primarily takes place at and through work in order not only to meet individual development aspirations but also the performative aims of a relevant organisation (usually the employer)”. Thus, there are three main interacting partners; a tripartite relationship between: the *learner*, the *employer* and the *higher education institution* (HEI).

This relationship is depicted by Nixon et al (2006:35) in which learning outcomes are agreed, industry specific, and “achieved through activities that are based on, or derived from, the context of work or the workplace” (Hills et al, 2003:84); whilst taking generic skills into account, and “meta-competence” (Raelin, 2000:11).

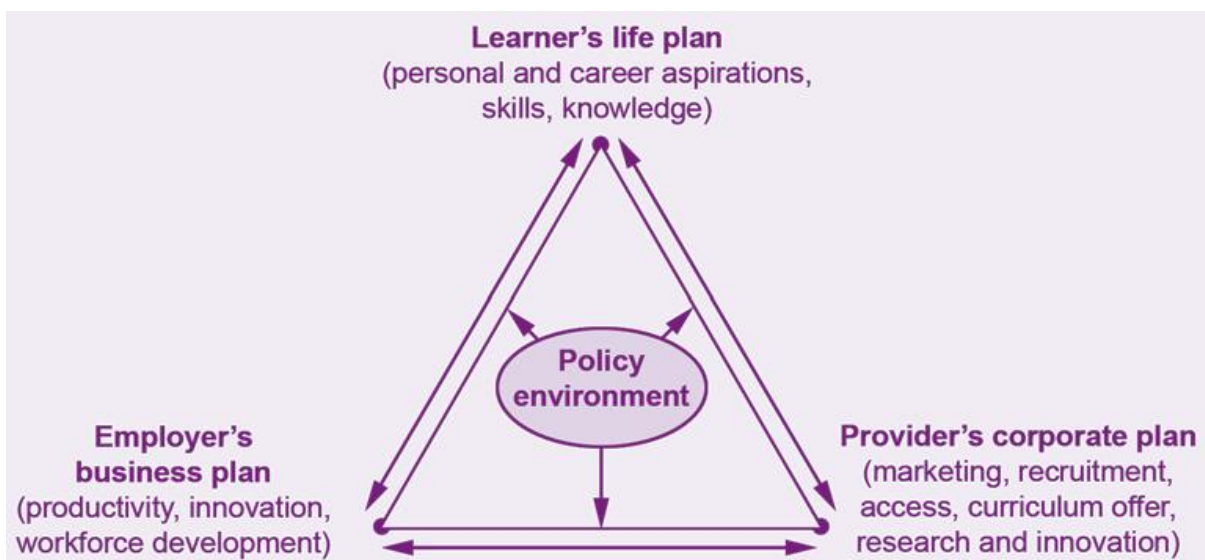


Figure 1: Tripartite Relationship (Nixon et al, 2006:35)

This may be bound together as a learning contract, representing the different interests of the three parties, as well as those of other implicated stakeholders, such as Lifelong Learning Networks (LLNs) and Sector Skills Councils (SSCs). Garnett *et al* (2009) whilst discussing the Middlesex approach to WBL, explain this process as follows:

“The organisation signs the Learning Agreement and agrees to the worker-researcher undertaking research that will develop organisational learning. The worker researcher signs the Learning Agreement and by doing so agrees to undertake study to develop workplace practice. The university signs it, and in doing so approves the plan of study set out by the student according to university academic and ethical standards.” (Garnett *et al*, 2009:95)

The nature of the relationship across the three parties is not homogeneous, but varies from context to context. In this respect, Nixon *et al*'s (2006:36) diagram shown in Figure 2 identifies four types of WBL provision. Gleaned from their case-studies, these four types of WBL provision give us an indication of the variability in the nature of the tripartite relationship.

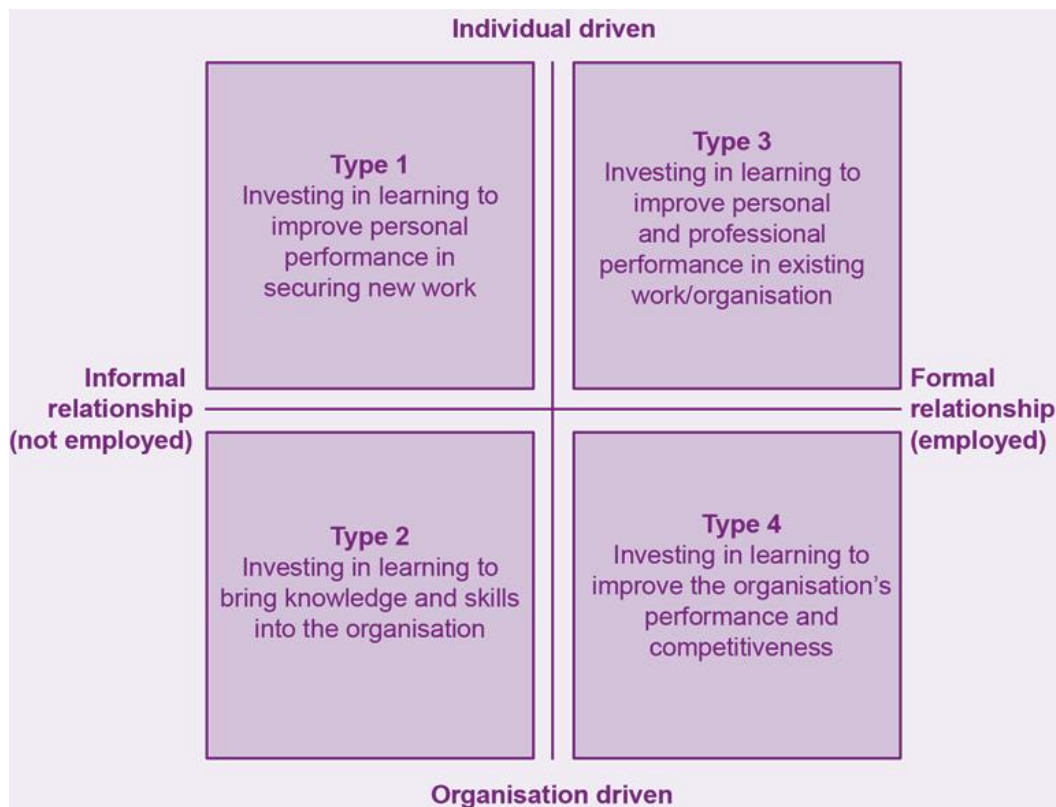


Figure 2: WBL typology (Nixon et al, 2006:36)

2. Drivers for WBL

Some of the 'drivers' that have led to this are, according to Wedgwood (2006):

1. *Demographic changes:* A decline in the number of young people after 2010 will result in a focus more on other markets, either overseas, older people, lifelong learners.
2. *Lifelong learning:* There has been a growth in people choosing to learn throughout the course of their lives and in more personal ways. There is also an increased need in certain occupations and sectors to have a postgraduate qualification as well as a first degree (e.g. Science, Technology, Engineering, and Mathematics - STEM).

3. *Local community role of universities and more local /regional student markets:* This is of growing significance for the University of Bradford, including the development of the city's local economy. Workforce development is inevitably part of this as HEIs seek to move into wider and more diverse arenas of practice.
4. *Widening participation:* Greater HE Participation by adults is likely to be more important in future in helping institutions meet their widening participation objectives, particularly at a time when higher education needs to justify and extend its impact on, and value to, society.

Equally, Wedgwood (2006) suggests good reasons why employers might work more closely with HEIs, including:

1. Providing opportunity for CPD for leading to improvements in business performance.
2. Providing new access routes to higher education for older employees in particular occupations where higher skill levels and qualifications are increasingly needed and where employers are experiencing shortages (e.g. using Foundation Degrees).
3. Improving attrition, especially 'churn' among new graduates in early development years in many large firms.
4. Increasing external standing of a firm by more employees becoming qualified (especially if competing in international markets).

Benefits to individual employees might include:

1. Obtaining a nationally recognised qualification which has more 'currency' in the marketplace.

2. Improved earnings over lifetime.
3. Personal satisfaction, sense of achievement, and confidence boost.

Thus, WBL programmes are negotiated between the partners and the individual learners and critically are derived from the needs of the workplace and the student rather than controlled by the disciplinary curriculum (Garnett 2007). WBL presents challenges to some of the more traditional aspects of Higher Education (Boud and Solomon, 2001); it not only challenges the structures of the university to be flexible in terms of mode of delivery, but can also be seen as challenging its traditional epistemological structures. As a result WBL has become a discrete transdisciplinary field of study in that it draws from and impacts on other subjects.

We learn from Boud and Solomon (2003) that a range of structural and infrastructural features of both an external organisation and an educational institution (in this case HEIs) needs to be set in place for a WBL model to operate effectively. In terms of this structural capital as outlined by Boud and Solomon (2003), in the case of HEIs, regulations and procedures would have to be in place to enable the creation and operation of such partnerships and effective institutional change to accommodate and promote WBL models.

At the University of Bradford, this has been realised through the creation of the Escalate programme, where the focus is on delivering a cultural change that moves away from traditional full time undergraduates to part-time, work-based learners. In creating such a change Escalate will need to review the University's administrative framework to enable greater flexibility for these learners, in terms of responsiveness, fitness for purpose, and flexibility by looking at alternative delivery modes, for example. Whilst initial work is focussed on large public sector employers, Escalate will also engage private sector employers and small and medium sized enterprises (SMEs) who commit to becoming learning organisations.

Later I shall consider some of the different WBL models currently in use, including ones that utilise distance learning and e-learning, how they work, and whether they can inform the development of a flexible model of WBL as part of the WELL project.

3. Notable WBL models

This section explores how some of HEIs in the UK deliver WBL programmes. Largely drawn from Nixon *et al* (2006), it discusses various models of WBL in a thematic presentation with some inevitable overlap, incorporating *accessibility of the HEI, distance learning, e-learning, and mobile learning*. This is then used to assess the extent to which these various methodologies can inform the development of a model of WBL as part of the WELL project at the University of Bradford.

3.1 Accessibility of the HEI

This refers to the extent to which the three parties outlined in section 2: the learner, the employer and HEI are within reasonable reach for educational activities, etc. The following examples are HEIs that have successfully capitalised on this type of WBL.

3.1.1 Centre for Work-based Learning Partnership (CWBLP), Middlesex University

WBL at Middlesex came about because of the recognition that work-based learning facilitates two fundamental corporate objectives:

- It supports the development of a student-centred approach to programme delivery, improving the learning experience.
- By increasing the attractiveness of study, widening the curriculum offer and supporting the international strategy through in-country delivery, it improves the recruitment and

retention of students as well as income generation through partnerships with employers and business.

The institution supports the development of WBL in two fundamental ways: -

- The Incorporation by each School of WBL into their School plans
- The creation of Work-based Learning Partnerships (CWBLP).

As an example, The Foods Unwrapped programme was developed in partnership with Marks & Spencer as part of their staff development programme for employees working in their food halls. In 2006 there were 550 students engaged in the programme. The course is wholly work-focused and the majority of learning takes place in the workplace supported by CD-ROM learning materials, group work and workplace mentors. The University provides a Programme Adviser who has close contact with the students, who are assessed by means of a portfolio which is reviewed by trained assessors - the company Food Performance Managers.

As a result of the programme, most graduates secured internal promotion and Marks & Spencer reported improved performance in the Food Halls where members of staff had been engaged in the programme.

3.1.2 Foundation Direct, University of Portsmouth

Foundation Direct (FD) – a Centre for Excellence in Teaching and Learning – has secured four years of HEFCE funding (£4.5m) to provide WBL programmes. The Partnership Programme (now *Learning at Work*) in the Faculty of Technology, operates the usual tripartite system (as identified in the previous section) and offers a mixture of study on campus, short courses and online/distance learning, and students can claim credit for prior learning including formal qualifications, in-house training and on-the-job experience.

An example of the type of subject offered is the *Early Years Care and Education* programme, developed in response to the Government's drive to improve standards within the child care sector. It has been endorsed by 'Surestart' and in 2006 had 40 students (nursery nurses, nannies, play-workers, child minders and special needs assistants) on the programme. Many of the students hold pre-degree level qualifications and the FD is providing a work-based progression to the 'top-up' degree BA (Hons) Education Studies (Nixon et al, 2006:31). . It is hoped that The FD will help to demonstrate competence in the new role of 'Senior Practitioner' within the early years education sector.

3.2 Distance Learning

This refers to a programme of (work-based) learning where the learner, for various reasons, is only able to attend the HEI infrequently, or not at all. The most widely known provider in this category is the Open University, the largest provider of distance learning programmes in the United Kingdom.

3.2.1 The Centre for Excellence in Teaching and Learning, Open University

The Centre for Excellence in Teaching and Learning was established to support WBL development across the institution. In addition to providing tailor-made programmes it supports research into WBL and has recently hosted a national conference (2002), published research materials (e.g. Yorke 2005), commissioned teaching development projects, and established special interest groups. It also initiated a programme of staff secondments to increase staff competencies in this field of work, while engaging with various Sector Skills Councils and employer bodies.

One of its larger activities is the MBA Professional Development Programme with approximately 7,000 students, all of whom are practising managers mainly aged 25 years and over, around 40% based overseas.

Learning opportunities are presented through a blend of formal academic delivery and reflective practice based upon individual work environments and those of their fellow students. Support is provided on a number of levels: there is an extensive ICT system with access to online resources, personal tutors, and also mentors. The Open University has also developed a regional support network and tutorial groups. Notably, specific needs of individual learners are addressed through the elective nature of the course, passing more ownership of the course to the learner.

More recently, through its *Centre for Professional Learning and Development*, the OU has launched a range of flexible online CPD courses especially for work-based learners who may need to extend or update their work skills, but can't commit to more long-term study. They are designed to blend an appreciation of skills and techniques with an understanding of workplace application.

Current courses offered are in: *business & management, computing and technology, updating teaching practices, the food industry, professional skills updating, and travel planning.*

Notably, every course takes about 30 hours and allows learners to start and finish when it suits them, and no previous academic achievement is needed to gain entry on to one of the flexible online CPD courses. A broad understanding or practical experience of the subject, however, is essential. The courses are taken from material at NQF level 6 in England Wales and NI; SCQF level 10 in Scotland, and NFQ level 8 in Ireland. The courses themselves are not academically

rated, as they are designed to update the skills and knowledge of working professionals and to help them meet the CPD requirements of various professional bodies.

3.2.2 Work-related Learning Service, Northumbria University

School-based work-related learning developments/programmes exist in each of Northumbria University's eight academic Schools. A small grants scheme operates to support Schools in developing learning programmes and the service pursues external funding opportunities. Income from work-related learning accounts for around 1% of the University's overall funding. In 2006 its target was 900 students (an increase of 350 over the previous year).

An example of a 'distance-learning' model of operation is the WBL programme offered by the University to the British Army. The University delivered a programme to 12 students from the British Army, all of whom had long service histories and responsibility for command. The programme aimed to support their transition into, and readiness for, post-service employment, and was an online/CD ROM-based service which students completed while still on active service around the world. During the two-year programme, which leads to a Diploma in Management Development, students had access to an online tutor and were supported by the Army's Education Officer.

3.3 E-learning

Although this technique is allied to some of the programmes we have already considered under 'distance learning', it is worth a separate mention. An interesting discussion on the subject was given by Basiel *et al* (2008) at the Work-based Learning Futures II Conference (Garnett and Young, 2008). He and his co-authors examined the shift in the digital spectrum from the 'offline student' to the 'networked learner', and it will be helpful to consider an example of how this is used.

3.3.1 Institute for Work Based Learning (IWBL), Middlesex University

At the Institute for Work Based Learning (IWBL) Middlesex University, distance learning programmes are provided to allow work-based learners opportunities to develop and apply their professional knowledge at undergraduate, postgraduate, and doctoral level (Basiel *et al*, 2008).

One such group are maritime seafarers, who may never meet their tutors or work-based learning colleagues, and who cannot access the Internet as satellite communication is restricted for personal use. The IWBL in collaboration with The Marine Society offer a route for seafarers to top up their HND or Foundation Degree (FD) into a full honours degree by means of a programme that is entirely distance taught. This means that seafarers do not need to come ashore to study and can instead continue their careers at sea.

Naturally, as remote learners Web 2.0 technologies and an open participation approach was used. Utilising DVDs was considered unsuitable due to problems with file size, instead flash drives and/or memory sticks were preferred, and software applications based on the browser-based interface (so that learners can work from their own standalone PCs) allowed students to download an entire website locally onto their hard drive while still maintaining live web links to external sites. The technology is still developing, and recent HEFCE funding has allowed Middlesex University to enter into a business arrangement with a supplier who specialises in the creation of e-learning portfolios and learning platforms to customise software to the needs of work-based learners.

In this respect, Penuel *et al*, (1999) indicate a variety of ways that technology can support WBL:

1. collaborative technologies (groupware) to build communities of practice;
2. tools to give access to best-practice examples and access to experts; and

3. simulations and models to bridge prior knowledge into novel situations (as cited by Margaryan, 2008:20)

Osgoode (2000) further supports the integration of e-learning with WBL, noting that “learning technology solutions have the power to integrate the process of work and learning to improve knowledge and hence job competence and performance. Working then becomes an integration of learning and performing, facilitated by discipline-specific technology that adapts to the uniqueness of the individual using it and the work and conditions at hand”.

The institutional Virtual Learning Environment (VLE) and technological ‘maturity’ is a key factor in achieving this, in that the tools and systems used must support the involvement of all in the tripartite relationship. That is, the VLE must allow people who are otherwise *outsiders* to participate and/or contribute to it. JISC CETIS¹ have considered a number of VLE models (<http://wiki.cetis.ac.uk/images/3/3a/ComposedLE.pdf>) which allow integration that is natural to any user’s web using practices, and the creation of a VLE through a blog or website etc., by embedding questions on online texts, rather like how a teacher would select texts from different books.

Nevertheless, despite the widespread application of technology in learning environments, many institutions are becoming so engrossed in computer use that they ignore the real requirements of the learner (Carrant, *et al* 2008). Whilst the new digital learner may or may not be ready, the environment already is, as proposed by Hartley (2007) as a fourth online learning space which allows socialisation in the learning environment. Carrant *et al* (2008) propose four types of digital learners based on their degree of education and experience with technology; all of which

¹ A JISC Innovation Support Centre providing advice to the UK Higher and Post-16 Education sectors on educational technology and standards.

interact to either empower or diminish the technological capabilities of the student. As such, assessing computer familiarity must be a prerequisite for any WBL programme that intends to use online delivery or assessment. This should be understood before or during the induction period.

E-learning is envisaged to grow in education; John Chambers, CEO of Cisco Systems, predicted in 1999 that 'The next big killer application for the Internet is going to be education. Education over the Internet is going to be so big it is going to make e-mail usage look like a rounding error' (Chambers, 1999). In sum, we can say that digital technologies can be a support for WBL as well as a key enabler. This is quite simply because, with a tripartite WBL partnership in mind, e-learning "challenges traditional boundaries between knowledge communities and the demarcation of knowledge domains" (Bliss and Saljö, 1999:9).

3.4 Mobile Learning (m-learning)

Fundamentally a species of e-learning, m-learning deserves a separate section due to the pedagogical potential offered by handheld devices particularly for members of the 'millennial generation'. Even Basiel *et al's* (2008) discussion mentioned above does not reflect the true speed of change, as according to Carnevale (2006) "E-mail is for Old People"! Members of the millennial generation are taking the lead in the transition to being a fully-wired and mobile group, preferring the more immediate forms of communication such as text messaging and IRC (Lenhart et al, 2005). Only a small percentage use or see any value in the use of e-mail. If this trend holds true it may well affect the structure of academic teaching; we have already seen that in India and America mobile phone is already exceeding land line use and 'leap-frogged' the use PCs for the internet (Gupta, 2006).

Notably, in O'Malley *et al's* (2003) definition of m-learning, 'mobile' refers to the mobility of the *learners* rather than the *devices*, something that connect well with WBL where learning can take place across contexts (Walker, 2007).

What could be termed "work-based mobile learning" is evident in the following examples:

3.4.1 Perioperative Specialist Practitioners, Imperial College London

In Kneebone and Harry's (2005) case study, Personal Digital Assistants (PDAs) were used with a group of mature healthcare workers whilst training between April 2003 and March 2004. The Perioperative Specialist Practitioners (PSP) project was one of 19 established to pilot new professional roles in order to reduce Junior Doctors' workloads to 56 hours a week. Each learner was provided with a Compaq iPAQ H3970 model PDA which was running a Pocket PC 2002 operating system. Each was also given a foldable keyboard to facilitate their input of written reflections-on-action (Schön, 1983) onto the PDA. This PDA model has an inbuilt appointment calendar, address book and limited or 'pocket' versions of Microsoft® Word® and Excel® and Outlook®. As the students' learning process and outcomes demanded that it was crucial to record actions *when* they were done, not at the end of the day, these devices were used by the learners as tools for:

- storing information on an *ad hoc* basis,
- reading information,
- recording clinical and learning activities,
- writing reflections right after every learning action,
- sharing information, and
- transfer of relevant data to the monitoring centre in London.

They were designed to be used to process notes and other information while roaming from one ward to another and in other locations of their hospitals as their training demanded. In sum, the PDAs were deployed to fulfill immediate and easy capture and processing of information.

Taught modules used a range of teaching styles including didactic lectures, scenario-based learning, and computer simulations of surgical procedures. Technical, professional, and communications skills were taught using an integrated approach. For example, a PSP would learn techniques for taking blood while simultaneously answering questions from an actor taking the role of a patient (Kneebone and Harry, 2005:107).

Moreover, Kukulska-Hulme and Traxler (2005) have also shown how the functionalities of PDAs and a mix of media, methods and mobile applications can be used to provide both generic, academic, and subject-specific support for mobile learners. They argue strongly in favour of learning support which is provided spontaneously irrespective of whether learners are on campus students, part-time students, distance learners or employees learning in the workplace.

3.4.2 Web Lectures, IBM

Since IBM's Web Lecture Services in 1998, the organisation's commitment to stay up-to-date and meet rapidly changing job demands has continued inexorably; such that in 2002 this idea went mobile. Since their inception more than 158,800 employees have benefited from the 1,250,000 lectures produced, allowing IBM to successfully embed learning into the everyday workflow of the organisation.

Getting around the asynchronous nature of mobile Web Lectures, they introduced the use of an 'Ask the Author' button for certain topics such as negotiation skills for example. IBM does, however, acknowledge that this system of learning cannot work by itself (Koschimbahr and Sagrott, 2005). New systems such as *Google Wave*, may help overcome the limitations of

asynchronous e-learning, especially if integrated into the VLE but it is far too soon to say. Whilst the mobile Web Lectures were successful due to the on-demand nature of delivery, IBM's employees were conflicted as to how they preferred to learn.

Handheld computer technology gives students access to a large and changing knowledge base, especially when they are geographically dispersed. This has provided many possibilities in certain fields of study, for example in clinical practice. Nestel *et al* (2005) suggest that handheld devices are particularly useful for progress mapping and ready access to clinical reference material, especially for use in medical education.

In their review of m-learning implementations, van Barneveld and Shaw (2006) contend that m-learning remains for now a vision more so than a reality. Taking account of van Barneveld and Shaw's (2006) contention, m-learning methods certainly deserve a place in a flexible model of WBL due to the emerging nature of its popularity. As, by the year 2010, the average 10-year-old will have access to more digital technologies than existed on the planet in 2001 (Harris, 2003, as cited by Kukulska-Hulme and Traxler, 2005:165).

4. Assessment in WBL

Costley and Armsby (2007) differentiate between assessment of WBL as a mode of study (i.e., when it is assessed using subject specific criteria but the criteria have been met through work-based practice) and as a field of study (i.e., using generic and transdisciplinary criteria), concluding that the latter more closely matches the learning experience of work-based students.

Therefore, whilst we can draw from a set of generic WBL skills (see Durrant *et al*), contextualised learning outcomes must be agreed as part of the initial learning agreement (Costley, 2007), and

must be fully attached to the work place milieu socially and cognitively (Poikela, 2004). That is, the means of assessing these learning outcomes must reflect the context in which they are agreed; i.e. they must be fit for purpose.

Following this, Brodie and Irving (2007), through their research at the University of Chester, suggest that assessment in WBL must be focussed on *meta-learning*, *critical reflection*, and the learner's *capability*. We can, therefore, say that assessment should be issue-based, transdisciplinary, driven by the learner and employer, and subsequently "self-managed" by the learner (Lester, 1999) in-situ.

If we assume such a 'constructivist'² view, then in a WBL context a learner can observe him/herself or colleagues in action and gain instant feedback from a supervisor or other employees/learners, rather than the academic, due to the gap between work context and educational provider. Such an approach supports the creation of 'communities of practice', where work-based learners form socially constructed groups to support learning through mentors.

Bradford College's Foundation Degree in Metalurgy is one example of such effective practice. In this case, the College has engaged industry and employed industrialists as part-time teachers (subject to a training programme) and/or industrial mentors who, using the College's VLE, carried out assessment activities. Also, the JISC TEA project at Derby College sought to bridge the institution-employer divide in the same way by implementing an e-assessment system across a group of HND/C Engineering students who were employed by Rolls Royce and studying

² Where learners construct their meaning of experiences in relation to their context or situation.

at Derby College. In both cases the integration of, and access to, the institution's existing systems (ePortfolios, online conferencing, VLE, etc) was central to support the delivery of WBL.

4.1 Reflection

According to Kolb (1984), reflection is a key stage in such an experiential learning process. Schon (1983) further suggested that reflection is necessary for practitioners to improve their professional judgement. We have already discussed that in a WBL context the learner *owns* not only the learning process, but the assessment process too (Brodie and Irving, 2007; Lester, 1999). The reflection process is clearly owned by the learner, and should be a key part of the assessment method. In this respect, portfolios are a useful way to encourage and facilitate the reflection process, as learners document their own self appraisal; commenting and reflecting on the learning resulting from the evidence is considered to be the focus, rather than the evidence in and of itself. Considering the documented practical benefits to using 'electronic portfolios' (Butler, 2006; Grant, 2009), such tools can support the process of iterative feedback, the most important part of the reflection process.

Portfolios themselves, electronic or otherwise, need not always be of the 'reflective' type. Smith and Tillema (2003) suggest three *additional* types of portfolios (as cited in Roberts, 2008 as part of the Higher Education Academy's 'E-Portfolios in the Workplace' project):

A **dossier portfolio**, provides a record of achievement, or evidence in order to demonstrate particular professional standards.

A **training portfolio** is a mandatory collection of evidence collected during a course of study to demonstrate the knowledge, skills, and competences gained.

A **personal development portfolio** is a reflective account of development over a period of time, and is used for refining and structuring ones future development. (As cited in Roberts, 2008).

5. Accreditation of Prior and Experiential Learning (APEL)

Within the transdisciplinary model of WBL, the practice of awarding credit for prior learning against an HEI-owned curriculum is no longer sufficient. It is also difficult to facilitate unless the programme is flexible enough to accommodate a variety of study pathways (e.g. a shell framework or Combined Studies programme). A flexible and responsive WBL programme necessitates an APEL system that awards what has been described as ‘focussed’ credit (Garnett 1998); a system where credit is awarded if it forms part of a coherent overall academic programme as described in the learning agreement. Making a prior learning claim, then, is a developmental process in its own right designed to support skills of self-directed and self-managed learning (Doncaster 2000, Armsby *et al* 2006). It is the beginning of the work-based learner’s process of critical reflection, where she evaluates past learning in relation to future goals.

6. Making WBL Work

In the case studies we have considered (Nixon *et al* 2006; Basiel *et al* 2008) it is clear that HEIs are responding in different ways, and to different levels, to the WBL zeitgeist. In all of them a distinctive feature of these solutions is that “learning outcomes are achieved through activities that are based on, or derived from, the context of work or the workplace” (Hills *et al* 2003:84). The learning outcomes for a WBL programme operate at a number of different yet interrelated levels – knowledge, understanding, application analysis, synthesis, evaluation and abstraction – as emphasised by Solomon and Gustavs (2004).

It is important to realise that the aims and needs of the partners in the WBL programme are different (Penn *et al* 2005); those of the student are influenced by their life plan, the learning provider by their corporate plan and the employer (or sector) by their business plan. It is also the case that the nature of the relationship between the individual students and their employing organisation is likely to have a strong influence on the type of WBL provision that is accessed or, in some cases, designed to meet specific needs. In this respect, WBL programme designers must avoid the 'here's what I made earlier approach' when filling a supposed 'skills gap'. Such myopic reliance on prototypicality may fail to take into account the dynamic transdisciplinary nature of WBL. Take, for example, the interdisciplinary and interfunctional role of a manager; the creation of a model of WBL would require pragmatic application within diverse settings.

As mentioned previously in section 5, Costley and Armsby (2007) differentiate between WBL as a mode of study (i.e., when it is assessed using subject specific criteria but the criteria have been met through work-based practice) and as a field of study (i.e., using generic and transdisciplinary criteria). The WELL project focuses on the development of a model which sees WBL both as a *mode* of study shaped by whichever academic field and industry context work-based learners find themselves, and supports the notion of WBL as a transdisciplinary pedagogy and discrete *field* of study. This is because current HE practice satisfies both definitions. The 'field of study' perspective has been central to Middlesex University's approach to WBL in challenging the traditional university academic understanding ranging from general ignorance of WBL to understanding it as 'sandwich courses' or placements. It is with this in mind that the HE landscape faces a plethora of terms each with a different shade of meaning: 'work-based learning', 'work-related learning', 'learning at work', 'learning through work', etc. In many respects, research is required to continue to increase our understanding of WBL, both in terms

of developing partnerships with employers to maximise knowledge creation, and of establishing how people learn in the workplace.

The extent to which WBL should be regarded as having equal value to more traditional academic learning, and as such should receive equal credit, is an issue that is yet to be resolved across the HE sector. The terms 'good', 'successful' and 'best' practice are open to many interpretations but, in the light of what we have seen already it is evident that there is sufficient variety to provide a successful WBL programme to suit virtually every need. In Scotland, for example, over 70% of employers have increased the volume of WBL, and 78% of employees had participated in WBL over the 12 months of Glass et al's (2002) survey with the Scottish Executive Central Research Unit. In smaller companies the proportion was less marked. This result surely shows that WBL does enable participation for many whom otherwise may not undertake further learning.

Nevertheless, there remains a fundamental need to recognise WBL as a legitimate HE activity (Nixon et al, 2006:25). Therefore research is required to increase our understanding of WBL in terms of:

- Developing effective partnerships with employers;
- Developing an effective transdisciplinary pedagogy;

The model to be developed by the WELL project cuts across these two aspects with more focus on the second.

7. Conclusion and Development of a Criteria for the WELL Project

We have examined the different ways in which WBL can be delivered and it is evident that, provided the most appropriate system is chosen and that progress and results are kept continuously under review, WBL can be an effective method of academic transfer. Most importantly, however, it is necessary to have regard to the different objectives of the participating entities: those of the students are determined by their life plan; the learning provider (HEI) by their corporate plan, and the employer by business objectives, and the involvement of the organisation/employer in the development of the learning programme.

The discussion above, whilst not exhaustive, can give rise to criteria for a model proposed by the WELL project. The next section briefly discusses such criteria based on the review of the literature undertaken. Whilst the headings are thematic, there is some inevitable overlap between them.

8.1 Getting started & induction

Once an employer has been engaged and all three participating entities wish to pursue a WBL project, then the following questions are key (Open University, 2006):

1. What are the requirements of the relevant occupational standards, or professional guidelines?
2. How best can the occupational standards be assessed and supported at a distance?

Once these two questions have been answered, through a process of negotiation and liaison, the HEI's processes of course accreditation then assess the academic soundness of the proposal.

The work-based learners' induction must also be flexible and responsive to their contextual demands and allows integration with the employer's PDR/appraisal systems.

8.2 Flexibility

As seen through the case studies, a WBL programme must be flexible to the demands of the other two participating entities and their contextual demands (employer and learner). This can be via 'distance learning', 'e-learning', 'mobile-learning', 'blended-learning', etc.

This can be utilising anything (and everything) from books to virtual world technologies like Second Life. Offering face-to-face tutorials and short residential intensives (with online equivalents). Flexibility, therefore, is not just in delivery but also for the choice of communication with tutors and fellow students by phone, email, online conferencing, or at the nearest tutorial group.

The learner should also be allowed a choice; for example, a single course to develop specific practice and skills, or be able to work towards a qualification, choosing specialist options to suit his/her needs and interests.

The facilitation of the integration of learning with work is a crucial component of the model, and a key indicator of success and uptake.

8.3 Fitness for purpose

A WBL model must reflect the needs and motivations of the employer and the individual as much as the HEI. Course programme outputs need to satisfy the original needs of the tripartite relationship, and be contextually relevant to the profession, sector, industry, etc.

Management guru Charles Handy makes the distinction between 'research' and 'reportage' in business education in Universities, claiming that the confusion between research and reportage leads to a lack of critical questioning. On the topic of preparing managers for the business world

he feels that “the real danger in all this is that the students learn to count, to analyze, and to imitate but are not encouraged to think for themselves” (Handy, 2008).

8.4 Responsive

A WBL model must be adaptable and responsive to the demands of the other two participating (employer and learner) entities and their contextual demands.

A WBL model should be ‘organic’ in that it allows for the creation of qualifications and realisation of opportunities as they arise, as businesses request, and malleable enough to evolve as engaged businesses grow or downsize; thereby responding to market demands and economic conditions. In this respect, the HEI must be prepared to change its approach, and in an appropriate timescale if required.

8.5 Negotiable

A WBL model should allow for input from all parties *throughout the programme*. Continuous feedback and evaluation rather than a 'job done' approach. The channels of communication must be open and accessible for all.

8.6 APEL toolkit

The APEL system must be comprehensive and completed quickly enough to maintain the interest of the learner and employer. E-APEL provides such a self-managed and responsive tool, but is by no means the only system available. WHY & HOW?

8.7 E-learning systems

E-learning systems should be selected and employed only if they enhance the quality of the teaching/learning, and allow the learners to access course content without time and place restrictions. In this respect, the online system Elluminate may support the idea of lecturers doing ‘bite-sized’ recorded lectures with follow up synchronous tutorials afterwards. As

mentioned however, there is often a reluctance to embrace e-learning wholeheartedly, particularly in distance-education; not least, due to the operational costs involved in doing so effectively. Additionally, the link between technology and pedagogy is rarely smooth in any educational domain, and technological innovation doesn't always equal pedagogical change (or improvement). In this respect, a WBL model should not revolve around technological innovations, and a WBL programme should focus on a clear articulation of learning goals and effective pedagogy, which then inform any technological incorporation.

8.8 E-Portfolio systems

E-Portfolio systems must be integrated into the HEI's already ICT systems, whilst allowing for integration and access from the employer's systems. This is because the workplace supervisor and/or mentor needs to be able to look at the learning journey. Bradford's current use of PebblePad does allow for this as the portfolio (or parts of it) can be emailed to anyone.

8.9 Assessment procedures -

These should support negotiated forms of assessment, if required, that add value both in the workplace, as well as meeting academic/quality requirements.

8.10 Progression routes

A WBL model should support the development of clear progression routes and pathways between FE and HE. This is because progression is a key indicator of success, as it enables the learner to plan for their future, etc. Progression agreements are one way of encouraging this.

8.11 Differentiation & support

Work-based learners differ in terms of their maturity, independence, challenge, and support from employer. A model should account for these differences of educational experience, digital maturity, and work-based learners' different locations and learning styles.

In view of the rapidly changing patterns and preferences of communication, particularly by the young, it is essential that the WELL WBL model is designed to cater for the needs of all age groups concerned, learning styles, aspirations, and how they communicate and absorb knowledge, as well as the ways in which they are supervised. In some cases, even with relatively easy access to HEIs the student's home and family circumstances must be taken into account.

Distance learning, for example, can sometimes be a lonely and frustrating experience. Support networks, alumni associations, residential schools, and online conferencing are just some of the ways a work-based learner could be supported.

8.12 Quality

All this must be achieved without compromising the WBL programme's quality and currency as an academically rigorous course of study. Through continuous stakeholder evaluation, it is hoped that the WELL model, under the Escalate remit, can serve as an impetus for curricula areas that lack WBL provision, whilst refresh the already curricula areas where WBL is offered.

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