Technological University Dublin
ARROW@TU Dublin

Articles | Directorate of Academic Affairs

2008-05-01

The Interface Between Academic Knowledge and Working Knowledge: Implications for Curriculum Design and Pedagogic Practice

Anne Murphy
Technological University Dublin, anne.murphy@tudublin.ie

Follow this and additional works at: https://arrow.tudublin.ie/diraaart

 Part of the Curriculum and Instruction Commons

Recommended Citation

Murphy, A. (2008) The Interface between Academic Knowledge and Working Knowledge: Implications for Curriculum Design and Pedagogic Practice. *Level3,* Issue 6, May.

This Article is brought to you for free and open access by the Directorate of Academic Affairs at ARROW@TU Dublin. It has been accepted for inclusion in Articles by an authorized administrator of ARROW@TU Dublin. For more information, please contact arrow.admin@tudublin.ie, aisling.coyne@tudublin.ie, gerard.connolly@tudublin.ie, vera.kilshaw@tudublin.ie.

The interface between academic knowledge and working knowledge Implications for curriculum design and pedagogic practice

Dr Anne Murphy

Introduction

This paper considers some aspects of the theory and practice of work-based learning (WBL) that may be of interest to academic staff in higher education who have responsibility for negotiating, designing, delivering and assessing programmes for, and with, Irish workplaces, companies, organisations and sectors of the workforce. The paper does not claim to be breaking significant new ground: rather it is trying to connect aspects of the field to inform underpinning of WBL curriculum design and related pedagogic practice as the start of a conversation rather than the last word.

The relationship of contemporary tertiary education to the world of work is now undisputed. Partnerships between vocational education and training/further education (VET/FE) and higher education (HE) providers with statutory bodies, companies, organisations, sectors and groups are now standard practice with academic quality assurance protocols and arrangements in place to ensure the integrity of awards and the standards of learning. Academics are well used to the concepts, theories and practices associated with curriculum design for traditional teaching, and indeed, the practice literature with regard to higher education pedagogies is vast. For the most part, academic staff development programmes related to teaching and learning operate from a paradigm of traditional, classroom-based teaching regardless of preferences for, variations on, or combinations of, behaviourist or constructivist pedagogical design (Davis *et al.* 2001).The inclusion of ICT-based technologies in teaching methods is energising significant numbers of academic staff and attracting considerable funding. Likewise the move to a learning outcomes approach is stimulating critique and discussion about the nature of learning at all levels. However, this paper argues that these changes operate predominantly within a traditional paradigm of teaching and learning, regardless of promotional rhetoric to the contrary, and that they do not fundamentally consider how adults learn through work, how curricula informed by a knowledge of the complexities of learning through working life could be designed, how learning outcomes can be negotiated and attained through work, and how assessment methods need to be relevant to learning through work. The paper distinguishes clearly between aspects of work-based learning which are integrated into traditional programmes, and programmes which are informed specifically by a paradigm of work-based learning, raising both theoretical and practice aspects of the latter, without privileging one form of teaching and learning above another. The main aim of the paper is to argue that work-based learning requires a different set of concepts, theories and practices – in fact a different paradigm – within higher education curriculum design and pedagogies.

Learning through work is nothing new in HE

At the outset it is conceded that learning through work has always been recognised in higher education in various ways. The most obvious vocational and professional relationships with the world of work practice at undergraduate level are through placements, apprenticeship, internships, sandwich courses, block release and so on. Postgraduate qualifications such as the Applied MSc., MBA & DBA, Continuing Professional Development courses, graduate diplomas, special purpose awards etc., generally respond to the needs of working life. It is not unusual for work-related elements of programmes to attract significant credits towards an award, often with grading. Nor is it unusual for such work-related elements to have formal arrangements for mentoring and supports in the workplace with academic 'inspection' that workplaces are indeed sites of learning.

Partnerships with the world of work are not new either in higher education. Traditional and contemporary arrangements for training of professional practitioners such as in law, accountancy, medicine, in the pharmaceutical industry and the IT industry, are well known. Off-campus and/or in-company delivery are now quite common. Negotiated programmes for the public service, for the defence forces and for public employees generally, are not unusual. All of these have an element of recognition of the significance of learning *at, through* and *from* work.

The question, then, is: Is it legitimate to argue that we require a specific paradigm of work-based learning to inform the business of higher education, other than within the context of recognising prior experiential learning (APEL)? It could be argued that mechanisms used to date for recognition of prior learning through work have centred more on making experiential *recognisable* within the traditional paradigm of learning in higher education rather than within its own paradigm. It could also be argued that the use of learning outcomes has had limited value in APEL since the construction of those outcomes is informed by a traditional learning and teaching paradigm, and factors out any learning that is not articulated in those pre-scribed learning outcomes! This paper, then, tentatively suggests that there is an obvious relationship between the concepts, theories and practices of work-based learning and those of APEL since both 'recognise' the legitimacy of working life as a locus of legitimate, higher level learning in its own right. They represent an emerging paradigm, or worldview, that higher education needs to seriously consider if it is to further extend its relationships with working life in a more philosophically empathic manner.

Features of a paradigm or worldview

A paradigm, based loosely on Kuhn's original definition (see Kuhn 1962), is broadly defined as a set of practices underpinned by shared epistemology, values and beliefs, habits of reasoning, patterns of judgement and working techniques, with broad agreement on theories and concepts. A paradigm may emerge from an earlier one, may displace an earlier paradigm, or exist alongside a different one. At the macro level of metaphysics, a paradigm defines what can be known and understood. At the meso level of epistemology, a paradigm determines what counts as acceptable, or

legitimate, knowledge. At the micro level of ethics and praxis, a paradigm mediates the practices of its own community.

Circumstances, events and actions may cause paradigm shifts in how higher education organises itself and positions itself within the world and may cause paradigms to shift or change. The process of paradigmatic change requires that a new paradigm becomes generally accepted by the power elite as well as by the general body of practitioners, if it is to be sustainable. Paradigms become accepted in higher education generally when the following happen:

- professional bodies give them legitimacy
- dynamic leaders adopt and promote them
- specialised journals and books emerge
- conferences of like-minded thinkers are organised
- government agencies grant funding
- educators include them in their curriculum content
- they become popular in the media
- they are no longer regarded as deviant
- research gives them 'scientific' legitimacy
- they feature in policy documents.

There is a broadly similar pattern in how new paradigms become accepted, integrated and subsumed into higher education practices, often with features as follows. Communication among practitioners and explicit practices ensure that the 'rules' of the paradigm become tacitly known. Soon new theories emerge from practice within the paradigm, often resulting in a general shift in worldview. These changes in worldview can impact differently on different academic disciplines both in timescale and extent. It is not unusual for initial resistances to identify anomalies in the old and new paradigms. When a paradigm becomes entrenched it too begins to resist challenges to its assumptions, values and theories. On the other hand, paradigmatic changes can blur boundaries and sometimes generate border-crossings among paradigms, thereby making resistance less necessary. Crises in paradigms can result in paralysis, resistance, or passive acceptance of new paradigms. A new paradigm may not be a cumulative outcome of earlier paradigms, but can represent an entirely different worldview which needs mass persuasion for acceptance. Acceptance of, or surrender to, a new paradigm frees practitioners from continuously examining the assumptions underpinning previous paradigms.

Drivers of paradigmatic change in Irish higher education in relation to WBL

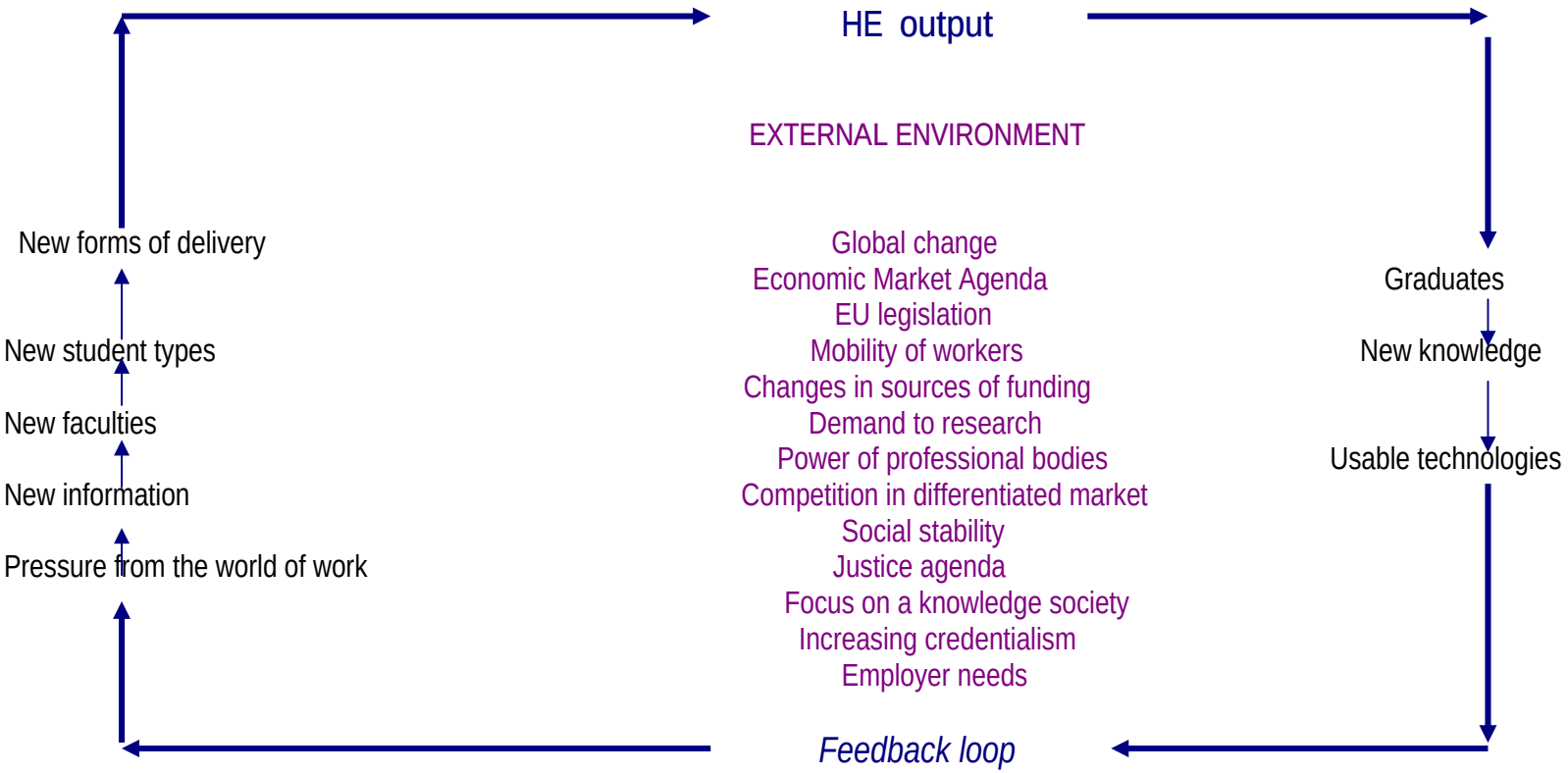
Contemporary drivers of structural and political change in higher education in Ireland, and in Europe generally, are identified as two-fold, as illustrated in Figure 1: firstly, the need to maintain and enhance economic progress through generation of new knowledge through research and the application of that new knowledge in the world of work, and secondly, the need to facilitate social stability and democratic cohesion. As a broadly publicly funded institution, higher education is expected, in such an open/neo-liberal model of the academy, to be responsive to the needs of the economy and of the labour market, while at the same time affording citizens their right to appropriate levels of education to sustain economies in stable societies. Thus the growing interest in the interface between traditional higher education and the world of

work at OECD, EU and national levels manifest through the myriad of research project, incentives and initiatives which have a labour market focus.

Higher education is being increasingly pressurised to adapt its cultures, policies and practices to this agenda, and indeed the growing number of qualifications and credentials are testimony to the growing marketisation of education generally within a European Qualifications Framework characterised now by diminishing differentiation among higher education providers or among their awards (Barnett 1997, 1999; Boud and Solomon 2003; Delanty 2001; Fenwick 2002; Fisher 2005; Fulton and McHugh 1996; Gustavis and Clegg 2005; Mills 2001; O'Donoghue and Maguire 2005; Reeve and Gallacher 2005; Symes and McIntyre 2000; Wagner and Childs 2000).

Where individual academics position themselves with regard to these changes in the remit and function of higher education is a matter of some importance where the paradigm of work-based learning is concerned, since positionality will determine one's philosophical, ethical and practice attitudes on many levels. There is no doubt that scholarly opinion is quite divided in this regard.

Figure 1 Emergence of WBL in an open/neo-liberal model of HE as a public knowledge institution



Scholarship of the WBL paradigm

Emerging international scholarship related to work-based learning ranges over all aspects, though with less emphasis on pedagogies of WBL appropriate for higher education than one might expect. This deficit could, of course, be explained by the tendency to regard WBL as 'training' in the vocational training and education or further education sectors. The literature on 'adult learning', much valued in higher education, however, does not readily transfer from its marginal, liberal humanism, or critical theory roots, to scaled-up pedagogical practices across all higher education. Thus, it is not surprising that a paradigm of WBL with its own discrete scholarship is emerging across all continents, including aspects of worker/trade union and indigenous knowledges. An indicative table of WBL scholarship and scholars is offered in Table 1 with the caution that it is highly selective to include writers who focus on philosophical and theoretical aspects rather than on specific pedagogical practices.

Table 1 Scholarship of WBL

Aspect of WBL scholarship	***Selected contemporary WBL Irish and international 'scholars'***
Ontology and epistemology: The nature of working knowledge	Hagar, Boud, Fenwick, Eraut, Schön, Brown and Duguid, Sfard, Engeström, Fuller
How people learn at work	Billet, Solomon, Mills, Illeris, Evans, Falstead, Unwin, Eraut, Lave and Wenger
Partnerships between HE and the world of work	Brennan and Little, Boud and Solomon, Gallacher and Reeve, Fisher
General and postmodern critique	Coffield, Fenwick, Kincheloe, Fuller, Barnett, Apple, Usher, Edwards, Lynch, Mills, Murphy

Emergence of a WBL paradigm in relation to learning theories and attitude to learners

Any paradigm of curriculum and pedagogical design will be underpinned by a philosophical stance with regard to the nature of learning and the appropriate means of teaching, as well as by a specific view of the role of the learner. A WBL paradigm, as illustrated in the timeline overview in Table 2 looks significantly different to a traditional paradigm with regard to the locus of learning. A WBL paradigm will regard the exigencies of work as central to the curriculum and to the level, pace and intent of the learning. While some traditional academics may find this unsettling, it could be argued to be merely an extended articulation of many pedagogical approaches listed earlier, such as apprenticeship, internship, placements, learning contracts. What is significant in WBL and in APEL, though, is the acceptance that all knowledge need not necessarily be codified in the concepts and terminology of the traditional higher education curriculum to be regarded as legitimate for working life.

Table 2 Timeline of development of curricular types

Stage	***Innovation in HE curriculum design and pedagogies***	***Theoretical basis***	***Centrality of the learner/degree of agency***
1950s and 1960s	Programmed learning, open learning	behaviourism	Learners control the pace of learning but not the content
1970s and 1980s	Adult learning methods, self-directed and negotiated	humanism	Learners negotiate the pace with some negotiation of content
1990s	e-learning, group project-based learning, PBL	constructivism	Learners collaboratively focus on what is needed to be learned with problems/projects usually defined/set by others
Late 1990s	Work-based learning partnerships	eclectic (situated, distributed, complex)	Learners negotiate programme activities from the exigencies of work. Variability of agency depending on context, purpose, power and culture.

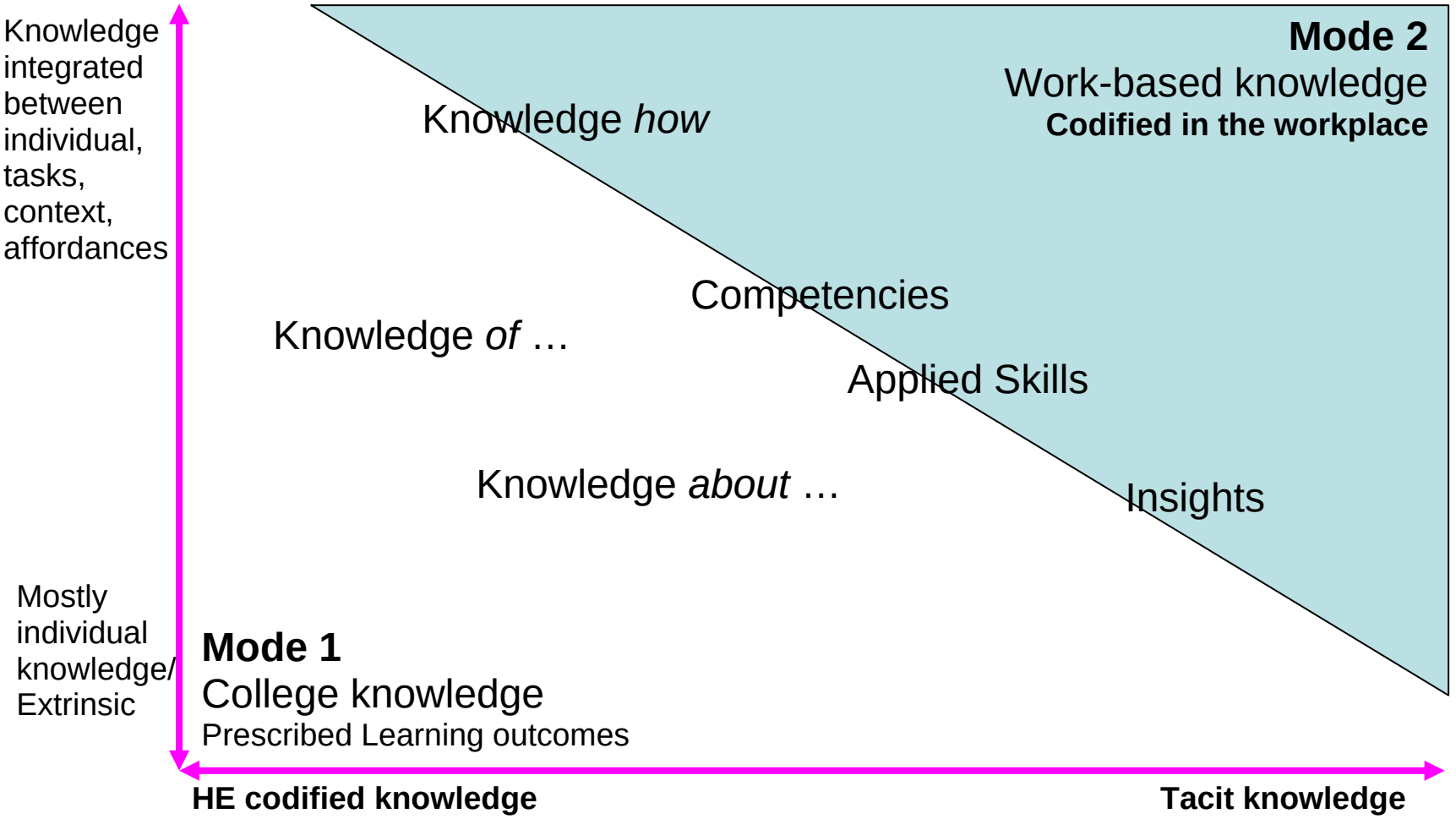
The interface between WBL and college-knowledge

Ways to clearly and simply articulate the differences between dimensions of what could be described as the 'college-knowledge' paradigm and the paradigm of learning through work are now well published in international literature. Widely known ideas of Model 1 and Mode 2 knowledge (Gibbons *et al.* 1994) are a useful starting point. For the purpose of our discussion here, we could describe Model 1 as the codified knowledge of the academy which is articulated in its curricula, pedagogies, scholarship and awards. This form of knowledge is mostly extrinsic to the knower, with its own academically defined codes. Its acquisition is an individual act aided by teaching of a prescribed curriculum. It is mostly knowledge *of* and knowledge *about* for application in a notional context in the future. Model 2, on the other hand, could be described as emerging from collaborative work, codified through work practices and distributed through both work practices and worker activity. It depends to a great extent on workplace affordances and opportunities in real-time. It is mostly knowledge *how to*, and knowledge *why*. In may be tacit rather than explicit, with insight a significant factor. The emphasis is on understanding learning as distributed among tasks, people, contexts, time–space and affordances, as illustrated for discussion purposes in Figure 2.

Designing and delivering a curriculum which 'values' this kind of distributed and situated learning is challenging for the academic practitioner who may have little freedom to operate outside the traditional paradigm of programme design and quality assurance practices, mindful that any threat to the predominant paradigm may be hotly resisted by internal cultures and professional vested interests (Billett *et al.* 2006; Boud

and Garrick 1999; Brennan and Little 1996; Brennan 2005; Casey 1994; Fenwick 2002).

Figure 2 Conceptualising the interface between *College Knowledge* and *Working Knowledge*



Murphy (2007) elaborated from Campbell (2007)

Implications of the WBL paradigm for curriculum design

Design challenges for the WBL curriculum require the academic practitioner to re-consider the rationale for the traditional curriculum and its many unquestioned assumptions about the validity of a pre-scribed learning outcomes approach, about fundamental constructive alignment of learning, teaching and assessment, about static semesters and rigid timetables, about linear learning, and about static assessment models, as tentatively illustrated in Table 3.

More fundamentally it may question the basis of the codified knowledge of the academy and its preference for disembodied, de-contextualised and abstract curricula that favour forensic and atomistic attention to the minutiae of programme documents. It may instead promote a reasoned consideration of WBL programmes operating within their own paradigm of holistic learning where learning outcomes are broadly defined at the appropriate level in relation to the work context, where the curriculum is integrated and relational, where assessment activities are authentic and negotiated, where the learning tasks are designed as real-world challenges with the appropriate level of theory-in-practice, and where the assessment criteria are negotiable, weighted in relation to the tasks, and fit for purpose.

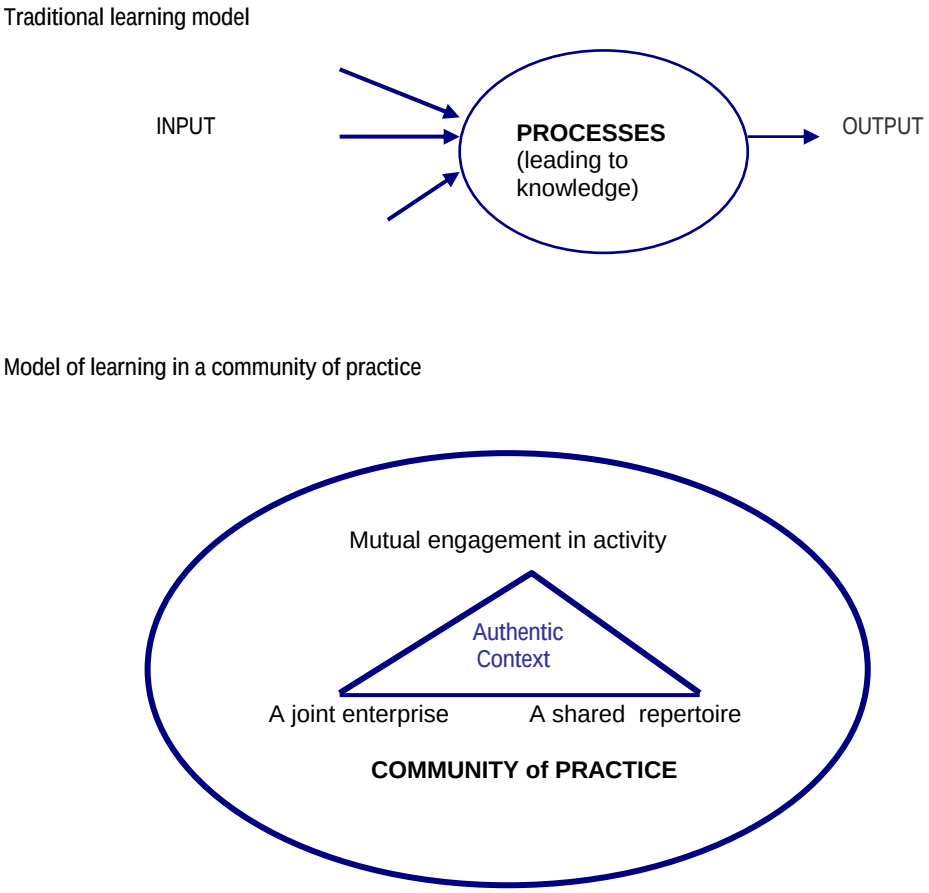
Table 3 Atomistic and holistic curricula

ATOMISTIC **Pre-scribed curriculum**	**HOLISTIC** **Learning contract with exigencies of work as the curriculum**
➢ Pre-determined learning outcomes at unit or module level ➢ Alignment of curriculum content, learning activities and assessment methods ➢ Teaching hours, learning hours and assessment hours mathematically determined ➢ ECTS formulae determine programme design and pace of learning achievement ➢ Static timetabling of learning progress ➢ Semester-based calendar structures	➢ Learning outcomes broadly defined at level in context ➢ Integrated and relational curriculum ➢ Negotiated assessment activities ➢ Scale of learning negotiable ➢ Challenges of learning tasks determine the pace and extent of learning ➢ Work-place timelines dominate ➢ Negotiated weighting of assessment criteria

Working principles for a WBL programme design in higher education

The design of a work-based learning programme will inevitably be influenced by traditional as well as by emerging trends in higher education generally, and trends emerging at the interface of education and industry. In particular it will take cognisance of the growing scholarship related to communities of practices, to work-based learning and to validation of non-formal and informal learning in its curriculum design, its pedagogical approach and in its assessment strategies. A WBL curriculum model generally includes direct teaching and related project work in accordance with the paradigm of transmission/acquisition favoured by traditional third level pedagogies within established levels of learning in national frameworks and within European Qualifications Framework. However, it will also take account of the growing shift towards work-related learning in authentic communities of professional practice, especially at postgraduate level. Those traditional and communities of practice paradigms are briefly illustrated in Figure 3.

Figure 3 Traditional learning process and learning in communities of practice



A WBL programme design will take particular cognisance of the location of the participants in a context and establish if affordances for informal and non-formal learning are ubiquitous. The importance of non-formal and informal learning in the working lives of adults is central to a WBL paradigm, whereas it is mostly factored out in traditional higher education curricular design.

The underpinning of a WBL programme is likely to be informed by particular models, particular sets of learning theory and particular scholarly literature. For the purpose of this paper it might be legitimate to state six emergent key design principles broadly stated as follows:

Principle 1 The level of learning of the programme achieved by participants should be directly mappable onto the national qualifications framework level descriptor and onto the Bologna Framework Dublin Descriptors of the European Qualifications Framework.

Principle 2 The syllabus content and mode of teaching should enable the acquisition of theoretical underpinnings of work-related elements so that learners will be equipped with sufficiently robust analytical frameworks to critically and

reflexively relate their experiences of work-related aspects to the appropriate body of scholarship.

Principle 3 Affordances and supports in the workplace should be sufficient to enable learners to achieve the agreed learning outcomes for the work-related elements in the agreed timespan.

Principle 4 The elements of the programme should be structured so as to meet both the needs of the sponsoring organisation the learning needs of individual participants, and the needs of the providing/awarding body.

Principle 5 Mechanisms to document individual and collective learning should be appropriate to the context, to the intended learning outcomes of the programme and to the potential of learners to demonstrate understanding, insights, skills and competences in relation to the work-based elements and the major project.

Principle 6 Both the provider/awarding body and the partner organisation should respect standard protocols in relation to privacy for the student related to academic achievement and progress.

Learning theories underpinning a WBL model

The pedagogical model for a WBL model is generally based on international and national good practice in work-based and work-related learning drawing on contemporary research and scholarship related to the interface between the world of work and the world of academia. It might draw on the scholarship of knowledge production through work and the attendant theories of work-related learning.

In general, WBL locates its theoretical affiliation predominantly within an activist, constructivist and social learning paradigm with an openness to complexity and emergence. WBL programme designers acknowledge the centrality of the transfer and acquisition metaphors in taught programmes and knowingly designed a considerable element of direct teaching at the start of the programme delivery in the form of obligatory modules and optional modules before participants begin their work-based learning individual projects and team project. The theoretical rationale for this design is that a considerable body of knowledge is required to achieve the level of learning assessed for a higher education award. A WBL model takes particular note of the need to integrate an understanding of how knowledge is both constructed and shared in the workplace through both organisational learning models and through individual and collective productive reflection, as illustrated in Table 4 and Table 5 (Boud 1 and Boud 2 after Boud 2004) related to metaphors of work-based learning and to productive reflection.

Table 4 Productive reflection (Boud1)

Productive reflection metaphor of learning	**Vocational education and training**	**Organisational learning**	**Learning for work**
Focus	Individuals	Organisations	Workgroups
Orientation	Learning achievement	Organisational development	Reflexive engagement with work
Practice	Training	Group development	Productive reflection
Criteria for learning	Individual qualifications	Organisational change	Work output and experience of work
Academic arena	Education	Business	Interdisciplinary

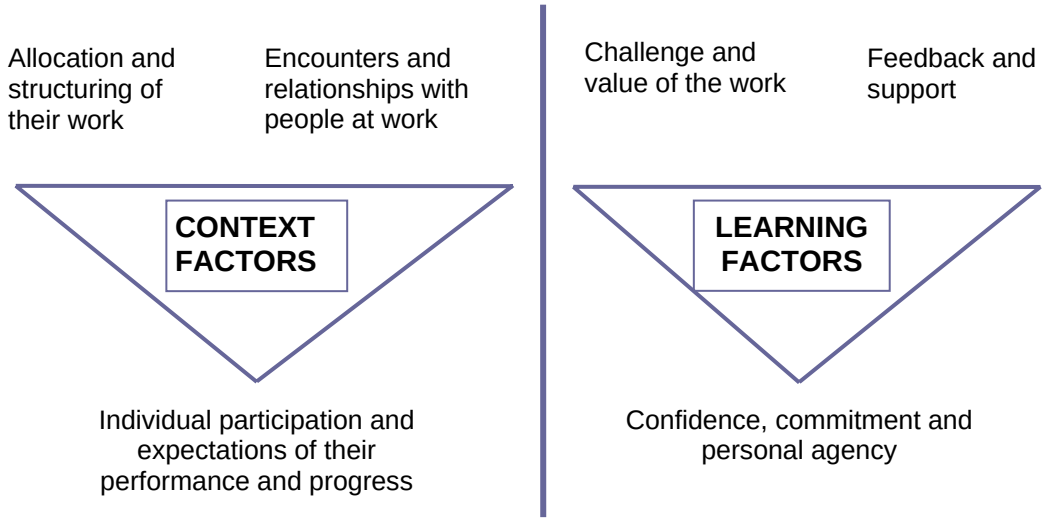
Table 5 Productive reflection (Boud2)

Approach to learning	**Training**	**Organisational learning**	**Productive reflection**
Key needs	Rule-governed stability	Appreciation of contingency and ambiguity	Managing contingency and ambiguity
Approach to competence	Dependent on stable occupational categories	Dependent upon effective development of human resources	Dependent upon distributed and flexible competence
Approach to problem solving	Fragmented, directive approach to problem solving	Holistic, recursive, participative approach to problem solving	Reflexive, contingent approach to problem solving
Work organisation	Single-function specialists	Multi-functional teams	Flexible project groups
Work classification	Job description comprising set tasks and responsibilities	Fluid series of continuous reviewed and renegotiated assignments	Implicit contracts drawing on wide range of capabilities
Learning location	Training/learning largely external	Learning, employability defined within enterprise	Emphasis on contextualised workplace learning

The paradigm of WBL focuses on action-in-the-world, on connectivity, on complexity, on potential, and is based on the belief that learning changes both the learner and the learner's environment. It focuses on the agentic power of the learner at both individual and group levels and prefers an andragogical, and even a heutagogical rather than a pedagogical or training model of learning. The WBL paradigm acknowledges the social situatedness, distributive and contextuality of learning and rejects the standard college-based paradigm that learning is an interior act at individual level which can be reproduced and replicated without changing the learner's environment. In WBL organisation learning is contingent on the situatedness and communal nature of learning with the worker-learner being both influenced by, and influencing, the workplace. The WBL paradigm considers it essential that programme design is practice-centred with learning tasks constructed and emerging from the lived world of work practice enabling co-creation, co-generation and collective ownership of knowledge giving respect to non-formal and informal learning and to tacit knowledge as well as to prescribed learning as described in the curriculum document.

However, WBL programme designers are generally conscious that there are limitations to reliance on unquestioned informal learning theory and limitations to the notion that tacit knowledge can be made explicit for the purposes of assessment and formal recognition. In this regard Eraut (2000) distinguishes clearly among informal, implicit learning and tacit knowledge, and rejects the notion that informal learning is the residual element when formal learning is excluded from the context. He further advises against the use of the term 'informal'; as it connotes discourses of dress, behaviours and diminution of social differences. Eraut defines personal learning as cognitive reasoning that a person brings to a situation which enables her to think and perform. This includes both implicit knowledge and tacit knowledge, public knowledge and private knowledge. This knowledge, according to Eraut, is not solely individual, but distributed and socially constructed by many people. Eraut categorises informal learning into implicit learning, reactive learning and deliberative learning. He argues, from his empirical research into work-based learning, that there are context factors and learning factors at play. Context factors can enable learning by providing structures, relationships and motivation for learning. Learning factors include challenging work, feedback and self-efficacy. See Figure 4.

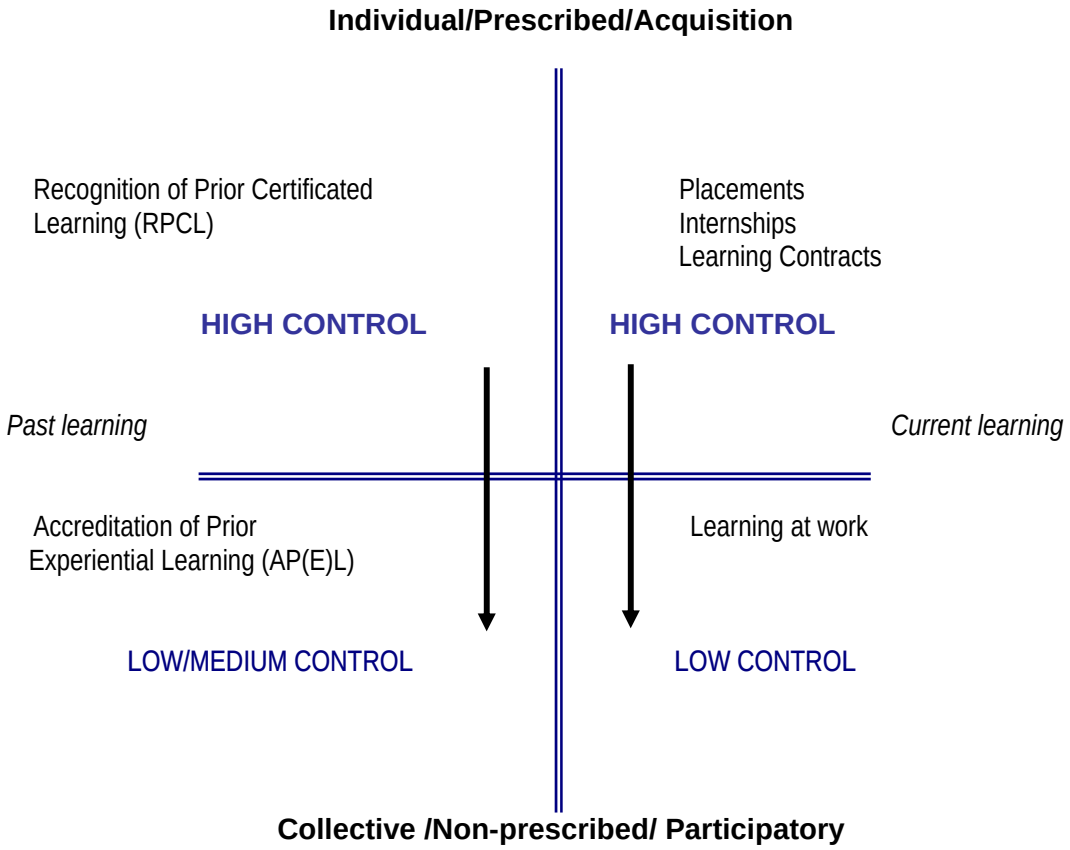
Figure 4 Eraut's conceptualisation of learning factors at work



Source: Eraut (2005)

In a nut-shell then, a WBL model acknowledges that the integration of pedagogical design from the traditional and emerging work-based learning paradigms requires academic staff to re-conceptualise some prior givens and to integrate into their conceptual frameworks that learning that is collective, non-prescribed and participatory will inevitably emerge in work-based learning regardless of the intended programme learning outcomes elaborated in the programme document, and that academics have low control over the nature and extent of this learning. It is in this complexity that work-based learning allows for greater affordances for learning than the traditional prescribed curriculum of the traditional higher education paradigm, as illustrated generally in Figure 5.

Figure 5 Control of learning: traditional and emerging paradigms



Source: Murphy (2007a)

However, for the purpose of elaborating the boundaries between the tradition and work-based curriculum, Figure 6 and Figure 7 use the continuum from Model 1 to Mode 2 from Figure 2. In Figure 6 (Brennan 2005) it is reasonable to conceptualise a continuum of curriculum design from a starting point of low relationship with the world of work to a more radical point where work is the primary site of learning. On that continuum it is possible to plot the locus of control over the curriculum and over the value placed on learning through working life. If we follow this logic we can then illustrate the relative influence of higher education and the external world in relation to curriculum content and design of learning programmes as illustrated in Figure 7. It is, of course, taken as given that there are areas of boundary-crossing in the continuum and that movement is not necessarily linear or uni-directional. However, as an heuristic it offers a conceptual framework for discussions with regard to WBL curriculum design and the interplay of interests and agendas within it.

Figure 6 WBL and the HE curriculum

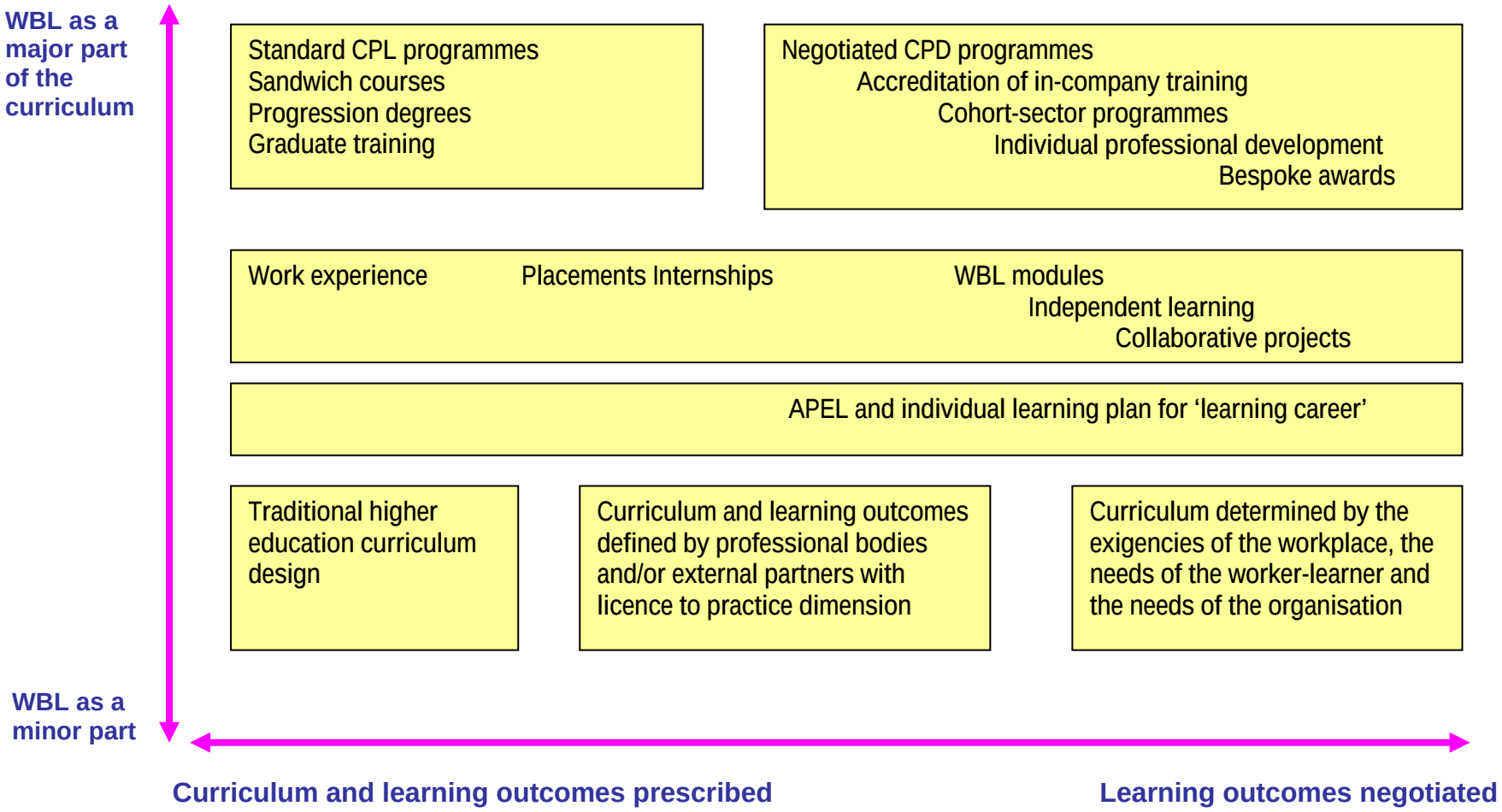
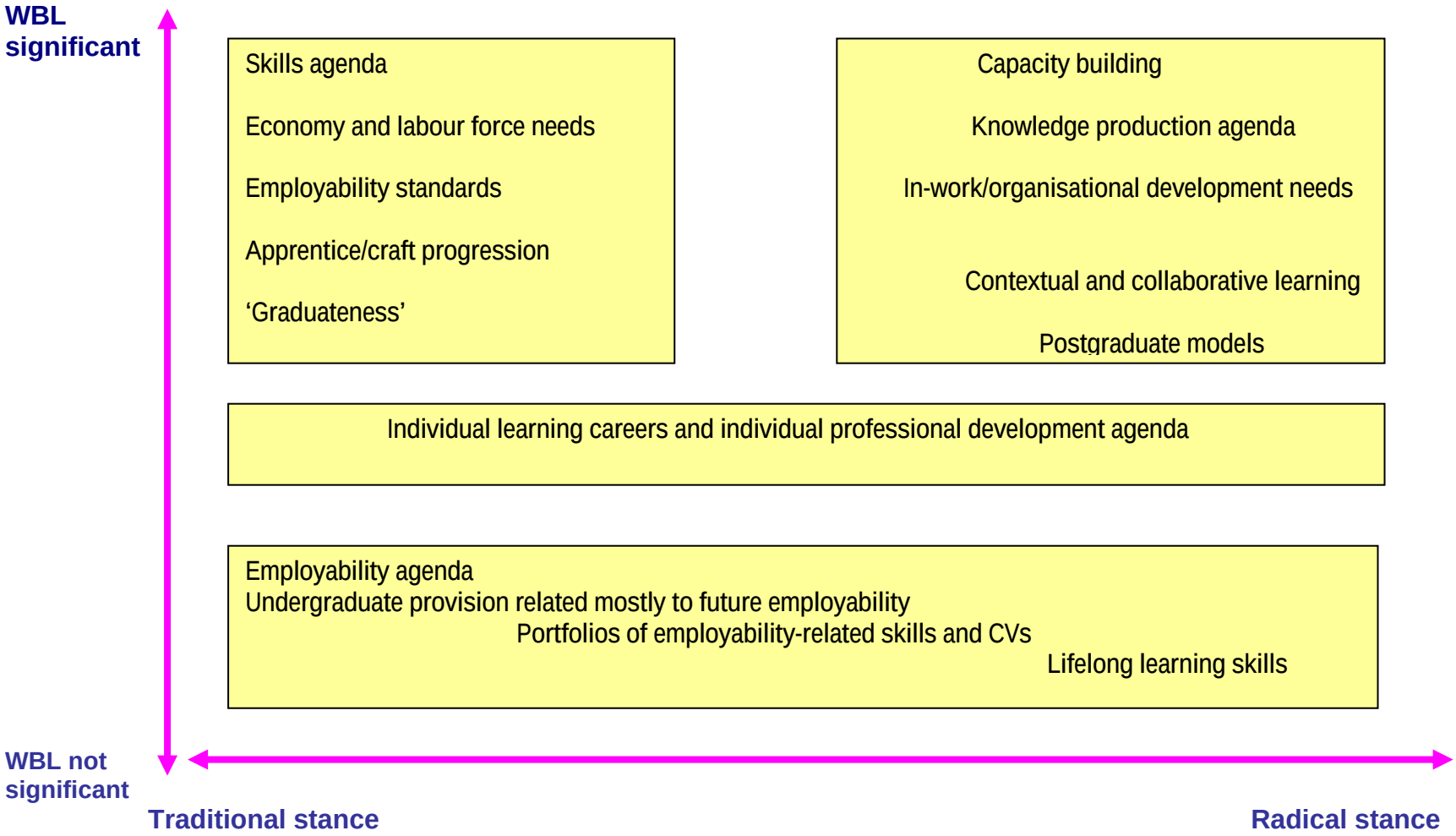


Figure 7 WBL and policy agendas



Some critiques of WBL pedagogical design

It is reasonable at this stage to concede that work-based learning as a political or policy position that works its way into higher education practices is not without its critics, whose academic right to remain critical is not questioned in this paper. Inevitably there are critical voices from within the traditional academy which resists diminution of its powers to decide its own role and remit in society. There are critics who fear the growth in interference by the state-as-paymaster in academic matters generally. Additionally there are scholars who write from the perspective of critical theory who fear that work-based learning represents yet another means of colonisation of the lifeworlds of workers and they lament the growing emphasis on performativity at work. They fear that higher education is becoming too close to market needs with too much demand for the 'flexible' and 'mobile' worker.

Traditional scholars often dismiss work-based learning because it lacks sufficient theory, is too subjective, too generalist, too contextual. Practitioners often dismiss it on the grounds that it is procedurally too-difficult and pedagogically too time intensive. All these are legitimate criticisms in their own ways, no doubt, though the traditional paradigm is rarely critiqued in equal measure!

Unresolved issues in WBL

As with any emerging educational practice, work-based learning excites critical reaction. Among the persistent and probably troubling issues are those related to legitimation of knowledge, individual agency, worker–learner identity, academic positionalities and worldviews, and the role of higher education in the labour market.

We could phrase some initial direct questions as follows:

- Whose codes and accreditations are most powerful?
- Who really has the power to regulate what is known?
- Does surveillance of work-based learning serve the needs of individuals, and equally well serve the needs of economies and nation states?
- How far will qualifications framework authorities intrude into workplace learning at the expense of individual agency?
- Has the *learned* curriculum equal respect with the *taught* curriculum, or will it ever have?
- Will higher education concede that is but one partner in collaborative co-creation of knowledge?

References and additional recommended readings

Anderson, G. and Boud, D. (1996) *Learning Contracts: A Practical Guide*, UK: RoutledgeFalmer.

Apple, M. (1993) *Official Knowledge: Democratic Education in a Conservative Age*, New York and London: Routledge.

Armsby, P., Costley, C. and Garrett, J. (2006) 'The Legitimation of Knowledge: A Workbased Learning Perspective of APEL', *International Journal of Lifelong Education*, 25 (4) (July–August): 369–383.

Barnett, R. (1997) *Higher Education: A Critical Business*, London: Society for Research into Higher Education.

Barnett, R. (1999) *The Limits of Competence: Knowledge, Higher Education and Society*, London: Society for Research into Higher Education.

Billett, S. (2004) 'Transformations and Control: Agency and Intentionality at Work', Conference paper, Workplace Learning from the Learners' Perspective, Copenhagen 25–27 November.

Billett, S., Fenwick, T. and Somerville, M. (eds) (2006) *Work, Subjectivity and Learning: Understanding Learning through Working Life*, The Netherlands: UNEVOC/Springer.

Boud, D. (2004) 'Productive Reflective in Learning', Keynote Conference Paper, Workplace Learning from the Learners' Perspective, Copenhagen 25–27 November.

Boud, D., Cohen, R. and Walker, D. (eds) (1993) *Using Experience for Learning*, London: Society for Research into Higher Education.

Boud, D. and Garrick, J. (eds) (1999) *Understanding Learning at Work*, UK: Routledge.

Boud, D. and Miller, N. (1995) *Working with Experience, Animating Knowledge*, London: Routledge.

Boud, D. and Solomon, N. (2003) *Work-based Learning: A New Higher Education?*, London: Society for Research into Higher Education.

Brennan, J. and Little, B. (1996) *A Review of Work-Based Learning in Higher Education*, London: Quality Support Centre, Open University.

Brennan, L. (2005) '*Integrating Work-based Learning into Higher Education: A Guide to Good Practice*, UK; UVAC; available online at http://www.uvac.ac.uk/downloads/0401_publications/int_wbl.pdf.

Brockbank, A. and McGill, I. (1999) *Facilitating Reflective Learning in Higher Education,* London: Society for Research into Higher Education.

Burns, R., Murphy, A. and O'Donnell, H. (2008) 'Supporting Graduate Development through Workbased Learning', UNIVEST Conference, Spain, May 2008.

Campbell, D. (2007) 'Bachelors and Employability', presentation to BeSt Graduate Fair Seminar, Vienna.

Carberry, R. (2005) 'Collaborative Learning in Large Organisations: A Community of Practice Approach', Department of Personnel and Employment Relations, University of Limerick.

Casey, C. (1994) *Work, Self and Society after Industrialism*, London and New York: Routledge.

Chappell, C. (1999) 'Work-based Learning and Vocational Education and Training Practitioners' Working Paper 99-103.

Cheetham, C. and Chivers, G. (2001) 'How Professionals Learn in Practice: An Investigation of Informal Learning amongst People Working in Professions', *Journal of European Industrial Training,* 25 (5): 248–292.

Childs, M. and Wagner, R. (1997) 'Opening Gates, Questioning Gatekeepers: RPL in a University Context', Australia: National Centre for Vocational Education Research.

Davis, B., Sumara, D. and Luce-Kepler, R. (2001) *Engaging Minds: Learning and Teaching in a Complex World*, Mahwah, NJ: Erlbaum Associates.

Delanty, G. (2001) *Challenging Knowledge: The University in the Knowledge Society*, London: Society for Research into Higher Education.

Dowling, P.J. (2006) 'Collaboration between Industry and Academic Institutions – Creating Win/Win Outcomes', Paper presented at Continuing Professional Development Symposium 2006, Dublin.

Edwards, R. (1998) 'Flexibility, Reflexivity and Reflection in the Contemporary Workplace', *International Journal of Lifelong Education,* 17 (6) (November–December).

Edwards, R. and Nicholls, K. (2004) 'Mobilising Workplaces: Actors, Discipline and Governmentality', *Studies in Continuing Education,* 26 (2) (July): 159–175.

Edwards, R. and Usher, R. (1994) 'Disciplining the Subject: The Power of Compliance', *Studies in the Education of Adults,* 26 (1 April).

Eraut, M. (2000) 'Non-formal Learning, Implicit Learning and Tacit Knowledge in Professional Work', in Coffield, F. *The Necessity of Informal Learning*, London: Policy Press.

Eraut, M. (2004) 'Transfer of Learning between Education and Workplace Settings', in Rainbird, H., Fuller, A. and Munro, A. (eds) *Workplace Learning in Context*, London: Routledge, pp. 201–221.

Eraut, M. (2005) 'Developing Responsibility', paper given at UTS Conference *Researching Work and Learning*, December, University of Technology, Sydney.

Eraut, M. (2007) 'Theoretical and Practical Knowledge Re-visited', draft paper to the author.

Eraut, M. and Hirsh, W. (2007) 'The Significance of Workbased Learning for Understanding Groups and Organisations', UK: ESRC and SKOPE.

Evans, K., Hodkinson, P., Rainbird, H. and Unwin, L. (2006) *Improving Workplace Learning*, London and New York: Routledge.

Fenwick, T. (2002) *New Understandings of Learning in Work: Implications for Education and Training*, Canada: University of Alberta.

Fisher, S. (2005) 'Is There a Need to Debate the Role of Higher Education and the Public Good?' DIT online journal *Level3*; available online at http://level3.dit.ie/html/issue3/fisher/fisher_abstract.htm.

Fisher, S. and Murphy, A. (2004) 'Workplace Learning and the University: from Re-active to Pro-active?', Conference paper, *Workplace Learning from the Learners' Perspective*, Copenhagen 25–27 November.

Forfás Expert Group on Future Skills Needs (2007) *Tomorrow's Skills: Towards a National Skills Strategy*, Forfás: Dublin; available online at http://www.skillsstrategy.ie/pdf/egfsn070306_skills_strategy_report_webopt.pdf.

Fuller, A. (2004) *Participative Learning through the Work Based Route: From Apprenticeship to Part-time Higher Education*, UK Centre for Labour Market Studies.

Fuller, S. (1991) *Social Epistemology*, US: Indiana University Press.

Fulton, O. and McHugh, G. (1996) *Work-based Learning and its Accreditation: Can Higher Education Deliver?* London: Department for Education and Skills.

Garavan, T., Morley, M., Gunnigle, P. and McGuire, D. (2002) 'Human Resource Development and Workplace Learning: Emerging Theoretical Perspectives and Organisational Practices', *Journal of European Industrial Training*, 26 (2–4): 60–71.

Garrick, J. (1998) *Informal Learning in the Workplace: Unmasking Human Resource Development*, London: Routledge.

Garrick, J. and Rhodes, C. (1998) 'Discovering Organisational Learning: The Possibilities for a Postmodern Epistemology of Practice', *Studies in the Education of Adults*, 30 (2): 18–23.

Garrick, J. and Rhodes, C. (eds) (2000) *Research and Knowledge at Work: Perspectives, Case Studies and Innovative Strategies*, London and New York: Routledge.

Gibbons, M., Limoges, C., Nowothny, H., Schwartzman, S., Scott, P. and Trow, M. (1994) *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*, London: Sage, 2007.

Glass, A., Higgins, K. and McGuigan, A. (2002) *Delivering Work Based Learning*, UK: Scottish Executive Central Research Unit.

Gustavis, J. and Clegg, S. (2005) 'Working the Knowledge Game? Universities and Corporate Organisations in Partnership' *Management Learning*, 36 (1): 9–30, 1350–5076.

Hager, P. (2001) 'Towards a Productive Concept of Productive Learning', Productive Learning Seminar Series, UTS Research Centre for Vocational Education and Learning.

Hager, P. and Beckett, D. (1999) 'Making Judgements on the Basis of Workplace Learning: Preliminary Research Findings', Sydney: Research Centre for Vocational Education and Training (RCVET).

Illeris, K. and Associates (2004) *Learning in Working Life*, Roskilde: Learning Lab Denmark.

Jacob, M. and Hellstrom, T. (eds) (2000) *The Future of Knowledge Production in the Academy*, Buckingham: SHRE and Open University Press.

Kincheloe, J. (1999) *How Do We Tell the Workers? The Socioeconomic Foundations of Work and Vocational Education*, Colorado: Westview.

Kuhn, T.S. (1962) *The Structure of Scientific Revolutions*, Chicago, IL: University of Chicago Press.

Livingstone, D.W., Stowe, S. and Raykov, M. (2003) *Annotated Bibliography on the Changing Nature of Work and* Lifelong Learning, WALL Working Paper No 2 2003.

Mills, V. (2001) 'Workbased Knowledge and the Challenge to Academic', *Widening Participation and Lifelong Learning*, 3 (3) 1466–6529.

Murphy, A. (2004) '"Situated Learning", "Distributed Cognition": Do Academics Really Need to Know?' DIT online journal L*evel3*; available online at http://www.level3.dit.ie/html/issue1_list.html.

Murphy, A. (2007a) 'In Mindful Search of a Good Theory of Learning at Work', in Connolly, B., Fleming, T., McCormack, D. and Ryan, A. (eds) *Radical Learning for Liberation 2*, Maynooth: NUIM.

Murphy, A. (2007b) 'The Interface between College Knowledge and Working Knowledge' HETAC Conference, Recognising Workbased Learning, Griffith College, November 2007.

Nixon, I., Smith, K., Stafford, R. and Camm, S. (2006) *Work-based Learning: Illuminating the Higher Education Landscape, Final Report*, UK; Higher Education Academy (http://www.heacademy.ac.uk).

O'Donoghue, J. and Maguire, T. (2005) 'The Individual Learner, Employability and the Workplace: A Re-appraisal of Relationships and Prophesies', Programme for University Industry Interface, University of Limerick.

O'Keeffe, J. and Harrington, D. (2001) 'Learning to Learn: An Examination of Organisational Learning in Selected Irish Multi-nationals', *Journal of European Industrial Training*, 25 (2–4): 137–147.

Portwood, D. and Costly, C. (eds) (2000) *Work Based Learning and the University: New Perspectives and Practices,* SEDA Paper 109, ISBN 1 902435 12 5.

Royal Irish Academy (2006) *Academia–Industry Interface from the Research Perspective, Summary Report of a Working Group,* July 2006, Dublin: RIA.

Rainbird, H., Fuller, A. and Munro, A. (eds) (2005) *Workplace Learning in Context*, London and New York: Routledge, Taylor and Francis.

Reeve, F. and Gallacher, J. (2005) 'Employer–University 'Partnerships': A Key Problem for Work-based Learning Programmes?', *Journal of Education and Work*, 18 (2) (June): 219–233.

Roberts, P. (1998) 'Re-reading Lyotard: Knowledge, Commodification and Higher Education', *Electronic Journal of Sociology*; available online at http://www.sociology.org/content/vol003.003/roberts.html.

Scott, P. (ed.) (1998) *The Globalisation of Higher Education*, London: Society for Research into Higher Education.

Sfärd, A. (1998) 'On Two Metaphors of Learning and the Danger of Choosing Just One', *Education Researcher*, 27 (2): 4–13.

Smith, V. (2004) Pushing the Boundaries: Working with Employers and Other Partners, London: Learning and Skills Agency.

Strydom, P. (2000) *Discourse and Knowledge: The Making of Enlightenment Society*, Liverpool: Liverpool University Press.

Symes, C, and McIntyre, J. (eds) (2000) *Working Knowledge: The New Vocationalism in Higher Education,* London: Society for Research into Higher Education.

Turnock, C. and Mulholland, J. (2006) *Learning in the Workplace: A Toolkit for Placement Tutors, Supervisors, Mentors and Facilitators,* UK: Kingsham Press.

UVAC (2005) *Integrating Work-based Learning into Higher Education: A Guide to Good Practice,* University Vocational Awards Council; available online at http://www.uvac.ac.uk/downloads/0401_publications/int_wbl.pdf.

Wagner, R. and Childs, M. (2000) 'Workbased Learning as Critical Social Pedagogy', 3rd National Conference of the Australian Vocational Education and Training Research Association, Canberra, February.

Weiner, E. (2005) *Private Learning, Public Needs: The Neo-liberal Assault on Democratic Education, New* York: Peter Lang.

Wenger, E. (1998) *Communities of Practice: Learning, Meaning, Identity,* Cambridge: Cambridge University Press.