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Towards a strategy for workplace learning

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Annex A

Review of the Academic Literature on Workplace Learning

Dr Judy Harris - CHERI Associate

Setting the scene and establishing parameters

The ideas of learning linked to work roles and learning occurring at work are not new. However, interest has increased in recent years and concepts such as lifelong learning, the learning society and the knowledge economy have 'contributed to the development of "workplace learning" as a distinctive field of enquiry' (Lee *et al.*, 2004, p. 2). At its broadest this field is about encouraging 'the learner' (however defined) 'to draw on their experiences of the workplace to gain new knowledge and understanding, and develop personal attributes and capabilities' (CHERI/KPMG Working Paper 1, p. 1).

However, terminology and definitional parameters are varied and unstable. One of the most-cited classifications is Seagraves *et al.*'s learning *for*, *at* and *through* work (cited in Brennan and Little, 1996). Learning *for* work refers to vocational and formal education; learning *at* work refers to non-formal, in-house training, including the recognition of this through credit-rating; learning *through* work refers to the integration of learning with work.

The instability of Seagraves *et al.*'s particular classifications is most apparent in their overlap. For example, learning *through* work can include the application of learning *for* and *at* work; learning *for* work can include learning *at* work (as in sandwich courses). Therefore, whilst heuristically neat, the classifications encompass wide-ranging variables such as the nature of the learning (formal, non-formal and informal); the focus of learning (work, professional competence, academic); the location of the learning (workplace, higher education institution); and the stage of career of the student or worker (preparation, application, consolidation, development). Furthermore, the foregrounding of any of the above variables tends to reconfigure all the others – rubric-cube style.

A further classification framework revolves around terms such as work-related, work-focused, work-derived, work-based, and workplace learning (to name but a few). As Stern and Sommerlad (cited in Lee *et al.*, 2004, p. 5) demonstrate, such classifications tend to be based on the *degree of separation* of work and learning. The terms have developed in a chronological, generational way, with each 'new' term taking on attributes of the others, in different ways and to varying degrees. For example, work-based learning is seen by some as a broad term embracing learning *in* and *through* work, and by others as referring only to an aspect of learning *through* work¹. Work-related learning is generally taken to be at the greatest distance from work itself, encompassing, for example, voluntary work and gap-year activities. Workplace learning is seen as closest to work, even though the notion of 'physical 'place' is shifting viz mobile offices, workstations, work from home, and so on.

The definitional starting point for this literature review is drawn from CHERI/KPMG.² That paper compares and contrasts interpretations and uses of different terms, advising for current

¹ Seagraves *et al.*'s original definition of learning *through* work had two aspects: first, the application of job-related learning and secondly, knowledge acquired doing a job. Contemporary definitions of workplace learning tend to refer only to the latter i.e. 'learning *closely bound* to the work role' (Brennan and Little, 1996, p. 5) (emphasis in original).

² *Typology of curriculum organisational forms.*

purposes a tight focus as a starting point. This tight focus combines HEFCE's (2005) definition³; aspects of a DfES (2000) definition of work experience⁴; and Brennan and Little's earlier (1996) definition of work-based learning, as follows:

Workplace learning (which is not primarily delivered by e-learning) is where the majority of learning, support and assessment takes place in the workplace, through direct experience of the workplace environment and face to face contact with tutorial or workplace staff (HEFCE).

Learning through work which is accredited and embedded within a [higher education] programme (HEFCE).

Learning [at higher levels] which is integrated with work (HEFCE).

Organised work experience as part of a programme of study (DfES).

Experience-led learning in the workplace i.e. the skills and knowledge which people acquire while doing their jobs [...] made public and [...] susceptible to assessment in academic terms. (Brennan and Little).

Although a relatively tight definition, the CHERI/KPMG typology maps variables within it which are complex. For example, organisational form can range from a short project in a workplace to a substantial sandwich placement to a wholly employment-based learning programme. Workplace learning can be compulsory or optional. The recipient can be a student or a worker at the beginning or in the middle of a career.

If the above definitional parameters provide some focus in terms of scope, conceptual issues remain complex. Writing on work-based learning (similar to workplace learning as defined above), Boud (2001, p. 40) asserts that, 'by and large, there has been little systematic analysis of the kinds of conceptual and theoretical work of value'. Likewise, Paivytynjala and Anneli (2003, p.150) argue that: 'Workplace learning is a very complex phenomenon which so far lacks systematic, sensibly conceptualised and comprehensive theorisation'.

Furthermore, Brown *et al.* (2004, p. 173) observe that workplace learning is 'reshaping the boundary between higher education, continuing education and training and organizational development'. Lee *et al.* (2004, p. 5) locate workplace learning in broader social, political and economic contexts, arguing that it lies at the juncture of learning, knowledge and new forms of work organisation in globalisation. These complex boundary issues have resulted in approaches to workplace learning that stem from a wide range of academic disciplines and perspectives, including: adult education, higher education, cultural anthropology, organisational theory, innovation studies, industrial economics, management studies and vocational education (Candy and Matthews cited in Lee *et al.*, 2004, p. 5). Within these disciplines and perspectives lies a deeper range of often understated philosophical positions across positivism, social realism, constructionism and poststructuralism. The literature is therefore philosophically, theoretically and conceptually complex.

This review

This report reflects a synoptic/selective review of workplace learning (WPL)-related literature. It aims to illuminate and analyse philosophical, theoretical and conceptual issues in order to provide a conceptual evidence base to inform the CHERI/KMPG research study and future HEFCE

³ *Specification for Research Study to inform the Higher Education Funding Council for England's Workplace Learning Strategy.*

⁴ Cited in CHERI/KMPG Working Paper 1.

policy interventions. Following Coffield (2004, p. 283), its purpose is to support the development of policy options that are grounded in 'analytical conclusions'.

The relationship between policy and research is always contested. The position adopted in this review aims to be a critically constructive one. Coffield (2004, p. 280) cites Furlong and White who argue for one role of research as 'part of the planning of policy by, for example, putting issues on the agenda, identifying what information is needed by policy-makers and by reviewing what is already known'. In Coffield's view (*ibid.*), Raffe adds to this by suggesting that researchers 'give policy-makers the conceptual tools to help their decision-making'. Coffield himself goes further and following Ozga argues that, 'research *into* policy should not be reduced to research *for* policy.' (*ibid.*, p. 296) If necessary, researchers should present 'evidence-informed counter policies'. (*ibid.*, p. 280)

This review is reflexively positioned within a frame of applied social theory. Following HEFCE's brief for the research study of which it forms part, it investigates the relationships between the 'worlds' of work and higher-level learning. Following recent WPL research (particularly Rainbird *et al.*, 2004 and Lee *et al.*, 2004), both worlds are situated in context(s). Understandings of different modes of learning and knowledge are then identified and discussed, and the potential for greater integration of the two worlds along learning and knowledge lines is addressed. The review uses critical realism and the lenses of learning theory and the sociology of knowledge to tease out what the literature is saying (or not saying) regarding complex contextual, epistemological and pedagogical issues in and around practices of WPL. The review is therefore a critical discussion and interpretation of the literature in terms of some of the main themes and positions on *contexts-knowledge-learning* and ways of thinking about the multiple possible relationships between them. In this way, it takes a step back from the arenas of policy and practice. Although led by the definition outlined above, the issues raised are also pertinent to broader conceptualisations of workplace learning.

The review draws on books and articles emanating from the UK and beyond. Earlier CHERI publications provide a firm starting point.⁵ There is a tranche of new literature that focuses on integrated workplace learning programmes where work provides the curriculum. This literature is drawn on particularly, because it surfaces tensions around knowledge and learning.

Context matters: A changing world?

As Ashton (2004, p. 22) notes, '[w]orkplace learning only becomes important under certain social conditions'. However in much of the literature these conditions are not investigated fully, even though they are fundamental to understanding current developments. As a result, the WPL literature is often acontextual, apolitical and astructural in this regard. As Keep and Payne (2002, p. 233) put it, there is a tendency to approach such matters in a way that is all too frequently 'founded upon the shifting sands of optimism', rather than on grounded and nuanced readings of contextual conditions.

At the broadest contextual level, as Boud and Solomon (2001, p. 23) point out, globalisation has become almost a cliché which runs the risk of obscuring as much as it reveals about complex and changing economic, political, social and cultural conditions and their effects on relationships between education and work. Generalised accounts of globalisation are often offered in the workplace learning literature. For example, McIntyre and Solomon (1999, pp. 3-4) identify economic globalisation as: 'the global spread of capitalism, and with it intensified and open economic competition, the rise of multinational corporations, the decentralisation of financial markets and the deregulation of labour'. Secondly, they identify political globalisation, where the power of sovereign states is increasingly challenged. Thirdly, they identify a human capital discourse used amongst other things to justify 'the restructuring of public education to promote

⁵ Particularly Brennan and Little (1996) *A Review of WBL in HE*.

individual choice [requiring] greater individual contribution to its costs'. In a more critical vein, Blackler (1995, p. 1031) refers to Castells's documentation of the post-Keynesian changes occurring in contemporary capitalism, characterised by weakening trade unions⁶, fiscally austere policies, a retreat from policies of wealth redistribution, and a reduction in the size of the public sector.

What seems to be missing from such broad accounts is their interpretation, interpolation and recontextualisation at 'sub-global' levels. Overarching accounts of globalisation are only helpful up to a point as they gloss over differentiations and tend to over-estimate the extent to which generalised conditions exist in particular localities. As such, they do not provide anything more than a very general guide for thinking about the theory and practice of workplace learning.

Context matters: The state, capital and labour

Some of the recent workplace learning literature does however take a more nuanced view of contextual matters, in recognising that it is the relationships between the state, capital and labour that underpin developments in this field.

Coffield (2004) highlights the relationships between the state, capital and labour that underpin the social conditions from which political and economic institutions, the organisation of production, and education and training systems and practices take their character. He presents two competing future economic models for Britain: the Anglo-Saxon and the European. The former is a neo-liberal approach which, 'puts its trust in the free, unregulated and flexible market, in ever increasing inequalities in income and wealth in order to encourage competitiveness, in mass higher education, some of it of dubious quality, and in welfare to work policies which do not "distinguish between good and bad jobs".' (*ibid.*, p. 291)⁷ He goes on to argue that the Anglo-Saxon model privileges human capital over social capital and reduces trust in (and increases accountability of) public sector professionals. Its main features are, he argues, 'a strong business elite, a weak state, weak labour organizations and the market is left to co-ordinate the supply and demand of skills' (*ibid.*).

The European model is concerned with 'consensus among the social partners, funds welfare at higher levels than in the UK, treats the twin policy goals of employability and active citizenship as equally significant and interdependent, and views social exclusion as a multi-dimensional and *structural* phenomenon' (*ibid.*, p. 292). Here we see a strong state, strong relationships between labour and business, robust institutional arrangements and a regulated market. Coffield's view is that the current political climate in the UK favours the Anglo-Saxon model as the means to ensure future economic competitiveness. Indeed, it has been argued that this is the model that has ensured low unemployment, a fast growing gross national product and a (relatively) productive and competitive economy. Obviously, this comes at a price: long working hours, a disaffected workforce, for example.

The UK is now recognised as a low-skill economy compared with high-skill economies such as Germany and Japan. As Finegold and Soskice (quoted in Coffield, 2004, p. 285) put it, 'the majority of enterprises are staffed by poorly trained managers, and workers produce low-quality goods and services'. Consequently, the UK Government's focus is on skill development as the main lever to improve competitiveness. However, researchers have noted a lack of attention to the tension between a focus on enhancing the national skill profile whilst also seeing education and training as a means to combat poverty (the development/equity debate, as it is often referred to) (Hayward and James 2004). Moreover, Coffield (2004, p. 284-5) claims that the Government sees skills and qualifications as leading to improved productivity in a 'monocausal' way, rather than seeing them as one amongst many 'economic, social, historical and cultural influences'. As

⁶ Interestingly, the literature rarely mentions trade unions as 'partners' in WPL developments.

⁷ The last phrase is a quotation from Tessa Jowell, then Minister for Employment.

Coffield (*ibid.*, p. 294) points out, the monocausal perspective 'fails to explain why the USA has much higher levels of productivity but roughly the same skill profile as the UK'.

The more critical literature, therefore, stresses the need to see the low-skills phenomenon as a lack of national strategy and state intervention in the nature of financial markets; lack of investment in research and development; and lack of attention to the nature of the employment relationship, industrial policy, labour market regulation and the alignment of the supply and demand sides of the skills equation. Added to this are market failures (such as 'poaching' of skilled workers and little marketing of the benefits of training).

Much of the workplace learning literature floats free of macro issues. What seems to be needed are more 'cranes and levers' to connect the different contextual levels and to position workplace learning accordingly. The focus on skill development as the main lever to improve economic competitiveness is not unproblematic. Workplace learning might benefit from taking greater account of the wider social and economic context within which learning takes place. The absence of trade union involvement in workplace learning is also troubling.

Context matters: Changing patterns of work organisation?

Alongside an absence of analytical perspectives on macro-level political and economic matters, the WPL literature has until recently been silent on the contextual issues of work organisation and workforce development.⁸

Much of the literature presents a one-size-fits-all set of descriptors of what are taken to be ubiquitous contemporary work practices. There are copious references to 'new' Japanese-style co-operative workplaces. These are linked to 'high performance' organisations and occupy the furthest end of a continuum from Taylorist production practices. Ashton (2004, p. 22-3) captures well the nature of high performance organisations:

'...work is designed to increase the opportunities for learning and skill acquisition. Workers are rotated between jobs, multiskilling is practised to ensure that workers are competent in a range of tasks, workers are encouraged through the use of self-managed work teams to take control over aspects of the production process, requiring them to become proficient in decision making and problem solving. In addition to technical skills, team-working and communication and problem-solving skills become essential. Here learning is continuous over the course of the person's employment within the organization.'

It is these new forms of work organisation that place a premium on workplace learning. As Butler *et al.*, (2004, p. 29-30) point out, the assumption is that a high performance organisation 'increases the level and utilisation of skill [...] by effectively tapping into the stock of knowledge that workers accumulate over time'. However, as they also point out, the processes of 'tapping into' largely tacit knowledge remain untested.⁹

That firms are operating in a changing context of work organisation is beyond question, but the WPL literature would lead us to believe that the UK is full of high performance organisations, when the reality is that only one-third of the workforce are at the 'top end' and two-thirds of workers are in insecure, low-paid jobs (mainly in traditional manual and service industries) with little or no training and few prospects.¹⁰ Many employees in this category are already over-qualified for their jobs. Rather than reflecting a primary (or sole) need for higher skill levels, what is suggested here is under-employment and under-utilisation of existing (potentially intermediate-

⁸ A differentiation is being made here between these factors as general phenomena and characteristics of *individual* workplaces which are dealt with in the next section.

⁹ This issue will be dealt with in a later section.

¹⁰ Radio 4 programme, 'Work-a-day-world' produced by Bill Morris, General Secretary, Transport and General Workers Union, broadcast at 9.00, 7 June 2005.

level) skills. Furthermore, such employees are frequently on short-term contracts: employers having no obligation for their continuing employment, let alone their learning needs.

Recent literature also stresses the 'down side' of high performance organisations and associated work practices. Garrick (cited in Fuller *et al.*, 2003, p. 8) argues that 'the introduction of flexible working practices should not be taken at face value as empowering workers but should be unpacked to expose the hidden realities (e.g. work intensification)'. Butler *et al.*, (2004, p. 28) cite Edward's arguments that 'increased autonomy comes at the expense of greater stress as employees are exposed to the vicissitudes of the market via bureaucratic controls such as performance related pay'. As Skule (quoted in *ibid.*) put it: 'transparent boundaries are exposing more employees to the external environment'. Over and above the possibility of work intensification and greater stress, Coffield (2004, p. 285) exhorts us not to be seduced by high performance organisations as these are used to justify down-sizing and redundancies as the main means to increase productivity. This is echoed by Rainbird *et al.* (2004, p. 51) who argue from a labour process perspective that the opposing interests of workers and employers are not taken account of by high performance discourses of co-operation, 'consensus and social partnership'.

It seems to be the case that changing work practices are treated in an apolitical way in much of the literature. This is a long-standing tradition in the organisation theory literature. Lee *et al.* (2004, p. 4) point out that Senge, the guru of the 'learning organisation', sees an unproblematic relationship between 'the good life' and 'skilled, knowledgeable and flexible workers' in a globalised economy.

A further significant issue regarding workplace practices is the seeming lack of demand from employers for more highly skilled employees.¹¹ As Reeve and Gallacher (2005, p. 225-226) observe:

'Further evidence of the limited demand for high level analytical skills in key sectors of the UK economy and elsewhere has been shown through recent research into the operation of large retailers. In these organisations the "core organisational competences" are located in a small number of staff in the headquarters of the organisation [...]. In these situations the demand for autonomous and analytical workers is limited...'

This lack of demand is further evidenced by research into the extent of workplace training. Coffield (2004, p. 282) cites Coleman and Keep who recorded that '72 per cent of the UK employees had received no training in the 13 weeks prior to interview. Of these, just under half (48 per cent) claimed that they had never been offered any type of training by their current employer.' Lack of demand and lack of training resonate with the lack of incentive provided by the main official policy mechanism for supporting workforce development – the Investors in People award (IiP). As Ashton (2004, p. 27) observes: 'This provides a template for best practice in the field of human resource development and for the certification of those organizations which meet the national standard [...] A blanket initiative to encourage good human resource development practice, there is nothing in the IiP standards which explicitly encourages employers to use the workplace per se as a source of learning.'

Various commentators argue that the current voluntarist arrangements are the culprit. As Young (2004, p. 186) observes, 'the peculiarly voluntarist role of the state that emerged in England in the nineteenth century [...] reflected in the continued reluctance of governments of both left and right to extend either the legal obligations on employers to guarantee training or the range of occupations that require some form of "licence to practice".'¹² Both Young (*ibid.*) and Coffield (2004) concur that in order for workplace learning to be successful, the performance of firms has to improve. To achieve this, government policy is required that is capable of stimulating demand

¹¹ This lack of interest does not carry over to sandwich placements and the public sector, although there is evidence of difficulties in engaging employers in foundation degrees.

¹² Also need to take account of the powerful role of the CBI in this matter.

for intermediate-level skills from individuals *and* employers. Measures such as paid educational leave have been suggested to address the former. In the case of the latter, Coffield suggests improvement in the quality of jobs on offer so that they require intermediate-level skills. According to the above commentators, without a contextual response the UK runs the risk of developing workplace learning 'on the cheap', focused entirely on individual training. Without corresponding structural measures to increase employer demand, it is argued that Britain will not be released from the low-skills trap. Indeed, '[t]he outcome is most likely to be a more qualified workforce which produces the same low level goods and services' (Coffield, 2004, p. 295).

It seems to be the case that the workplace learning literature tends to over-determine the extent of changed patterns of work organisation in the UK. Furthermore, particular practices are taken to be de facto desirable, with little attention to 'down sides' such as work intensification, greater stress and fewer jobs. In the UK currently, employers are under no obligation to provide learning opportunities, and present forms of work organisation do not warrant them. There appears to be a very real issue in terms of providing government incentives for employers to increase demand for workplace learning alongside strategies to change modes of work organisation including job enhancement. At the moment, many of the conditions for effective workplace learning are not in place. Currently, very little of the knowledge people need can be acquired on the job.

Context matters: Changing workplace practices?

Against the above backdrop, some of the workplace learning literature does focus on the internal characteristics of organisations which militate against the establishment of new work practices and higher levels of learning. The ESRC funded project, *Learning as Work*, has as one of its research questions: 'What are the contextual features of the workplace which affect employees' opportunities to learn and share their skills and knowledge, and their experience of learning at work?' The hypothesis is that contextual features interact in a dynamic and constitutive way with learning opportunities and outcomes.

Fuller and Unwin (2004) have devised a conceptual continuum based on *expansive* and *restrictive* approaches to workforce development at the level of the individual organisation. Although formulated with apprentices in mind, it has broader applicability. They found 'that the factors which generated an expansive learning environment [...] included: opportunities for both "on-and-off-the-job" learning; knowledge and skill development through participation in multiple communities of practice; access to knowledge-based qualifications; and a structure for progression. In contrast, a restrictive working environment included: a narrow range of "on-the-job" training; no organisational structure for progression and the gaining of new skills; no access to knowledge-based qualifications; and restricted participation within a singular community of practice' (Lee *et al.*, 2004, p. 30). Their reference to, and inclusion of, formal theoretical and conceptual knowledge 'that is unlikely to be made available solely through experience-on-the-job' marks an interesting corrective to literature which over-determines the importance of informal learning at work. (Fuller and Unwin, 2004, p. 139).¹³

In order to avoid charges of over-determining the structural characteristics of organisations and under-emphasising individual agency, Fuller and Unwin (2004, p. 133) make a link between the expansive/restrictive framework and two other concepts: learning territories and learning regions. Learning territory refers to the opportunities that an individual has for learning throughout life. The territory can be divided into regions consisting of sites – formal education, informal learning at home, the workplace, and so on. They argue that the overall character of the learning territory influences how individuals engage with learning at work. Although in an early stage of development, these concepts provide a promising heuristic framework for analysis and development in a way that balances structure and agency by viewing workplace learning in terms of organisational factors and as 'constrained or enabled through the positions that individuals occupy across multiple contexts and sets of social relations' including within workplaces (Lee *et*

¹³ This will be discussed further in a later section of the review.

al., 2004, p. 31). Future work within the ESRC project will further develop the concepts of learning territories and regions re: types of learning contexts, other regions (and how regions inter-relate) and more textured analysis of 'affordances' from formal education and the home.

A problem remains with the alignment of individual and organisational development. Fuller and Unwin (2004, p. 126) concede that 'the relationship between individual and organizational learning is complex and poorly understood', but go on to argue that an expansive approach to workforce development (especially one that incorporates formal education opportunities), 'appears to provide an environment in which personal and organizational development can be aligned' (*ibid.*, p. 141). Other literature points to the dangers of this kind of conflation. For example, Hoddinott (2004, p. 103) in a study of the effects of workplace basic education concludes that: 'Programmes which conflate specific organizational objectives (increased productivity, enhanced loyalty, improved industrial relations) with educational objectives are unlikely to be of any real educational benefit to the participants, and, it must be acknowledged, may actually be of negative worth to the individual.' There are dangers then, in using notions such as expansive environments without reservation and without situating them in broader sets of power relations. Colley *et al.* (in Lee *et al.*, 2004, p. 22), remind us of conflicting value systems and that workplaces (even expansive 'progressive' ones) remain 'deeply unequal, with those higher up the status and management hierarchy getting more and better opportunities for learning than those towards the bottom [who are] most likely to be female, working class or, at least in western countries, of non-white descent'. Power may be removed from view and reconfigured, but is not erased. It therefore seems necessary to locate workplace learning firmly within the power relations of the workplace as well as within the power relations of wider society. Unequal relations remain a structuring factor of workplace learning whatever the approach to workforce development.

That said, the work of the *Learning as Work* project does hold out the possibility of new and more contextually aligned approaches to workplace learning. It accepts that raising skill levels through workplace learning is a broad contextual issue that has to take account of the complexity of work settings. It supports the development of a more robust language for talking about the nature of workplaces and to assess 'what counts as effective learning in workplaces, from the perspectives of the learners themselves, their employers and other interested parties such as trade unions, training organizations and government agencies' (Evans and Rainbird, 2002, p. 13).

Finally, the issue remains that the number of workplaces susceptible to this sort of intervention is likely to be limited. According to Reeve and Gallacher (2005, p. 225), Guest *et al.* undertook a survey of UK employers who used HR development practices – particularly training and development, job design, appraisal, communication, consultation – things that might be seen as progressive or expansive. They found very few, though more in the public than the private sector. As Boud *et al.* (2001, p. 9) argue, organisations wishing to move in expansive directions have to want to invest in the learning of employees, as part of a 'longer view than the completion of immediate performance or productivity requirements' – including system-wide support for learning and full commitment to this throughout the organisation.

This recent work offers valuable conceptual and practical resources with which to approach workplace learning and to analyse and shape contextual conditions. However, caution needs to be exercised with regard to the prevailing conditions (as outlined in earlier sections of the review). It remains questionable as to the extent of demand for such innovative practice. This is more likely to be in the public sector than the private sector. Implementation in non-conducive circumstances could result in unforeseen and deleterious consequences for employees – work intensification etc.

Context matters: Higher education

The social and economic conditions that have created the backdrop for changes in work organisation and workplace practices have also influenced higher education. The main shift is in

the relationship between education and work and the emergence of an 'employability' agenda for higher education, whereby pressure is exerted on institutions to respond to extrinsic economic and social demands in a global context of heightened levels of complexity and uncertainty. In the UK context, this is firmly in keeping with the Government's focus on skill development as the main lever to improve competitiveness.

Much literature refers to higher education 'in crisis' (see for example, Boud and Solomon 2001) as traditional values and working practices are eroded. Onyx (2001, p. 138) observes that: 'The discourse of the market place may be offensive to the academic values of autonomy and collegiate decision-making.' Brennan and Little (1996, p. 14) point to the medieval origins of the university and its long-established relationship to the professions. As they note, 'ideologies of higher education have frequently been antipathetic to a close relationship between higher education and work'. In a slightly paradoxical way, the liberal notion of higher education has both 'emphasised that the value of higher education lies in something more than a preparation for working life' and also been a vehicle for 'considerable employment benefits' for graduates (*ibid.*). Young and Guile (1998) reflect on the contrasting value systems of higher education and work by focusing on 'insular reflexivity'. In relation to higher education, they contextualise and describe this in the following way:

'Universities were granted autonomy by society and they in turn granted a similar autonomy to their academic disciplines – a form of double insularity. The sense that the traditional university operated on the basis of insular reflexivity was expressed by the form of internal critique that was the main organising principle of academic subjects and disciplines – anything was subject to interrogation except the rules and demarcation of the discipline itself.'

It is those rules and demarcations that are now under scrutiny as the traditional world of higher education moves closer to the world of work. In terms of the forms of insular reflexivity that underpin work, Young and Guile (*ibid.*) trace their tradition to classical economic theory and the 'unfettered exploitation of natural resources and available labour to maximise its profits', arguing that these too are now under scrutiny.

The literature suggests at least four changing sets of practices in higher education associated with the employability agenda. First, the *expansion* of higher education. This has been conceptualised as a movement from elite systems to mass and universal systems (Trow 1974). Although there are vast disparities across and within institutions in the UK, the student age profile *has* changed and numbers *have* increased exponentially. Traditional access routes have changed and broadened via measures to widen participation.¹⁴ Moreover, as Paivitynjala and Anneli (2003, p. 147) point out, the massification of higher education is not just a technical matter – there is also increasing 'institutional diversity, organisational complexity, and academic heterogeneity'. Several commentators (myself included) use the work of Basil Bernstein to describe and analyse these aspects.

Bernstein's concept of classification refers primarily to the organisation of knowledge into curricula – more specifically to the boundaries between bodies of knowledge (or subjects). It is about the space between categories of knowledge; a space which stems the flow of discourse. Bernstein argues that this space or 'silence' is preserved by power. Where classification is strong, things are kept apart. This means that curriculum subjects remain highly differentiated. Along with this is a specific and demarcated sense of identity – the physicist, the psychologist, for example. Weaker classifications are associated with the softening of boundaries between bodies

¹⁴ Some of these measures proclaim a strong social justice/inclusion imperative but relationships between this and economic drives are unclear (for a discussion of this in relation to the Recognition of Prior Learning see Harris 1999, 2000, 2004). Other commentators argue that social inclusion is not *de facto* associated with greater equality as it depends on what people are being included in.

of knowledge associated with 'progressive' education. Bernstein's argument (1996, p. 30) is that when classification values change, this is accompanied by:

'...changes in organisational practices, changes in discursive practices, changes in transmission practices, changes on psychic defences, changes in the concepts of teacher, changes in the concepts of the pupils, changes in the concepts of knowledge itself...'

Bernstein focuses further on changes in organisational practices, noting the increase in 'cross-faculty courses and cross-disciplinary research institutes' and the reduction of conceptual space between universities and other organisations, as in 'the increasing number of entrepreneurial and research relationships with industry and government bodies' (Bernstein and Solomon, 2001, p. 20). Brennan and Jary (2004, p. 4) cite Kogan's argument that for academics, disciplines provide sources of 'languages, conceptual structures, histories, tradition, myths, values, practices and achieved goods', but point out that these only apply to students who see themselves as having a strong academic identity. Using Bernstein, Miller and Xulu (1996, p. 64) focus on changes in the concept of 'teacher' and refer to the increase in 'process and system-oriented professionals'. This analysis begins to illuminate the extent and depth of the 'crisis' currently facing higher education.

Secondly, *curriculum diversification*. As Brennan and Little (1996, p. 28) put it: 'There is now a much greater emphasis on vocational education.' Diversification is reflected in a wider range of courses, particularly new interdisciplinary degrees. These require less insularity and more collaboration with the rest of the education system, with professions and vocational structures (including accreditation systems), and with working life. Furthermore, since the advent of the national curriculum, higher education has exerted less influence on the school system. Concepts such as lifelong learning, the learning society and knowledge economy have challenged the reliance on initial education. Increasing provision for adults and those in mid-career has exercised pressure on teaching, learning and assessment methods, which, as Paivytynjala and Anneli (2003, p. 148) put it, have created 'new dynamics in knowledge production and in university pedagogy'. There is currently a lot of variety in higher education curricula in terms of their relationships to work:

[those] strongly directed towards preparation for research and the creation of knowledge or towards the reproduction of knowledge; curricula can be geared closely to occupational preparation or they can be unrelated to it; curricula can vary according to the degree of specialisation; curricula can focus on a single discipline or combine various disciplines; and some fields of study prepare students for "corresponding" professions.' (*ibid.*, p. 156)

Thirdly, *employment values* have been introduced into the general management and administration of higher education. As Millar and Xulu (1996, p. 51) put it, higher education is now part of an 'international educational management discourse [...] its grounding metaphor is that of economic production and productivity'. This discourse places high value on accountability and quality. There was been resistance in some quarters, particularly in the most insulated institutions. For example, Oxford dons recently refused to submit to performance appraisal.¹⁵ Finally, with the advent of 'non-specialist learning organisations' (Young and Guile, 1998) such as corporations with their own research and development capacities, higher education as a whole finds itself no longer at the centre of the learning society stage.

Taken as a whole, the above changes have undoubtedly placed higher education in a service role to the economy. Yet within this, the expectation is that universities particularly will continue to provide their traditional functions. De Kadt (in Millar and Xulu, 1996, p. 50) captures this dilemma well:

'it is clear that contemporary universities face a serious "crisis of identity". It is probably fair to say that there are, almost everywhere in the world, to some or another extent, "unhappy" institutions. They are under many often conflicting pressures. They have to

¹⁵ Radio 4 'Today Programme' 21/05/05.

educate and perpetuate elites and extend tertiary educational opportunities to even larger numbers of people. They have lost their pre-eminence as centres of knowledge production. Yet in order to survive they need to generate research, in a highly competitive environment, that serves the needs of industry and commerce; and they have to do this while still engaged, through teaching, in the creation of “human capital.”

Miller and Xulu (*ibid.*, p. 49) posit that: ‘The function of HE institutions that will not receive priority under such conditions is arguably the core critical intellectual task which universities in particular have aspired to as “principal institutions of reflexivity in society” [...] Crucial as this form of service to society may be, it is not one that is likely to be fought for in the market place as an immediately useful commodity.’ The same writers (*ibid.*, p. 52) argue that the responsiveness of individual institutions to ‘new times’ will vary and that, despite moves to reduce differentiation, hierarchy and status differentials between institutions may even increase because the ‘power of inherited conditions continues in institutional cultures, traditions and teaching and research practices’.

For the purposes of this review of links between the worlds of work and higher education, it is clear that the two worlds embody different goals, value systems, traditions and practices which render linkage a complex affair. Yet both worlds are responding to the same agenda re: globalisation, government reforms and skill levels. As a baseline argument, higher education students need to be prepared for jobs in organisations that are changing and requiring different forms of expertise. This exerts pressure on higher education teachers. Furthermore, in the UK context, as participation in higher education reaches 40-50 per cent, traditional liberal education arguments no longer hold sway. Change is therefore inevitable. Although there is much differentiation within the system, for the more insular parts of higher education, that change has complex ramifications to which there is likely to be resistance. For the more hybrid organisations, linkage with the world of work is unlikely to be a major problem. There will of course also be differences within institutions as well as between them. Some employers are realising that the development of their employees is important to their economic success in globalised markets: some areas of higher education are recognising the potential of work as a focus for learning. However, as outlined above, this pattern is by no means uniform.

It is against this contextual backdrop that our definition of workplace learning needs to be evaluated. In order to pursue possibilities for greater integration of the two worlds, attention is now turned to the literature that deals with knowledge and learning. For the purposes of this review, and in line with its critical realist orientation, the terms knowledge and learning are used in particular ways. Learning is viewed as a process (transmission and acquisition), the activities that generate knowledge, and the means by which knowledge is changed. Knowledge is seen in a more sociological way than is often the case in the literature – as the outcomes of learning processes. This is a difficult boundary to sustain as usage in the literature reflects a range of philosophical positions. Most particular is the trend to avoid the term knowledge because it implies ‘the existence of some permanent entities’ (Sfard, 1998, p. 6) and to replace it with ‘knowing’ which implies action and constructivism. Sfard (*ibid.*) continues: ‘In the image of learning that emerges from this linguistic turn, the permanence of *having* gives way to the constant flux of *doing*...’ Consequently, although the review is organised along the lines outlined, other terms will be used as they appear in the literature itself.

Knowledge matters

The term ‘knowledge’ is ubiquitous in the WPL literature although not addressed directly. WPL theorists and commentators are extremely cautious about entering the knowledge domain, seldom discussing disciplinary or formal knowledge, for example. As Moore and Young (2000, p. 1) observe, this silence reflects government policy generally and yet is at odds with policies for foregrounding the ‘knowledge economy’ and ‘knowledge workers’.

The knowledge issue tends to be addressed obliquely in the literature by way of *assumptions*. One set of assumptions is that there are *no differences* between various forms of knowledge, most particularly, work-based knowledge and disciplinary, academic knowledge. For example, Boud

(2001b, p. 56) claims that: 'It is profoundly misleading to regard work-based learning as an entirely pragmatic and operational endeavour. It is as potentially theoretically complex and intellectually demanding as any form of education.' A further implicit position on knowledge is a 'soft boundary' assumption, whereby any distinctions between forms of knowledge that might exist are taken to be readily amenable to 'transfer'. The argument is one of *similarity and continuity* between forms of knowledge. For example:

'Academics working in work-based learning programmes are confronting the challenge of articulating not only conventional academic standards but also how the learning outcomes in work-based learning programmes are equivalent to those standards [...] The engagement with work-based learning, with its focus on similar but different knowledge, has further stimulated the articulation of the specifications about standards.' (Boud and Solomon, 2001, p. 28)

Two other positions regarding knowledge are evident in the literature. In some cases there is an assumption of 'hard boundaries' and more emphasis on knowledge *difference*. For example, for Eraut *et al.* (2000), 'learning in the workplace is very different in kind from learning in school or college', and for Guile and Young (1998, p. 1), workplace learning 'will produce different outcomes of learning compared with schools and colleges'. For Boud and Solomon (2001, p. 31) 'the workplace, the individual learner and the university have to work together to produce and validate a non-disciplinary yet still "legitimate" knowledge'. The assumption in the last quote is that although work-based knowledge is different from academic knowledge it is of the same value – thereby overcoming the parity of esteem issue in a sleight of hand. The position is one where workplace learning is often presented as different, of the same value, and also *preferable* to other forms of knowledge – as in 'we do suggest that work-based learning draws attention to a radical shift in our assumptions about "legitimate" knowledge and learning' (*ibid.*, p. 19). This position is further exemplified in the following quotation:

'While the learning outcomes demonstrated [through workplace learning programmes] must satisfy particular university criteria to gain recognition and accreditation, this does not imply that it is only knowledge represented in conventional university curricula that can be accepted. Unless frameworks of standards and levels are constructed in ways that acknowledge the legitimacy of other forms of knowledge, then work-based learning is doomed to marginalization.' (Boud 2001b, p. 46)

Inherent in this last position are attempts to change and soften knowledge boundaries.¹⁶ These different assumptions about knowledge are represented diagrammatically in Figure 1. Such ambiguity is clearly unsatisfactory.¹⁷

Figure 1: Knowledge in the WPL literature

Position on work-based and academic knowledge	Position on knowledge boundaries
Same knowledge	Soft
Similar knowledge	Soft
Different knowledge	Hard
Different and preferable knowledge	Change and soften the boundary

Theorising knowledge

¹⁶ It is interesting to note different understandings of knowledge by the same authors in the same paper.

¹⁷ It should be emphasised that these ambiguities are most apparent in the literature on workplace learning where work forms the curriculum, rather than in, say, professional education more generally.

Because the workplace learning literature does not deal adequately with the knowledge issue, it is necessary to refer to other literatures (the sociology of knowledge and some aspects of curriculum theory). The 'hard boundary' and 'soft boundary' metaphor, as depicted in Figure 1 above, provides a starting point.¹⁸ The two metaphors have different philosophical and theoretical roots.

- **The 'soft boundary' approach to knowledge**

These are the approaches that do not distinguish between workplace and academic knowledge (or any other sorts of knowledge). They frequently flow from adult and experiential learning theory (and theorists). Indeed, workplace learning can be seen as a form of experiential learning. The centrality of experience in learning is traced to the ancient Greeks with two main tap roots. A Lockian interpretation in which the 'human mind at birth is a blank slate [...] all ideas emerge from experience and the associations it produces' (Bailey *et al.*, 2004, p. 25) led to a particularly behaviourist stance towards experiential learning, for example, behaviour modification and trial and error learning. A Deweyian interpretation is the closest to contemporary thinking in adult and experiential learning. This has particular resonance for workplace learning because for Dewey 'work was always a pivotal element'. He argued that the 'theme of work could be seen as an organizing principle of the curriculum, and that the conventional disciplines of study could be taught through it' (Boud *et al.*, 2001, p. 9). Education should start with the experienced world and be concerned with 'making determinate the indeterminate experience' (Bailey *et al.*, 2004, p. 26). The procedure for doing this followed a sequence that mirrors scientific method: 'perceiving a problem, articulating it, forming a hypothesis for solving the problem, testing the hypothesis, and experiencing the real consequences of our actions in the world' (*ibid.*).

This is very similar to Kolb's (1984) 'experiential learning cycle' - a linchpin of experiential learning theory. His cycle has four stages. The first is 'concrete experience' or 'direct encounter' (Kolb 1984; Weil and McGill 1989). For many interpreters of or commentators on Kolb, this stage is pre-rational (tacit?). The second stage is 'observation and reflection'. This is the conscious time when individuals focus on their experience and give it meaning (usually from within existing sets of perspectives and values). The third stage is 'generalization and abstract conceptualisation', whereby the fruits of reflection are ordered into symbolic representations. The cycle suggests that through cognitive and psychological processes of internal, mental conceptualisation, experience can be 'turned into' propositional (or formalised) knowledge. Thus, an essential continuity between forms of knowledge is implied (the *similar* position on knowledge in Figure 1). Some of the WPL literature links Kolb's experiential learning cycle with Schon's notion of reflective practice, reflective practitioners and reflection-in-action as the basis of professional activity within organisations and communities. Over and above a particular position on knowledge, a further problem that is not adequately addressed is the meta-level capabilities required to successfully affect the translation process. There is something paradoxical about needing to understand formalised knowledge in order to translate one's experiential learning into it.

Despite (or perhaps because of) the ubiquity of experiential learning, various attempts at definition and classification have been made. The most well-known of these is Weil and McGill's (1989) four villages. *Village one* is the recognition of prior learning with a focus on boosting adults' strengths, self-esteem and status through recognising their knowledge and all they have learned throughout their lives: a largely humanist, psychological and 'progressive' underpinning. *Village two* stresses processes of learning and is concerned with the development of teaching/learning methods in formal education that value and use adults' experience. This village is concerned with the holistic development of the individual alongside contextual/institutional change. It

¹⁸ See Muller 2000 and Young 2002 for writings about hard and soft knowledge boundaries.

therefore embodies humanistic and 'progressive' dimensions. *Village three* is about social change and transformation and the development of critical consciousness: a radical position. *Village four* is about personal experience as the basis for growth and the development of self-awareness: a psychotherapeutic agenda. As such, experiential learning theories have provided an important resource for thinking about knowledge generated from informal contexts, including the workplace. In mapping the different villages, Weil and McGill are at pains to point out that they share a common citizenship and that, as Millar (1996, p. 1) puts it, the villages have 'open borders – there is commerce among them – and there are goods and practices in common'.

The validation of experience as 'authentic' and central to knowledge production is one of the central 'goods in common' across all of the above classifications. This has led to a counter-privileging of experiential and personal knowledge contributions over academic knowledge. Millar (1996, p. 2) argues that the commitment to authentic learning constructs the experiential learning movement as a 'quest and vision sharply contrasted with the false, mediocre or corrupt'. The quest, he claims, requires a 'negative pole' which is 'learning which is narrow, intellectual, subject-bound and has somehow come adrift from feeling or practice'. The latter is to be resisted. Paradoxically, although purporting to be boundary-less, these theories retain the notion of boundaries and difference, through counter privileging experiential over formal knowledge. This counter privileging is clearly evident in the WPL literature that exhorts principles of same, similar or preferable knowledge. Boud and Solomon (2001, p. 21), for example, refer to formal knowledge as part of a hierarchical and authoritarian model of learning, contrasted unfavourable with the more 'equitable decision-making process[es]' associated with workplace learning. In adopting an anti-academic stance, many WPL commentators find themselves rather uncritically embracing the employability agenda of higher education. This seems to be an elision of social projects, perhaps occasioned by the radical aspects of experiential learning theory being yoked to less radical ones.

- **The 'hard boundary' approach to knowledge**

These approaches to knowledge emanate from the sociology of knowledge. Moore and Young (2001, p. 1) present two dominant sets of assumptions about knowledge : 'neo-conservative traditionalism' and 'technical instrumentalism'. They posit that government policy is currently trying (unsuccessfully) to reconcile these two imperatives. Neo-conservative traditionalism treats knowledge as a given, as objective and as relatively static. These are the 'readings' of knowledge that proponents of workplace learning find most objectionable, particularly because of their association with elitism and with knowledge as a mark of status. Technical instrumentalism with its economic focus acts as a reminder that economic considerations have always been a function of higher education, despite the claims of liberal educators (see Brennan and Little 1996, quoted above).

Alternatives and resistance to the above two dominant sets of assumptions usually take the form of social theories of knowledge 'whether humanist, Marxist or more recently post-modernist' (*ibid.*). These stress that knowledge is a product of social practices and standpoints. The corollary of this is that formalised knowledge is in principle no different from everyday knowledge. The distinguishing dynamic centres on the 'position of the claimant rather than of the knowledge itself' (Young, 2006, forthcoming). Moore and Young (*ibid.*, p. 10) claim that although social theories of knowledge surface the power relations embedded in knowledge, they do not address the distinctive properties that take knowledge beyond the interests of particular groups. Knowledge becomes a process. As Boud (2001b, p. 42) puts it, it 'flows from the particular spatial and temporal circumstances of work contexts and situations.'. Or, as Lee *et al.*, (2004, p. 9) put it, it is 'fluid [...] produced and continually restructured through the relationships and interactions between individuals, rather than as an object which is acquired, internalised and owned'.

Moore and Young advance a social realist approach to knowledge as a way beyond conservative/disciplinary, market/economic and social/standpoint approaches. This recognises that there is a social and historical character to knowledge; is not driven solely by the instrumentalism of economic or political demands; and does not see knowledge as static and ahistorical as in the neo-conservative position. Rather, knowledge is seen as dependent upon 'distinctive forms of social organisation whereby powerful codes and procedures for the production and acquisition of knowledge have been developed' (*ibid.*). These distinctive forms of social organisation are produced 'in dialogue with others [and] set within particular collective codes and values'. The crucial point advanced by social realists is that knowledge production needs these (or similar) social conditions. They are the conditions that allow knowledge to ultimately transcend them and provide explanatory resources for envisaging alternative social realities. Such conditions place limits on 'the crossing of disciplinary boundaries', 'the incorporation of everyday knowledge' and 'the involvement of non-specialists such as employers' (Young, 2003, p. 7). The claim is that there is an epistemological price to be paid in dispensing with certain boundaries. As Young (*ibid.*) puts it, knowledge classifications 'not only have social and political origins; they also have epistemological and pedagogic significance; in other words, they relate in fundamental ways to how people learn and how they produce new knowledge'. In this frame of reference, workplace learning policy and practice undermine established conditions for knowledge production and thus threaten the core intellectual task of higher education.

Taking this line of argument further requires differentiation between theoretical and everyday knowledge. Durkheim provides the starting point. For him, the two forms of knowledge are 'profoundly differentiated or so radically opposed to one another [...] The forces which play on one are not simply those which are met in the other, but a little stronger; they are of a different sort.' (Durkheim quoted in Young, 2001, p. 16.) Drawing on Durkheim, it is argued that Bernstein's conceptualisations provide resources for addressing different types of knowledge and their related different forms of social organisation, 'as a precursor to exploring the different forms in which they may be related' (Young, 2004, p. 195). What is suggested is that it is necessary to understand differences before contemplating linkages.

The two main Bernsteinian concepts for achieving this understanding are horizontal and vertical discourse. A *horizontal discourse* is typified (analytically¹⁹) as local, everyday, usually oral, segmentally organised, tacit, multi-layered, context-specific and context-dependent knowledge. It is common-sense knowledge in so much as everyone (potentially) has access to it and in so far as it has a common history 'arising out of common problems of living and dying' (Bernstein, 1999, p.159). Horizontal discourses are therefore culture- or context-embedded (within families, peer groups, communities or workplaces, for example – and so, often highly affective). They require the specificities of the particular context (practices and relationships, for example) in order to be activated and realised. Where such specificities are absent, or cannot be 'unproblematically read', the 'competence/literacy' associated with the discourse may not be able to be demonstrated (Bernstein, 1996, p.179). Although the competences/literacies are localised, they are not inflexible and there are variations in 'correct' strategies.

Horizontal discourses are acquired tacitly in equally context-specific and segmented ways, through local activities such as exemplar modelling. Bernstein argues that in horizontal discourses knowledge circulates beyond its immediate context through individual 'repertoires' and group 'reservoirs'. In circumstances where there is free-flowing contact, both can be increased, and exchanges between the two can take place.

¹⁹ It is important to bear in mind that these are analytical, not empirical concepts. They do not exist in 'pure' forms in the 'real' world.

Conversely, the isolation of individuals and/or groups will restrict the flow of discourse and limit exchange and development. There is a mutually reinforcing relationship between social relations and horizontal discourse. Bernstein sees social relationships as generating the discourse, but also the discourse strengthening social relations and encouraging 'forms of social solidarity' (Bernstein, 1999, p. 160). It is hardly surprising, therefore, that horizontal discourse becomes a resource for popular social movements concerned to empower those who experience themselves as silenced and excluded by vertical discourses. As such, the validation of horizontal discourse links to the aims and objectives of some experiential learning practices.

Vertical discourses originate from and develop within formal institutions. The oft-cited definition is as follows:

'A vertical discourse takes the form of a coherent, explicit, systematically principled structure, hierarchically organised, *or* it takes the form of a series of specialised languages with specialised modes of interrogation and specialised criteria for the production of texts' (Bernstein, 1996, p.171).

This is the antithesis of the analytical construct of horizontal discourse. Importantly, there is no localisation and no segmentation – instead, specialised symbolic assemblages of knowledge are integrated at the level of meaning rather than in terms of relationships between segments. These assemblages are created through recontextualisation rather than through segmentation. Recontextualisation involves the movement of discourses from a context of production to a context of transmission. Vertical discourses are therefore created and circulated to different groups and individuals by *formal* pedagogic means (mainly). They do have a social context, but not the embedded one of horizontal discourse. The two analytical discourses are summarised in Figure 2.

Figure 2: Vertical and horizontal discourse (adapted from Bernstein 1999)

	Vertical discourse	Horizontal discourse
Practice	Official/institutional	Local
Distributive principle	Recontextualisation	Segmentation

It is important to note that Bernstein makes further distinctions within vertical discourses, that is, some are more vertical than others. These differentiations will not be dealt with in this review although they are potentially important to understandings of workplace knowledge. The key point is that, conceptually, horizontal discourse has no 'explicit principles for transferring meanings across segments (whether these are sites or occupational sectors), except by analogy that one segment or occupation is "similar" to another' (Young, 2004, p. 196). This means that it 'cannot provide the basis for or lead to the explanatory frameworks that lie at the heart of any claim to objective knowledge' (Young, 2001, p. 16-17). This reflects the debates in the workplace learning literature regarding *similar* knowledge. The reason that horizontal discourses cannot generate vertical knowledge is because they embody no principles of recontextualisation or rules for making explicit the grounds for an explanation – rules that are intrinsic to the production and acquisition of vertical knowledge, which have their roots in different forms of social organisation.

For the purposes of this review, this line of thinking offers a possible explanation as to the failure of much education policy. All too frequently, it is assumed that vertical discourse can be derived from horizontal. Likewise, it is assumed that vertical knowledge can be directly applied to, for example, practical workplace problems. The same route to failure might be prefigured in workplace learning literature (and practices) that reject any notion of knowledge difference because of particular associations with neo-conservative traditionalism. In the retreat from this and from technical instrumentalism, the adoption of social theories of learning in WPL may be less 'progressive' than envisaged because such theories have the potential to erode the conditions necessary for the production of new

knowledge.

- **Other ways of looking at knowledge difference: Modes 1 and 2**

A recently popularised way of differentiating between modes of knowledge production is via the concepts of Mode 1 and Mode 2 knowledge production (Gibbons *et al.*, 1995). The former refers to knowledge produced by academics and scientists working within discrete disciplines in academic and research-based institutions. Mode 2 knowledge production is socially constructed by multiple actors in specific and multiple local contexts. It gives value to knowledge-in-action. As with horizontal and vertical discourse, these modes are analytical rather than empirical concepts.

Mode 2 knowledge production is often invoked (and counter-privileged) in discussions of workplace learning. For example, Boud and Solomon (2001, p. 21) identify a key concept in workplace learning as 'the co-production of knowledge and of the learning experience'. This is a very Mode 2 notion. Boud (2001, p. 37) argues that: 'The focus of work-based learning is on the knowledge of practice, on what is needed to understand and develop the activities of particular work sites [...] This does not imply that Mode 1 knowledge is irrelevant to work-based learning, but that it may be subordinated to other, more pressing agendas.' Boud (*ibid.*, p. 40) puts forward the view that the two modes 'may be qualitatively different and cannot be translated from one to another.' This has echoes with a Durkheimian and Bernsteinian position, but contradicts the same writer's other perspectives on forms of knowledge as *the same* or *similar*. It also seems to imply that Mode 1 knowledge is 'outmoded'.

Writing about higher education as a whole rather than workplace learning, Miller and Xulu (1996, p. 7) ask: 'What is to be the relationship between "Mode 1" and "Mode 2" knowledge production in HE? Is the first foundational to the second and in what ways? What new forms of foundational programmes may be required? Do traditional disciplines – and the departments which have housed them – lose authority? How does the role of HE change? Where are Mode 2 practices to find their institutional locations? How are new, and necessarily temporary, forms of collaboration to be constructed, managed and evaluated? What are the implications of different modes of knowledge construction within the same institution for academic roles, career paths, and locus of commitment?' These questions are perhaps playing themselves out in practices such as workplace learning. However, the concepts have more efficacies in terms of reflecting the breadth of knowledge production in modern societies rather than as sticks with which to bludgeon each other. It might therefore be more beneficial to theorise about the relationships between the two along the lines Millar and Xulu propose.

- **Other ways of looking at knowledge difference: the work of Michael Eraut**

Eraut (1994) distinguishes between *propositional knowledge* and *process knowledge* in the professions. Propositional knowledge falls into three categories: discipline-based theories and concepts; generalisations and practical principles in the applied field of professional action; and specific propositions about particular cases, decisions and actions. In contrast, process knowledge is about 'knowing how' in relation to professional practice. There are five types of process knowledge: acquiring information, skilled behaviour, deliberative processes (e.g. planning and decision-making), giving information; and meta-processes for managing one's own behaviour. Although the two forms of knowledge are different, there are also many possible inter-relationships between them. Traditional practice in professional education is to physically separate their acquisition: propositional knowledge is acquired formally and process knowledge is acquired through placement or practice.

Eraut *et al.* (2000, 2004) make a distinction between *cultural knowledge* and *personal knowledge* both of which can have 'codified' or 'uncodified' dimensions.²⁰ Codified cultural knowledge is discipline-based propositional knowledge. Eraut sees uncodified cultural knowledge as playing a key role in most workplace practices and activities.²¹ In a similar way to Bernstein's horizontal discourse, Eraut (2004, p. 202) argues that 'much uncodified cultural knowledge is acquired informally through participation in social activities; and much is so "taken for granted" that people are unaware of its influence on their behaviour'.

Personal knowledge includes implicit, tacit, public and private knowledge. In a codified form it might take the form of 'personalized versions of public, codified knowledge' which 'provide the basis for assignments and assessments within educational programmes from which more than the replication of publicly available knowledge is expected' (*ibid.*). In an uncodified form, personal knowledge is 'everyday knowledge of people and situations, know-how in the form of skills and practices, memories of episodes and events, self-knowledge, attitudes and emotions' (*ibid.*, p. 202). Obviously, some forms of uncodified knowledge are more amenable to codification than others.

More work could be done exploring the interrelationships between Eraut's, Gibbons et al's and Bernstein's concepts, especially within Moore and Young's framework of neo-conservative traditionalism, technical instrumentalism, social realism and social theories of learning. The key point is that knowledge issues tend to be avoided or caricatured in some of the workplace learning literature. Such atheoretical approaches are unhelpful.

- **Tacit knowledge**

The contested and confusing issue of tacit knowledge is worthy of further examination, particularly because it is seen to play a big role in life. It is generally taken as being at the opposite end of a continuum to discipline-based codified knowledge. According to Eraut (2000, p. 16), it can take at least two forms: first, socialisation into something without being conscious (not abstracted from practice; embedded); and, secondly, knowing something so well explicitly, that it becomes implicit. Eraut argues that tacit knowledge occupies a particular place in memory structures. As a result, it is capable of affecting behaviour without passing through the semantic memory and without being mediated by generalised knowledge. In this way, it is activated unconsciously.

Evans *et al.* (2004, p. 224) refer to tacit knowledge as having attributes which often go unnoticed such as 'creativity, sensitivity and emotional intelligence'. The same writers (*ibid.*, pp. 227-8) make reference to tacit knowledge as 'competence'²² - 'competence related to attitudes and values', 'learning competence' 'social co-operative competence' (e.g. patience, caring and adaptability), 'methodological competence' and 'strategic competence'. Furthermore, they argue that *all* skills have tacit and explicit dimensions. Its ubiquity makes tacit knowledge difficult to categorise and understand. A main area of ambiguity is whether it refers to 'knowledge which is not communicated, or knowledge which cannot be communicated' (Eraut 2000, p. 17). Is its amenability to communication an attribute of the knowledge itself or of the knower?²³

There are similar levels of ambiguity in terms of the role of tacit knowledge in the workplace. Eraut disputes what is taken as tacit knowledge in workplace literature

²⁰ He links codified knowledge to Aristotelian technical knowledge (or *techne*) and uncodified knowledge to practical knowledge. There is of course a further Aristotelian category of knowledge referred to as *phronesis*, variously translated as prudence or practical wisdom (see Flyvbjerg 2001).

²¹ Presumably, then, workplace learning can be seen as a mix of process knowledge, uncodified cultural knowledge and personal knowledge.

²² This is the same way that Bernstein uses competence i.e. to refer to intrinsic qualities. It is a different usage to that in more recent education reform processes.

²³ The issue of tacit knowledge and transfer will be revisited in a later section of the review.

(including some of the influential Japanese literature), arguing that what is referred to is not tacit knowledge but explicit, personal knowledge which has not previously been considered relevant or shared with others. Boud (2001, p. 35) points out that the existence of tacit knowledge in much workplace activity could be a factor in the difficulties workers and supervisors have in seeing work as learning. Evans *et al.* (2004, p. 222) explore the role of tacit knowledge in the education, training and work re-entry of adults with interrupted occupational or learning biographies. Their primary evidence suggests that the acquisition, deployment and recognition of tacit knowledge 'heightens self-assurance' and has the capacity to support the development of organisations in an expansive direction. However, there are those that argue that attempts to make tacit knowledge explicit, thus remove its power and efficacy. A lot more needs to be known before conclusions can be drawn. A recent PhD study holds promise. Gamble (2004, p. iii) uses Bernstein's work to theorise the form that tacit craft knowledge takes in the trade of cabinet making, finding 'an external performance that is grounded or embedded in an internally held competence [...] a capacity for *visualisation* that acts as a proxy for a relationship between "parts" and "whole" that cannot be rendered in words. This relationship is held in the body and constitutes what can be called the "tacit" in craft.'

For the purposes of this aspect of the review, that is illuminating the worlds of work and higher education through a consideration of knowledge, at present there seems to be little consensus in the literature. The most common (and contradictory) positions seem to be that workplace knowledge is the same or similar to or different from formal knowledge (and worthy of counter-privileging). These discourses position knowledge difference as part of a traditionalist and modernist paradigm. Unfortunately, this prevents workplace learning from becoming a site for constructive theorising about knowledge. As Young (2003, p.11) observes: 'We should be cautious about replacing a curriculum based on specialist research and pedagogic communities with one based on the immediate practical concerns of employers or general criteria of employability.' In the past, ensuring appropriate social conditions for knowledge production was enshrined in 'a history of social networks, and trust among specialists'. What is needed now, Young argues (ibid., p. 12) are 'new forms of association, and trust and [...] new types of specialists'. The question is how to establish 'the new networks of specialists [...] which take account of global economic changes within losing the critical autonomy that was provided by the old subjects and disciplines'. This would seem to be a useful goal for workplace learning.

Learning matters

More emphasis is placed on learning than on knowledge in the workplace learning literature. That said, learning theory is notoriously complex and confusing. Learning implies change. At their most general, theories of learning can be seen as explanations of change – of how people come to learning and come to know. As with theories of knowledge, they rest on frequently implicit philosophical and paradigmatic assumptions about reality and epistemology. There are two main dimensions to discussions of learning in the literature. The first pertains to paradigmatic distinctions; the second to the formality and informality of learning.

Paradigmatic distinctions

In recent workplace literature, these distinctions have been characterised as *learning by acquisition* (or the standard paradigm) and *learning by participation* (or the emergent paradigm). Approaches to learning underpinned by the behaviourist paradigm are conspicuous by their absence. Admittedly, such theories (which were dominant in the first half of the twentieth century) are outmoded, relying as they do on a view of learning as the *conditioning* of observable human behaviour located within a positivist theory of society and an empiricist epistemology. However, such theories do provide a useful adjunct to more contemporary theorising, not least because many work practices and some education practices tacitly continue to rely upon them. For example, according to Atkins (1993, p. 253) many 'multi-media applications are being produced which incorporate features usually identified with behaviourism'. Jarvis (1983, p. 61) suggests that seemingly 'progressive' adult education practices such as 'praising a reticent student for contributing to a

group discussion' display underpinnings of operant conditioning'.²⁴ (For a discussion of learning theory, see Harris 2000b.)

Most of the workplace learning literature celebrates learning by participation, and the process of so doing privileges this over learning by acquisition. This appears to be the learning theory equivalent of the knowledge issues discussed in the previous section. Before embarking on a discussion of this phenomenon, both theories are described.

Learning as acquisition (or the standard paradigm) is a *theory of the mind*. The paradigm is underpinned by an ontological view of an 'out there' reality, and an epistemological assumption that knowledge exists independently of the knower but can be acquired, internalised and acted upon. Its origins can be traced to the 'cognitive revolution' in psychology in the 1960s. If behaviourism was seen as a stimulus-response set of theories, then these theories are concerned with what goes on between stimulus and response. There are two main assumptions behind learning as acquisition. First, is a *focus on individual processing*. As Hager (quoted in Lee *et al.*, 2004, p. 7) puts it, the 'individual mind' is steadily stocked with ideas via the senses. These 'data' are processed and organised (thinking). Thereafter, the learner can act upon the world. The learning process is therefore linear and uni-directional. The tools for learning are individuals' existing mental structures/schemata which undergo modification as new information is processed. The focus is on individual attainment. A general preference for incrementalism is borne out by the abundance of taxonomies produced by theorists operating in this paradigm (Bloom's taxonomy, for example). The second assumption is a *separation between individual and environment*. As Bredo (1999, p. 22) puts it, 'the mind is isolated from the social world'.

Learning as acquisition would mean several things for WPL if it was to be used as a sole frame. Hager takes on this issue (in Lee *et al.*, 2004, p. 7) and suggests that it would lead to a focus on individuals and on the 'rational, cognitive aspects of work performance'. Work performance would be conceived in terms of 'thinking or reflection followed by application of the thinking or reflection'. Social, organisational and cultural factors in workplace learning and performance would be down-played.

However, workplace learning literature lacks nuanced descriptions of this paradigm of learning. All too often, it is presented as the negative pole of learning as participation, which is seen as the natural paradigmatic home for workplace learning. For example, Hager (*ibid.*) refers to the standard paradigm of learning as assuming 'abstract propositional, context dependent and transparent knowledge to be the best and most desirable form of learning'. This is a faulty analysis on two counts. First, context dependency is not a characteristic of the paradigm. Second, the learning processes are not restricted to propositional knowledge. Furthermore, many of the incremental and developmental taxonomies developed within this paradigm form the basis of things such as generic level descriptors which are very highly prized in workplace learning.

Learning as participation is underpinned by social constructionism: 'agent, activity, and the world mutually constitute each other' (Lave and Wenger, 1991, p. 31). Its roots are traced to Vygotsky's social development theory. This theory advanced the view that learning happens first *in relation to others* and only later is it internalised individually. Put another way, individual consciousness is built from the outside through social relations. Vygotsky's zone of proximal development refers to the gap between what can be achieved unaided and what can be achieved with the help of others. However, although there are references to Vygotsky in the workplace learning literature, with a few exceptions, his theories tend not to be discussed in detail or applied in practice.

Instead, the focus is on *situated learning theory*, particularly the work of Lave and Wenger (1991). Guile and Young (1998, p. 7) suggest that these theorists add a societal dimension to the zone of proximal development 'by highlighting the historical and social dimensions of learning'. In this

²⁴ Operant conditioning is a Skinnerian concept referring to the reinforcement of a response to stimulus.

theoretical frame, learning becomes action, participation and engagement: 'stimulated and produced through social interaction [...] which is also contextual; that is, through their learning, individuals shape and transform both themselves and the social/interactional environments within which they work. From this perspective, the appropriate unit of analysis is social/discursive relations between people rather than the isolated "individual".' (Lee *et al.*, 2004, p. 9). The concepts of 'communities of practice' and 'legitimate peripheral participation' are particularly influential in the workplace learning literature (some would say, and have said, that they are 'eulogised'). Learning becomes an ever-present aspect of changing participation in changing communities of practice. Legitimate peripheral participation represents the movement to full participation in a community of practice. It is about apprenticeship, identity construction, forms of belonging and 'the relations between newcomers and old-timers' (*ibid.*, p. 10).

Some of the recent workplace learning literature is critically reflective about learning as participation. It is argued that the sorts of communities of practice researched by Lave and Wenger do not resemble contemporary workplaces and actually no longer exist even in their own right, having broken down under contemporary social and economic conditions. The unidirectionality of legitimate peripheral participation is also questioned. Assumptions are made that movement is always from the periphery to the centre, and that learning relationships are always hierarchical, rather than horizontal (involving peers and co-workers, for example). Furthermore, formal education can also be seen as a community of practice, characterised by learning as acquisition. This disturbs the boundary between the paradigms. In fact, in this paradigm, learning becomes synonymous with *all* social practices: ubiquitous and homogenised.

A further range of critiques centre on lack of attention to power and structure/agency in the concepts (and consequently in their application to workplace learning theory and practice). Rainbird *et al.*, (2004, p. 40) argue that Lave and Wenger have a weak 'conceptualization of power relations and [...] structural constraints'. Taking a labour process viewpoint, they point to lack of theorisation of the social relations of production and an emphasis on 'the consensual and the participative at the expense of an analysis of the power relations which underpin workplace practices' (*ibid.*, p. 41). In a similar vein, little attention is paid to the probability that opportunities for participation in communities of practice are socially distributed, for example, according to status in the workplace, and that these reflect broader societal lines of advantage and disadvantage. The option of non-participation is not catered for, although Hager (quoted in Fuller *et al.*, 2003, p. 19) does argue that participation can be oppressive and closed and does not always involve learning.

Formal learning is severely down-played in this paradigm. In fact, the logical conclusion of Lave and Wenger's position would be that all formal learning be absorbed into the informal or the practical. An exception is Rainbird *et al.*, (2004, p. 51) who argue for the continued role of formal institutions, formal learning and formal qualifications in the improvement of material conditions for employees, noting that an 'absence of formal qualifications can be a criterion of exclusion from particular types of job, access to training and development opportunities and to opportunities for job progression'. In a similar vein, Hodkinson and Hodkinson (2004, p. 264) argue that 'Lave and Wenger's work underestimates the significance of type [mode] 1 learning on modern employment settings.' This is echoed by Reich (cited in Paivitynjala and Anneli, 2003, p. 151-2) who argues that jobs are increasingly 'symbolic-analytic', bearing a stronger relationship to formal education (and the learning as acquisition paradigm):

'In these jobs professionals identify and solve problems by manipulating symbols. They use and transform information with analytic tools such as mathematical algorithms, scientific principles, psychological insights, legal arguments, and so on. The nature of symbol manipulation of this kind is much like the nature of school work: context-specific reasoning is not enough but abstract thinking and an ability to analyse and synthesise information [are] required. In this way the conceptual reasoning and abstraction emphasised in educational settings and school learning is, indeed, an essential element of key jobs in working life today.'

Linked to this are arguments that learning as participation is a 'process' view of knowledge. According to Lee *et al.*, (2004, p. 9), perspectives in this paradigm do tend to conceptualise knowledge differently: 'They see it as fluid, that is, produced and continually restructured through the relationships and interactions between individuals, rather than as an object which is acquired, internalised and owned.' Whilst this view of knowledge may be consonant with process knowledge, it fails to recognise any other sorts of knowledge, especially those which are less situated. If this is the case, the paradigm has a very restricted and particular view of knowledge.

It is conceptually helpful to compare understandings of learning with the discussion of knowledge in the previous section. It was seen that knowledge and knowledge production can be conceptualised in many ways. This complexity is not reflected in the workplace learning literature. Instead, debates become polarised; knowledge differences are collapsed and/or social and experiential forms of knowledge are counter-privileged over a narrow understanding of formal knowledge and its role in society. Formal knowledge is 'read' in a particularly Parsonian and functionalist way. The same polarisation appears to be happening regarding learning. The accounts of learning as acquisition are highly caricatured, narrowly conceptualised and occasionally inaccurate. They are subjected to the same functionalist interpretations as knowledge is. Moreover, vast swathes of learning theory are omitted – the various forms of constructivism for example, which arguably sit between learning as acquisition and learning as participation.²⁵ These embrace the work of Piaget, Kolb, Eraut and Schon and many others. Although arguably mentalist, they do differ from learning as acquisition in the narrow form in which it is presented in the literature. There seems to be a very real need to broaden debates on learning and to take account of Eraut's point (2004, p. 203) that there will always be aspects of a person's knowledge that are unique to them and outside of the circle of shared cultural knowledge.

The learning and participation paradigm has taken a giant developmental step through the work of Engestrom. Engestrom (2004, p. 148) expands situated learning theory by taking a more complex view of what goes on across overlapping, multiple and interacting communities of practice in such a way as to embrace 'radical, discontinuous change' in work and organisational practices. The notion of a community of practice is replaced with the term *activity system*.²⁶ According to Engestrom (*ibid.*, p. 149-50), there are five principles of an activity system: 1) it is 'a collective, artefact-mediated and object-oriented activity system, seen in its network relations to other activity systems'; 2) an activity system is always 'a community of multiple points of view', it is 'historically etched' and 'multi-voiced'; 3) such systems 'take shape and get transformed over lengthy periods of time. Their problems and potentials can only be understood against their own past'; 4) contradictions are important 'historically accumulating structural tensions within and between activity systems' which lead to 'disturbances and innovative solutions'; 5) expansive transformations occur when contradictions aggregate.

The literature suggests that one of the main attractions of activity theory within workplace learning is the idea of expansive transformation and a radical reconceptualisation of learning into a notion that is emergent and that cannot be understood ahead of time. Engestrom's 'expansive learning' is thus made up of the 'theoretical model of social/interactional "activity system" processes' together with a view of learning as an 'action-oriented process of construction and reconstruction' (Lee *et al.*, 2004, p. 12). The purpose of expansive learning is to achieve substantial changes at the organisational level.

Guile and Young (1998, p. 7) claim that, as Lave and Wenger took the zone of proximal development into historical and societal realms, Engestrom takes it into 'transformatory' dimensions: 'His studies on the social transformation of the organisation of work begin to identify how individuals and groups through critically interrogating their work contexts,

²⁵ Constructivism refers to theories that share the view that learning requires the active participation of learners. Fuller *et al.* (2003, p.19) do introduce the term 'construction' as a way to 'mediate the dichotomy between produce and process' but the relationship of this to the many faces of constructivism is not developed.

²⁶ From cultural-historical activity theory.

collectively produce new understandings and hence new knowledge'. Engestrom's thesis (2004, p. 146) is that contemporary experts have to 'face, diagnose and resolve novel situations for which they have little or no directly applicable practice'. Resolutions need to be found which are not available from existing models or 'the skills and knowledge of the established masters' (*ibid.*). In fact, he argues that such resolutions are already being formulated in some contemporary workplaces. He develops an 'expansive learning cycle' which moves from abstract to concrete in a non-linear way and includes elements of conditioning/acquisition, learning the 'hidden curriculum' and questioning/reconstruction (with the latter linking to expansive learning and transformation).

Engestrom has developed the concept of 'negotiated knotworking' to refer to the 'potentially expansive boundary-crossing actions of [transformatory] learning' (*ibid.*, p.152). This activity is ever-changing 'characterized by a pulsating movement of tying, untying and retying together otherwise separate threads of activity' (*ibid.*, p.153). It is particularly associated with 'co-configuration'. He names six criteria of co-configuration: '[an] adaptive product or service; continuous relationship between customer, product/service, and company; ongoing configuration or customization; active customer involvement; multiple collaborating producers; and mutual learning from interactions between the parties involved' (*ibid.*, p.154). Knots have shorter half-lives than activity systems. They are not person-dependent; rather 'subjectivity is dynamically distributed within the knot' (*ibid.*, p.155). They are fragile, reliant on 'intersubjective understanding' and therefore, on 'communicative and meta-communicative actions and tools' (*ibid.*). Engestrom recommends studies of successful organisational change processes and their social histories and 'developmental ethnography', by which he means 'recording and analysing troubles and disturbances' and capturing movements and change whilst they are in the zone of proximal development, i.e. before they reach a level of generality.

Exciting though these theories may be, it is questionable as to how many work contexts in the UK are at this stage in their development. Lee et al. (2004, p. 13) cite Young's observation that few people are in suitable 'gold standard' social/ discursive contexts. Even if they are, expansive learning has the potential to restrict movement beyond the organisational activity system. There is also a sense in which Engestrom assumes a level playing field. As Lee et al. (2004, p. 13-4) observe, he tends to down-play the existence of top-down decision making and does not ask: 'who is doing the questioning and who is being silenced or prevented from participating in the questioning, and thus the expansive learning'.

The formality and informality of learning

This dimension relates to the paradigmatic distinctions discussed above. Formal learning is aligned with the narrow readings of learning in the acquisition paradigm, to Mode 1 forms of knowledge production and to Bernstein's vertical discourse. As such, it is not foregrounded or discussed in great detail in the literature. Very often it is 'read' in very functionalist terms as 'cultural transmission'. As Bailey *et al.* (2004, p. 25) put it:

'...learning is regarded essentially as socialization or acculturation, the induction of the neophyte into this body of culturally defined knowledge and the acquisition of functional forms of knowledge and cognitive skills by the learner. The process is entirely passive; appropriate social mechanisms and persons teach the learner socially appropriate knowledge.'

In very general terms, Eraut (quoted in Lee *et al.*, 2004, p. 15) defines it as having: 'a prescribed learning framework; an organised learning event or package; the presence of a designated teacher or trainer; the award of a qualification or credit; the external specification of outcomes'. In the context of workplace learning it is usually taken to refer to structured learning that takes place 'off-the-job' and outside of the working environment.

Rather, the emphasis tends to be on informal learning. Lee *et al.* (2004, p.15-16) conceptualise this according to four organising principles: *context* – it largely takes place outside of formal educational situations or employment-related programmes; *cognisance* – anywhere along a continuum of ‘intentional/incidental’; *experiential* – often involving ‘practice and judgement’; *relationship* – for example, ‘sitting by Nellie’. It may be recognised by the various parties involved, and it may or may not be specifically and actively encouraged. Looked at in these ways, informal learning can be seen as a central feature of ‘work as a practice, the workplace as an environment, and workforce/individual development’ (*ibid.*, p.16).

Eraut (in Lee *et al.*, 2004, p. 17) develops a typology of informal learning along the *intentional-incidental* continuum mentioned above. He prefers the term non-formal to informal, seeing the latter as ubiquitous and as having ‘little to do with learning per se’. For him, in order to ‘count’, informal learning (particularly at work) would have to result in ‘significant changes in understanding and capability’. It is this that his typology intends to capture. He develops the intention-incidental dimension into three categories. *Deliberative learning* is the most intentional. *Implicit learning* refers to situations where ‘there is no intention to learn and no awareness of learning at the time it takes place’. *Reactive learning* is an in-between category to describe ‘situations where the learning is explicit but takes place almost spontaneously in response to recent, current or imminent situations without any time being specifically set aside for it. Its articulation in explicit form could also be difficult without setting aside time for more reflection and thus becoming deliberative.’

Watkins and Marsick (1992, p. 287) developed a theoretical framework that helps to understanding the incidental end of the continuum. They saw incidental learning at work, amongst other things, as being based on learning from experience; embedded in an organisational context; oriented to a focus on action; governed by non-routine conditions; concerned with tacit dimensions that must be made explicit; and delimited by the nature of the task, the way in which problems are framed, and the work capacity of the individual undertaking the task. Thus, ‘incidental learning takes place along a continuum of conscious awareness’ (*ibid.*, p. 291). At an extreme end, it is buried in the interaction itself.²⁷ There is obviously a strong relationship between this understanding of incidental learning and notions of tacit knowledge, but the connections are not further developed by these theorists.

Although there is a strong emphasis on informal learning in the literature, there are a range of views about it. Although it is usually endorsed, even celebrated, some downsides are acknowledged. Lee *et al.* (2004, p. 20) quote Fuller *et al.* who draw attention to the perspective that ‘an over-valuing of informal learning could lead to fewer opportunities for employees to participate in formal “off-the-job” training’ therefore negatively impacting on ‘knowledge control in the workplace’. The same writers also draw attention to the work of Dale and Bell who point out that workplace learning ‘may be too narrowly based [...] may not be transferable; it may be unconscious and not be recognised. This does not build confidence nor lead to development; it is not easy to accredit [...]; the employee may learn bad habits or the wrong lessons’ (*ibid.*). From a post-structuralist vantage point, other writers argue that discourses of informal learning produce new worker subjectivities whereby more of the individuals become subject to organisational surveillance, control and discipline. (See for example, Usher and Solomon; 1996, du Gay, 1996; Usher and Edwards 1994; Harrison 2000.)

The literature reveals a range of perspectives on the usefulness or otherwise of the distinction between formal and informal learning. There are those that argue against distinctions because they imply the inferiority of informal learning processes and position formal learning as the norm. Others argue that the distinction should be abandoned for other reasons: namely because it does not hold. Billett (cited in Lee *et al.*, 2004, p. 19) asserts that workplaces are in fact ‘highly structured environments for learning’. In this way, he extends structured learning environments beyond formal pedagogic institutions. Likewise, Colley *et al.* (cited in Lee *et al.*, 2004, p. 20)

²⁷ This is similar to Bernstein’s horizontal discourse – which is also context-subsumed.

conclude that informal learning is present in formal settings and vice versa. Fuller *et al.*, (2003, p. 46) argue that the term informal learning remains useful because it can capture 'the nature of learning which forms part of everyday life' and, in the case of workplace learning, make a powerful link between learning and context. Fuller and Unwin (cited in Lee *et al.*, 2004, 19-20) take a different position. They argue for a re-insertion of the concept of formal learning and qualifications, especially in relation their expansive workplace learning contexts. Part of their argument for this is driven by social justice imperatives. There is a need to promote access to formal qualifications for employees because there is not yet parity of esteem. It is therefore important for workers to have their skills validated outside of a particular employment context.

There seems to be a need to look at learning in the round in workplace learning. Clearly, formal learning processes are a small part of workplace learning. Yet, for a range of reasons, they remain part of the picture. For example, earlier arguments addressed how new 'symbolic-analytic' workers require expertise that is similar to formal learning. Formal qualifications are presented as having a role to play in expansive learning; and learning as both attainment and participation seem to figure in Engestrom's knotworking.

In acknowledging the emergent paradigm of learning as participation, the pendulum seems to have swung dramatically away from learning as acquisition. It seems important to recognise the social and contextualised character of learning, but also to accept that learning is also a cognitive process. Consequently, neither side needs to be denigrated. Both have something to contribute to a richer understanding of learning generally and workplace learning in particular. It is also clear that learning at work is an amalgam of different types of learning. Hodkinson and Hodkinson (2004, p. 260-8) capture this in a very useful way. They see workplace learning as made up of:

1. *Intentional/planned learning of things that others know. This includes formal training and books, internet etc. Learning as acquisition. Standard paradigm. Also includes the passing on of 'established skills and practices' (ibid., p. 262). Can be communal. Tends to be underpinned by a scientific/empiricist view of research.*
2. *Socialisation into communities of practice. Learning is 'known and understood through practice, but not necessarily through discursive language or explicit thought' (ibid., p. 264). Difficult to identify and describe. Like Eraut's non-formal learning. Few 'attainments' that can be specified; rather, attainment is seen as membership.*
3. *Unplanned adaptation/improvement of practice. Where learning is part of ongoing activity and people are unaware of it and have difficulty recalling the process. Where intentionality is involved, it is directed to task completion not learning.*
4. *Planned/intentional learning to modify existing capability. Self-directed. Like Eraut's deliberative or analytic learning.*
5. *Intended/planned learning to do that which has not been done before. 'This type of learning lies at the heart of calls for firms to become "learning organizations" and of claims about the achievement of the "high skills equilibrium" (ibid., p. 267). It resonates with Engestrom's work.*
6. *Unplanned learning of that which has not been done before. As in doing a new job, for example.*

This type of analysis is very helpful because it begins to bring together theory and practice and provides a basis for further situational analyses to determine relationships between different types of learning in the same context.

Knowledge transfer as learning process

In this final section, knowledge and learning issues merge. Theory suggests that vertical discourse, propositional and Mode 1 knowledge forms are the most amenable to transfer for the reasons outlined, namely a degree of acontextuality and principles of recontextualisation and rules for making explicit the grounds for explanation. Other forms of knowledge are less amenable to transfer because, to varying degrees, they are context-subsumed, or context-specific. As Young (2001, p. 16) puts it, there are no explicit principles for transferring meanings across 'segments' except by analogy that one segment is 'similar' to another. He argues that the case of workplace knowledge, 'segments' might refer to different occupational sectors. These issues are overlooked in workplace learning. For advocates of same or similar knowledge, they are non-issues, by definition. For advocates of learning as participation, they are also non-issues, because learning as acquisition is deemed irrelevant. However, for those who accept that there are different forms of knowledge and who take a broader view of learning theory, these delimiting epistemological conditions require pedagogic attention. As Eraut *et al.* (2000, p. 259) put it:

'We have shown that learning in the workplace is very different in kind from learning in school or college. Thus learning in one context will not easily transfer to the other. Nor will knowledge and skill transfer without being resituated in the new context, which will require significant further learning [...] The attributes and dispositions required for lifelong learning in the workplace cannot be acquired outside the workplace; and a significant amount of preparation for work can only be undertaken in employment. To pretend otherwise would be to deceive the public and limit the quality of the outcomes of both general and vocational education.'

Various strategies are advanced in the literatures. There is common acceptance that the means to *integrate* different forms of knowledge are central to the transfer of knowledge to new environments (see Paivitynjala and Anneli, 2003, p. 160, for example). Evans (2002, p. 83), argues that there is a need to understand better 'the *processes* by which skills are 'transformed' from one setting to another. Several commentators suggest that this goes beyond naïve mappings of concepts such as 'key skills' and other de-contextualised 'transferable skills' which do not work in practice. Tacit knowledge is particularly problematic when it comes to considerations of transfer. There is a general consensus that it is difficult, if not impossible (and even undesirable) to make tacit knowledge explicit and therefore amenable to codification.

In earlier work, Young and Guile (1994, p. 31) developed the notion of *connectivity* in relation to professional development. It was a term that focused on how to '*connect* theoretical and practical learning [and] overcome the problem of either equating "theory" and theorising or assuming that it is only "theorising" that is relevant to professional practice'. In more recent work, Young (2001, p. 18) follows Bernstein and suggests that it is useful to distinguish between types of knowledge along 'a continuum of vertical and horizontal discourses depending on the extent to which they are constrained by the material world'. In this way, he is suggesting the development of a theoretically-informed understanding of knowledge in the field concerned as a basis for gauging transferability.

Some of Eraut's work is also useful in this regard, especially if seen in terms of Bernstein's *recontextualisation*. Recontextualisation has cognitive and social dimensions. It refers to the means by which discourse is dislocated from one context and relocated in another. Eraut (2004, p. 212) identifies four variables: 'the nature of what is to be transferred, differences between the contexts, the disposition of the transferee [and] the time and effort devoted to facilitating the transfer process'. He argues that this is difficult because of differences in 'context, culture and modes of learning'. Likewise, Bernstein (1996) points to difficulties because 'space, time, disposition, social relation and relevance' all change. Eraut (2004, p. 212) advances five stages of transfer: 1) 'extraction of potentially relevant knowledge from the context(s) of its acquisition and previous use'; 2) 'understanding the new situation, a process that often depends on informal social learning'; 3) 'recognizing what knowledge and skills are relevant'; 4) 'transforming them to fit the new situation'; 5) 'integrating them with other knowledge and skills in order to

think/act/communicate in the new situation'. Such textured pedagogic processes go some way towards addressing the criticism made of Kolb's learning cycle, namely that meta-level abilities are required to effect the translation of knowledge into a different form.

The blurring of boundaries between forms of knowledge and processes of learning render issues of knowledge transfer problematic in workplace learning. Literature advocating same/similar knowledge and the de-differentiation of formal and informal learning render discussion of transfer irrelevant – it is not required because there are no epistemological or pedagogic differences or boundaries, only vested interests to be overcome. Transfer is mainly an issue for those who maintain that there are differences in forms of knowledge and forms of learning. Various strategies emerge from theorists in this camp. The concept of recontextualisation may offer a means to approach this in ways that take account of complex interaction between different forms of knowledge as a means to support the development of both intellectual and practical expertise.

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Annex B

Review of Reports by the QAA and DfES on Placement and Practice Learning and Foundation Degrees

Anna Scesa – CHERI

Introduction

Our analysis of workplace learning practices focuses essentially on three strands: sandwich placements, practice learning in the healthcare and social work sectors, and foundation degrees.

We looked at the institutional audit reports of audit visits that took place from 2002 onwards and were produced by the Quality Assurance Agency for Higher Education (QAA) on a selection of institutions with a high percentage of sandwich students (Aston University, Brunel University, Coventry University, Leeds Metropolitan University, Loughborough University, Nottingham Trent University). In another three institutions (University of Huddersfield, University of Northumbria at Newcastle and Sheffield Hallam University) the audit visits took place prior to 2002 and their reports, therefore, follow a different format.

We also looked at QAA subject review reports of subject areas with the highest concentration of sandwich students (agriculture and related subjects, computer science, engineering and technology, architecture, building and planning, business and administrative studies). As subject reviews were discontinued at the end of 2001, these reports are rather old. We have therefore supplemented this information with data taken from the summary report of the academic review of subjects 2002-04 (46 academic reviews in 14 subjects). Academic review was used by QAA as a transitional arrangement between review methods.

Finally, we examined a recent overview of healthcare programmes undertaken by QAA on behalf of the Department of Health, and recent available evidence on foundation degrees (FDs) by QAA and the Department for Education and Skills (DfES). The DfES evaluation of foundation degrees comprised a survey of foundation degree students and 15 institutional case studies.

A full list of the documents consulted is available in the appendix.

Placement and practice learning

On what concerns sandwich placements we found more explicit information in the 'new style' institutional audit reports, as opposed to the evidence presented in the quality audit reports that were produced prior to the introduction of institutional audit in 2002-03.

Comments and considerations expressed on placement and practice learning can be grouped under the following headings.

- **Organisation, monitoring and management of placements**

There is evidence that in some universities placements are well organised, students briefed appropriately beforehand and monitoring processes well defined. An effective relationship exists between employers, tutors and placement officers (Aston, Leeds

Metropolitan). At Brunel University, for example, work placement officers identify and advertise placement opportunities, co-ordinate recruitment and support activities, and brief students. Considerable efforts are also made by staff throughout the university to forge new links with employers and to secure placement opportunities for students. There is a dedicated website (Brunel Opportunities for Learning Development) to promote information about this service. In some cases the audit teams were so impressed by the quality of the development and management of placements that placement learning was listed amongst the features of 'good practice' for four universities (Aston, Brunel, Leeds Metropolitan and Loughborough). Academic review reports highlight the fact that, where there is a significant commitment to placement provision, the quality of provision is usually high, with well-organised work placements geared to effective experiential learning.

- **Support for learning**

The majority of the institutional audit reports comment in a positive way on the quality of support that students on placement receive (Aston, Brunel, Coventry, Leeds Metropolitan, Loughborough and Nottingham Trent). Students at Aston University who had undertaken a placement stated that they had received good support and guidance before and during the placements, and that tutors had helped them prepare for the final year of studies. Students received only one visit by their tutor during their placements, but they were in regular e-mail contact with the school. At Aston the suitability of the placements is reviewed within a month of its beginning, so that any difficulties can be promptly resolved. At Brunel support arrangements worked well and students were particularly positive about the tutors' visits (each semester) and the departmental tutorial days which provided the opportunity to share experiences. Students on placements from Loughborough University enjoyed at least two visits from their tutors and had continuous access to their personal tutors throughout their placements. The subject review report of the quality of the provision of Business and Management courses (2000-01) states that 'support for students on placement is generally good' (p8). The academic review summary report notes that 'support for students during placements is generally effective' but 'there is scope to strengthen student guidance and support for the process of gaining placements in some provisions' (p3).

Much good practice is reported in the support for students on practice placements in the healthcare sector. Examples include the use of clinical practice facilitators to teach students in the clinical areas, the effective use of problem-based learning, and the contributions to teaching sessions from health service users and carers. In addition, the effective collaborations between academic and clinical staff at placement locations provide good support mechanisms for students. Other factors worth mentioning are the effective use of virtual learning environments, the quality of student handbooks, library and ICT resources.

- **Assessment of learning**

In one case concerns were raised about the lack of consistency in the conventions for the assessment of sandwich placements and, at the time of the audit, the University Senate was about to consider new, more consistent regulations (Aston). No other mention of assessment was found in any of the other reports reviewed.

In practice learning, however, there is good evidence that both students and practice staff receive clear and comprehensive information about the intended learning outcomes, assessment criteria and instruments. In addition, both mentors and assessors are used effectively, are appropriately prepared and provide constructive feedback that aids students' development. The only area of concern highlighted in the QAA review is the provision of feedback to students on their formative assessment, both on their

academic and practice work, which in a number of cases does not appear to be as timely and comprehensive as it should be.

- **Employer involvement**

Good links with employers and their involvement in the organisation of placements are considered essential for the effectiveness of placement learning, and employer involvement is mentioned in all the institutional audit reports reviewed. Extensive links with the employers are maintained at Aston, Brunel, Coventry, Leeds Metropolitan, Loughborough and Nottingham Trent. At Brunel, feedback from employers is obtained in a variety of ways (industrial liaison groups, meetings with professional bodies and through personal contacts with employers during placements). Coventry University routinely collects information from employers involved in placements, and 'employer satisfaction has recently been introduced as a performance measure in the Corporate Plan' (p19). At Leeds Metropolitan, employers are regularly involved in course planning committees and their views are also heard at faculty advisory groups and meetings of employer organisations and professional bodies which are also attended by senior academic staff. At Loughborough University MEng students are often sponsored by employers, and employers' inputs inform the development of the curricula. In the science and engineering area in particular, employers provide feedback to the university on the individual performance of students as well as on the appropriateness of the range of skills they have acquired during the placements. At Nottingham Trent University relationships with employers are both formal and informal. Feedback from employers is heard in some faculties at employer forums and advisory panels, and many programmes maintain close links with professional bodies. The subject review for Business and Management states that 'generally the providers maintain links with industrial and commercial organisations and take care to ensure that curricula are informed by current practice' (p4).

The active involvement of health professionals in curriculum planning and good working relationship between academic and clinical staff are also highlighted as areas of good practice in the QAA review of healthcare programmes. This found that in some discipline areas staff research continuously informs and underpins the development of curricula. Another related factor is 'the effective use of link lecturers and tutors to support mentors and practice facilitators in both the delivery of practice-based curriculum and the rigorous and appropriate assessment of students in practice' (p11).

- **Learning beyond placement**

Little detailed information is given about how and whether the skills and competences acquired during placements subsequently benefit the students' academic development. Students of Aston University, however, spoke positively of the contribution that the placements made to their learning experiences; students of Brunel University felt placements had been extremely beneficial to their personal development, employability, attitude to study and improved performance. In this respect Loughborough University has also introduced a specific module on Teamwork and Leadership (part of the MEng award) which involved 'an indoor event, with students producing written reflections on their expectations and experiences before and after the event' (p42). The module is highly valued by students, staff and employers alike. The 'considerable educational benefit' of placements was also highlighted by students of the Business and Management courses.

The summary document of the QAA review of healthcare programmes states that although it is 'too early in the implementation of the review to draw too many conclusions' (p12) it is interesting to note that less good practice is reported in student progression than in other areas.

- **Adherence to the QAA Code of Practice**

The 'Code of practice for the assurance of academic quality and standards' covers 'placement learning' in its Section 9, and adherence to the code (or lack thereof) is often mentioned in institutional audit reports. Although in most cases the institutions were found to adhere to the precepts of the code concerning placement learning, one university was found to be rather slow in its response to it (Coventry).

Foundation degrees

The QAA review sampled 34 FD programmes (3,100 students) at a time (2002-03) when the FD qualification was still very new and few students had finished their courses. The QAA review of FD programmes included visits to the sites of work-based learning (WBL). In 2004-05 the QAA undertook a follow-up survey of the programmes reviewed in 2002-03, to check on progress since the last review. The 2005 QAA report constitutes, therefore, the most recent evidence on the quality of WBL provision within FDs.

In spite of the fact that work-based learning is central to foundation degree programmes, the 2002-03 QAA review found 'a need for significant development of work-based learning' to address the variability of students' experience. In particular they identified the need for: more formal monitoring and mentoring of WBL; greater involvement by employers in the delivery and assessment of WBL; and improved handbooks and other information to raise awareness. The DFES evaluation of FDs conducted in 2004, which includes a student survey element, seems to uphold these findings. It states that 'the extent to which work-based learning has been incorporated into FDs is variable' and depends on 'mode of study, the nature and structure of employment in the sector, the views and involvement of employers, the profile of the student body, the requirements of professional bodies, and the specific learning outcomes of the programme' (p31). Thirty-nine per cent of students surveyed (total number of respondents 841) stated that 'their course involved a proportion of 50 per cent or more WBL directly with an employer' (p30) and 73 per cent felt the amount of WBL was about right.

The most recent (May 2005) report found many areas of good practice in the provision of WBL in FDs, but also some persisting areas where further development is needed, the most important being the need to ensure consistency of the student experience across a variety of different sites and types of WBL provision.

According to the 2005 survey, WBL in FDs can take many forms depending on the subject studied, the location, and whether the students are working as well as studying. The four main approaches used by FDs providers are: i) the student undertakes a period of work with an employer, with appropriate briefing and support by their institution; ii) the institution arranges with the student's current employer for ways to build WBL practices into the workplace; iii) simulated work-environments in which the students become familiar with realistic work scenarios without actually experiencing them first-hand (one third of the programmes reviewed used simulated WBL); and iv) classroom-based modules that teach students the theoretical aspects of the world of work.

- **Good practice**

The most effective programmes are characterised by well-defined rationales, arrangements and learning outcomes that are communicated effectively in the programme specification, student handbooks, staff guidance and related documents; opportunities for the employers and academic staff to meet each other and discuss arrangements, aims and learning outcomes; and a three-way agreement specifying the responsibilities of academic provider, workplace mentor/employer and the student respectively.

Other examples of good practice which contribute to the achievement of the intended learning outcomes for WBL are the realism of the activities; the input of employer

comments and feedback (including input to the development of assignments and formative assessment); the use of work environments and industry standard equipment; and the responsibility placed on the students to bring their academic learning to bear on the WBL activities.

Students receive good support during their WBL from employers, work-based mentors, academic tutors and WBL staff. The role of the work-based mentors is still evolving, as it has only recently been introduced. The role varies depending on the employment sector and the size of the workplace.

- **Areas for improvement**

The 2002-03 review found that in two-thirds of the programmes reviewed there was a need to clarify the intended learning outcomes and match them more appropriately to the qualification benchmark and the prospectus. Lack of consistency in assessment criteria and lack of employers' involvement in summative assessment of work-based learning were also areas of concern. The 2005 report states that some of these aspects continue to offer challenges: in particular there is the need to 'provide intended learning outcomes for WBL at the programme level and ensuring the assessment allows their achievement' (p2). In some programmes the survey found 'weak, inappropriate or no assessment of WBL' whereby 'students cannot show that they have met necessary programme individual learning objectives related to WBL'.

Only in a few cases are employers directly responsible for assessing the competence of students in the workplace, and occasionally they add comments to the students' logbooks at the end of the assignments. Although good practice suggests that employers have a major role to play in formative assessment, evidence indicates that they do not wish to take on more of this.

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Annex C

Review of Teaching Funding Methods used by HEFCE, the NHS and the TDA

Sue Delve, Bridget Josselyn and Nick Ratcliffe - KPMG

This paper provides an overview of current teaching funding methodologies for the Higher Education Funding Council for England (HEFCE) and the Training and Development Agency for Schools (TDA), and the existing and anticipated future funding arrangements for students funded by the National Health Service (NHS).

HEFCE teaching funding method: an overview

HEFCE directly funds 130 higher education institutions and 146 further education colleges in England to provide higher education. It has allocated nearly £4 billion of recurrent funding for 2005-06 to fund learning and teaching in these institutions. The overview below is of the method for allocating mainstream recurrent funding for teaching, but there are also ring-fenced funding allocations related to teaching for activities such as Centres for Excellence in Teaching and Learning and the Teaching Quality Enhancement Fund, as well as recurrent funding for widening access and improving retention.

Funding provided by HEFCE is for the teaching of all home and EC students studying a course of HE unless they are on a closed course (that is, a course that is not open to any suitably qualified candidate), or their course is funded through any other EC public source (for example, the NHS, the TDA, or the European Social Fund).

The teaching funding model is calculated based on the full-time equivalent (FTE) student numbers at an institution. The FTE for a full-time student is 1 and the FTE for a part-time student is calculated depending on how long it would take to complete the equivalent full-time course; for example a degree student studying part-time over 6 years would have an FTE of 0.5 in each year. Within the teaching funding model, there are a number of weightings and premiums applied to reflect additional costs of various aspects of higher education. These are described in more detail below.

Weightings and premiums within the teaching funding model

Price group weighting

There is a weighting applied to the FTEs to reflect the relative costs of different types of subject as shown in the table below.

Price group	Description	Cost weight
A	The clinical stages of medicine and dentistry courses and veterinary science	4
B	Laboratory-based subjects (science, pre-clinical stages of medicine and dentistry, engineering and technology)	1.7
C	Subjects with a studio, laboratory or fieldwork element	1.3
D	All other subjects	1

Premiums applied to FTEs not weighted to reflect their price group

Some premiums applied within the teaching funding model are to reflect costs that do not vary with subject studied, so are applied to the FTE before it has the price group weighting applied. These premiums are described below with the size of the premium in brackets.

- *Part-time premium (10 per cent)*
Since the funding model is based on FTEs and not headcounts, this premium is applied to reflect the additional costs associated with part-time students such as administrative costs.
- *Foundation degree premium (10 per cent)*
The foundation degree premium was introduced into the funding model for the first time in 2004-05 and is there to reflect the additional costs associated with partnership working between institutions and employers.
- *Small institutions (variable depending on the size of institution)*
The premium for small institutions only applies to those institutions that have 1,000 FTEs or fewer (all FTEs are included in that count, not just those eligible for HEFCE funding). The premium is variable, increasing in value for smaller institutions, and is to reflect the fact that, even if an institution is small, there are still minimum overhead costs associated with running it.
- *Historic buildings (variable depending on floor space)*
Institutions that own buildings constructed before 1914 are eligible for this premium to reflect the additional costs associated with running old buildings. The size of the premium is dependent on the floor space of the old and historic buildings.

Premiums applied to FTEs weighted to reflect their price group

Other premiums within the model are considered to vary depending on the price group studied by the student. These are described below with the size of the premiums indicated in brackets.

- *Long course premium (25 per cent)*
Long courses are those which last for 45 weeks or more in each year. The weighting is applied to reflect the additional costs associated with teaching the student for a longer period. These courses are usually masters courses or accelerated degrees.
- *London weighting (8 per cent for inner London, 5 per cent for outer London)*
Those institutions within London are eligible for a premium to reflect the additional costs of equipment, staff and other operating costs.
- *Institution-specific premium (variable depending on review outcomes)*
Some specialist institutions (those with 60 per cent or more of their provision in only one or two cost centres) are eligible for an additional premium following reviews of their provision. This premium varies depending on the outcomes of the reviews. Institutions that have an institution-specific premium of more than 10 per cent are not eligible for the small institutions premium since the costs reflected here cover the additional costs related to their small size.

Funding for additional student numbers

Institutions will only receive additional funding for increasing their student numbers if it is allocated by HEFCE. Until 2004, places were allocated through an annual competitive bidding round. Institutions were free to bid for additional places for any new courses they wanted to run, or existing courses they wished to expand. These bids were assessed by a national panel which

also took into account recommendations from regional groups. The final additional student numbers bidding round was for foundation degree places only, and development funding was also made available to assist institutions in setting up the foundation degrees.

From 2005, the process for allocating additional student numbers has changed to allow some of the additional student number allocations to align more closely with bids for capital funding from the HEFCE Strategic Development Fund and the rest of the allocations to be distributed according to regional priorities.

Workplace learning typology and current HEFCE funding systems

A number of workplace typologies have been agreed and the discussions below indicate how they would be treated within the current HEFCE teaching funding method.

- *Short project within workplace*

If a short project is undertaken as part of an HE qualification, for example, as a final year project, HEFCE would not distinguish between that module and other modules on the course in funding terms. That is, if the project were undertaken as part of a degree in chemical engineering, it would be funded at price group B rates.

- *Sandwich placement*

Until 2004-05 students on sandwich placements were funded at the price group relating to the course they were studying, but were counted as 0.5 FTE, effectively meaning that the institution received half the resource for that year than for the other years on the course. Following the initial consultation on changes to the teaching funding method, the funding of sandwich years was changed to reflect the costs involved in running the placement, rather than teaching the subject studied. All sandwich placements are now funded at price group C and are still counted at 0.5 FTE.

- *Sequence of short placements in 'practice' settings alternating with taught modules*

Examples of this type of course are PGCEs and nursing qualifications. PGCEs for the post-compulsory education sector (those required to teach study above level 2) are funded by HEFCE at price group C. Other programmes are funded by the TDA and the NHS.

- *Sequence of activities in real (or simulated) work settings central to programme*

Foundation degrees attract a 10 per cent premium in the HEFCE teaching funding model. This premium was introduced in 2004-05 to reflect partnership costs involved in running foundation degrees. Some additional funding was provided to institutions that bid for additional foundation degree places. This funding was to be used in the development of those foundation degrees.

- *Employment-based learning programme*

If the course is only open to employees of the company, it is a closed course and so does not attract any HEFCE funding – it will be entirely funded by the employer. If it is open to anyone, for example a Learndirect Learning through Work programme, then it could be fundable by HEFCE. Normal funding rules will apply and so it would need to be credit-bearing and leading to an HE qualification. It would be funded as part-time provision and, as a result, would attract a 10 per cent premium.

- *Specific investigation within workplace*

This is likely to be a combination of a 'short project within the workplace' and an 'employment-based learning programme', so will attract HEFCE funding if the course is open and the study leads to an HE qualification.

- *Specific assignments based on workplace activities*

Again, this will attract HEFCE funding if the course is open and the study leads to an HE qualification.

TDA teaching funding method: an overview

Categories of funding

The Education Act 1994 defines the remit of the TDA. The Government established the TDA to fund institutions to deliver initial teacher training (ITT). Teacher training, along with the training of nurses and other professions allied to medicine, is not funded by HEFCE.

There are a number of relevant TDA funding initiatives, which will be examined in more detail below, as follows:

- ITT recurrent mainstream funding;
- various funding premiums;
- Secondary Shortage Subject Scheme (SSSS) funding;
- employment-based ITT, including Graduate Teacher Programmes, Registered Teacher Programmes, Overseas Trained Teacher Programmes.

ITT recurrent mainstream funding

Mainstream funding is the largest TDA funding stream for initial teacher training. The TDA determines the units of mainstream funding per place based on the different categories of teaching. These units are then used in conjunction with allocated [?? Is this correct meaning, ie, allocated student numbers??] and continuing student numbers to determine the total funding. The TDA calculation of these units of mainstream funding takes account of the:

- total amount of mainstream funding available;
- total number of places it is required to fund;
- price weighting factors.

The allocation of places to institutions that bid for them is heavily influenced by the quality category the institution receives from the TDA. There are four quality categories (A – D) with A being excellent, B good, C satisfactory and D borderline. In some cases providers may be found to be non-compliant and their accreditation may be withdrawn. Subject to providers recruiting to target, national target numbers not falling, and other caveats around ring-fenced training places, the TDA gives providers guarantees about the proportion of TDA-funded places they can plan for in the following year, depending on their quality scores, for the academic year 2006-07, the guarantees are as follows:

- quality category A providers and providers not yet inspected receive a 100 per cent guarantee that the TDA will not reduce their places;
- quality category B providers receive an 85 per cent guarantee – the TDA can only reduce their places by a maximum of 15 per cent;
- quality category C providers receive a 70 per cent guarantee – the TDA can only reduce their places by a maximum of 30 per cent;
- quality category D providers and non-compliant providers do not receive a guarantee.

The TDA gives a price weighting factor to each category of place reflecting agreed cost and policy differentials between them. The price weighting factors for the academic year 2005-06 are shown in the table below.

Units of mainstream funding and weighting factors for academic year 2005-06

Phase-subject group	Location	Level-mode of study Note 4	Price weighting factor	Unit of mainstream funding per FTE place (£) Notes 5 and 6
Secondary non-shortage Note 1	Outside London	UG	1.123	4,386
		PG	1.137	4,441
		PG flexible	1.191	4,652
	Inner London	UG	1.213	4,738
		PG	1.226	4,788
		PG flexible	1.284	5,015
	Outer London	UG	1.179	4,605
		PG	1.193	4,660
		PG flexible	1.249	4,878
Secondary shortage – standard cost Note 2	Outside London	UG	1.163	4,542
		PG	1.174	4,585
		PG flexible	1.230	4,804
	Inner London	UG	1.255	4,902
		PG	1.266	4,945
		PG flexible	1.326	5,179
	Outer London	UG	1.220	4,765
		PG	1.232	4,812
		PG flexible	1.290	5,038
Secondary shortage – high cost Note 3	Outside London	UG	1.296	5,062
		PG	1.307	5,105
		PG flexible	1.370	5,351
	Inner London	UG	1.399	5,464
		PG	1.410	5,507
		PG flexible	1.478	5,773
	Outer London	UG	1.360	5,312
		PG	1.372	5,359
		PG flexible	1.437	5,612
Primary – HEI/FEC providers	Outside London	UG	1.000	3,906
		PG	1.308	5,109
		PG flexible	1.370	5,351
	Inner London	UG	1.079	4,214
		PG	1.411	5,511
		PG flexible	1.478	5,773
	Outer London	UG	1.050	4,101
		PG	1.372	5,359
		PG flexible	1.438	5,616
Primary – non-HEI/FEC	Outside London	PG	1.355	5,292
		PG flexible	1.420	5,546
	Inner London	PG	1.462	5,710
		PG flexible	1.532	5,983
	Outer London	PG	1.422	5,554
		PG flexible	1.490	5,819

Note 1 Secondary non-shortage subjects include applied art & design, applied business, art & design, business studies, citizenship, English, geography, health & social care, history, leisure & tourism, and physical education.

Note 2 Secondary shortage standard cost subjects include applied ICT, ICT, mathematics, modern languages, music and religious education.

- Note 3 Secondary shortage high cost subjects include applied science, design & technology, engineering, manufacturing and science.
- Note 4 UG = Undergraduate, PG = Postgraduate and includes fast track.
- Note 5 This column shows units of mainstream funding per FTE place. The unit of mainstream funding for part-time places is 50 per cent of the FTE unit and the unit for assessment-only places is 25 per cent of the FTE unit.
- Note 6 These units of mainstream funding do not include the additional units of mainstream funding for Teachers' Pension Scheme contributions that some providers will receive.

Funding premiums

The TDA allocates most mainstream funding on the basis of numbers of places and recovers some or all of the funding it has allocated providers for those places that remain unfilled. The TDA also allocates some additional mainstream funding premiums on the basis of numbers of new entrants recruited rather than on the basis of numbers of places allocated. There are three separate schemes for academic year 2005-06, each of which is described below.

Funding premiums for additional primary early years specialist new entrants for 2005-06

In a move to increase the number of primary early years specialists, the TDA is allocating a funding premium to providers for 2005-06 of £400 for every additional primary early years new entrant they register for 2005-06 compared to the number they registered for 2003-04.

Funding premiums for additional secondary mathematics, science and modern languages new entrants for 2005-06

The TDA provides an incentive scheme for secondary mathematics, science and modern languages. Providers will be allocated mainstream funding premiums for every additional secondary mathematics, science or modern languages new entrant they registered for 2005-06 compared to the number they registered for 2002-03.

The TDA will compare the number of secondary mathematics, modern languages or science new entrants registered by providers for 2005-06 with the number of new entrants registered by them for 2002-03. Any increase will be treated as additional new entrants and will attract the funding premiums. The table below shows the amount of the funding premiums that the TDA will allocate for 2005-06.

Location of place filled by additional new entrant	Mainstream funding premium allocated per additional new entrant (£)	
	Mathematics/ modern languages	Science
Outside London	2,293	2,553
Inner London	2,473	2,754
Outer London	2,406	2,680

Funding premiums for primary modern languages specialist new entrants for 2005-06

The TDA will pay mainstream funding premiums for 2005-06 for primary modern languages specialist new entrants recruited by providers to allocated primary modern languages places. These premiums are designed to support travel and accommodation costs, partnerships abroad and assessments.

The TDA will allocate a funding premium of £1,050 to providers for each primary modern languages new entrant, towards travel and accommodation costs for the four-week training period abroad.

For every cohort of 15 trainees or part-cohort of trainees in each of the primary modern languages (French, German, Spanish and Italian) two additional premiums will be paid. The first is a funding premium of £1,050 towards costs associated with supporting partnerships with providers and schools abroad. The second is a premium of £1,500 to support assessment costs.

The table of these premiums for each primary modern language is shown below:

Premium	Number of new entrant trainees		
	1 to 15	16 to 30	31 to 45
Funding for travel and accommodation costs	£1,050 per trainee	£1,050 per trainee	£1,050 per trainee
Funding for supporting partnerships abroad	+ £1,050	+ £2,100	+ £3,150
Funding for assessment costs	+ £1,500	+ £3,000	+ £4,500

Secondary Shortage Subject Scheme (SSSS) funding

SSSS funding can be used by providers to make payments to relieve financial hardship of eligible trainees undertaking or proposing to undertake a priority secondary course of initial teacher training funded by the TDA.

A trainee is regarded as suffering financial hardship if they are in such serious financial difficulties that access to that course, or continued attendance on that course, may be at risk. The maximum amount that trainees may receive is £6,000.

SSSS funding allocations to providers are made up of three elements:

- financial hardship payment funding – this can only be used by providers for making financial hardship payments to eligible trainees and use of this funding element needs to be accounted for at the end of the academic year;
- SSSS administration funding – this can be retained by providers towards costs incurred by them in administering the SSSS and use of this funding element does not need to be accounted for separately by them at the end of the academic year;
- VAT on SSSS administration funding – this is for VAT registered ITT providers and is for the VAT chargeable by them to the TDA on the SSSS administration funding element.

Financial hardship payments funding

This funding element can only be used by providers for making financial hardship payments to eligible trainees. The size of an ITT provider's financial hardship funding allocation depends on:

- the number of (full-time equivalent) places they have been allocated by the TDA for 2005-06 for secondary shortage subjects broken down by category of place; and
- the units of SSSS funding that the TDA sets for each category of place.

Providers will receive a financial hardship payment funding allocation for 2005-06 equivalent to whichever is the greater of FTE numbers of places multiplied by appropriate units of SSSS funding, or £6,000.

The secondary subjects that are designated as secondary shortage subjects for the SSSS for 2005-06 are:

- applied ICT;
- applied science;
- design & technology;

- engineering;
- ICT;
- manufacturing;
- mathematics;
- music;
- modern languages;
- religious education;
- science.

The table below shows the categories of place and the SSSS units of funding for each of these categories of place for 2005-06.

Category of place	Unit of financial hardship payment funding per FTE place
<i>Group 1 subjects: secondary mathematics, modern languages and science</i>	
Year 1 of 2 full-time postgraduate and all undergraduate places	£2,250
All other postgraduate places	£225
<i>Group 2 subjects: all other secondary shortage subjects</i>	
Year 1 of 2 full-time postgraduate and all undergraduate places	£1,500
All other postgraduate places	£150

SSSS administration funding and VAT on SSSS administration funding

Providers will also receive SSSS administration funding towards costs incurred by them in operating the SSSS for 2005-06. Those providers that are registered for VAT will also receive a VAT funding element for the VAT chargeable by them to the TDA based on the administration funding element.

The amount of SSSS administration funding that a provider will be allocated for 2005-06 is whichever is the greater of 5 per cent of their financial hardship payment funding allocation for 2005-06 or £26 per FTE secondary shortage subject place. VAT registered providers will receive VAT calculated at 17.5 per cent of the amount allocated as SSSS administration funding.

Employment-based routes

Each year, the TDA invites ITT providers and designated recommending bodies (DRBs) to bid for intake targets for employed-based routes (EBR) for the following academic year. The number of EBR places made available each year is limited by the level of funding available, which is agreed with the DfES. EBR takes three major forms: Graduate Teacher Programmes (GTP), Registered Teacher Programmes (RTP), and Overseas Trained Teacher Programmes (OTTP). Each is considered in greater detail below.

Graduate Teacher Programmes

The TDA uses the GTP categories for allocation purposes. DRBs recruit their trainees to the following:

- secondary priority subjects – mathematics, science, modern languages, information and communication technology (ICT), design and technology and English;
- high quality applications for primary school teacher training;
- applications in any subject or phase that makes the teaching force more representative of society, for example:
 - men in primary teaching;
 - teachers from minority ethnic groups;

- teachers with disabilities;
- high quality secondary level applications in non-priority subjects;
- applications to train people currently working as teaching assistants. These additional places for teaching assistants are ring-fenced and do not prevent them from applying for places in the other categories.

Places in the third category above are now included in overall bid totals, and are a cross-cutting element of all other GTP allocation categories. From 2006-07, the GTP priority subjects will be the same as all other ITT categories, namely: design and technology, ICT, mathematics, modern languages, music, religious education, and science.

Also, from 2006-07, the final category (teaching assistants) will be subsumed into the remaining three phases. Thus, from 2006-07 there will only be allocations for high quality applications at primary level, for secondary level in priority subjects and for secondary level in non-priority subjects.

Training grant

The training grant is payable by the TDA to DRBs. DRBs may utilise this funding towards the provision of the formal teacher training programme and related activities – thus supporting trainees in meeting the standards for QTS.

DRBs are required to hold partnership agreements with each lead school. This agreement will set out the roles and responsibilities of the delivery of the training programme. The TDA does not specify how the training grant is shared – this will differ according to the individual partnership agreements made. However, the TDA expects DRBs to recognise the contribution of each lead school, and ensure that training grants are distributed on an equitable basis.

The table below outlines the units of training grant the TDA will pay a DRB for each trainee.

Period of training programme to be completed	Salary fundable GTP places		Training only fundable GTP places	
	Full-time £	Part-time £	Full-time £	Part-time £
1–120 days	2,060	1,660	2,000	1,600
121–240 days	3,090	2,290	3,000	2,200
241–360 days	4,120	2,920	4,000	2,800
361–480 days	N/a	3,550	N/a	3,400
>=481 days	N/a	4,180	N/a	4,000

Full-time trainees are defined as those whose FTE is over 0.5. Trainees with an FTE of 0.5 or less will be classified as part-time. Funding has been allocated on the basis of full-time places.

The period of the training programme to be completed is the number of days between the actual start of training and the planned end date of the programme; it includes weekends and bank holidays.

Salary grant

The salary grant is the TDA's contribution towards the employment costs incurred by the employing school over the period of the training programme. It is not designed to meet the full costs of employment.

It is the responsibility of the DRB to determine which of its candidates will be eligible for a salary funded place – the main constraint will be the number of salary funded places the TDA has made available to the DRB. DRBs are required to consider value for money when determining which trainees can be supported with a salary grant. This should be considered within the context of the

place the trainee will be taking at the school. Where a trainee is filling an existing teaching vacancy, a training grant only place may be more appropriate. There is some flexibility within the funding system to allow DRBs to effectively manage their devolved budgets.

The units of salary grant are based on the number of days the trainee is on the programme – including weekends and bank holidays. The general principle for a full-time trainee is that £1,300 is payable to the employing school for each 30 days of training (or part thereof), subject to a maximum of £13,000.

Assessment costs

The TDA will pay a £500 assessment fee for GTP trainees assessed against the QTS standards, for the following DRBs:

- DRBs that are partnered with an accredited ITT provider, and where that accredited ITT provider is carrying out the QTS assessment on behalf of the DRB
- DRBs that will be successful in gaining accreditation later in 2005 during the first round of formal accreditation of DRBs.

The TDA will not pay assessment costs for trainees who withdraw from their programme.

- **Self-funded trainees**

DRBs may recruit additional trainees on to GTP programmes on a self-funded basis – that is, programmes not attracting any training or salary grant from the TDA. The TDA will, however, pay for the assessment costs of these trainees, subject to the conditions in the section above.

- **Mathematics and science funding premiums**

In 2005-06, the TDA introduced funding premiums for DRBs for additional mathematics and science GTP trainees recruited. This is similar to the ITT funding premiums recently introduced for provider-based mathematics and science places. The TDA will pay a premium for each additional trainee recruited by a DRB in excess of the number recruited by them in 2002-03. This funding premium could be used to offset some of the additional costs DRBs might incur in recruiting and retaining these trainees and the additional activities needed to take them through to QTS.

- **Recruitment premiums**

The Government's response to the inquiry into post-14 mathematics 'Making Mathematics Count' and the 'Science and innovation investment framework 2004-2014' included a pledge to increase both the number and proportion of GTP trainees taking programmes of secondary mathematics and science. This comes at a time when the number of ITT places available nationally has peaked, where mainstream places are falling, and EBR places are stabilising.

The TDA has therefore approved that a recruitment premium will be introduced for 2005-06. The premium will be £1,000 per student recruited to secondary mathematics and science GTP programmes during 2005-06.

Registered Teacher Programmes

The TDA allocates training grant and assessment funding for RTPs, as follows.

Training grant

The training grant is payable by the TDA to DRBs. DRBs may utilise this funding towards the provision of the formal teacher training programme and related activities – thus supporting trainees in meeting the Standards for Qualified Teacher Status.

The table below outlines the units of training grant the TDA will pay a DRB for each trainee.

Period of training programme to be completed	Full-time £	Part-time £
1–120 days	2,000	1,500
121–240 days	3,000	2,250
241–360 days	4,000	3,000
361–480 days	5,500	3,750
481–600 days	7,000	4,500
601–720 days	8,000	5,250
721–840 days	8,000	6,000
841–960 days	N/a	6,750
961–1,080 days	N/a	7,500
>= 1,081 days	N/a	8,000

Full-time trainees are defined as those whose FTE is over 0.5. Trainees with an FTE of 0.5 or less will be classified as part-time. Funding has been allocated on the basis of full-time places.

The period of the training programme to be completed is the number of days between the actual start of training and the planned end date of the programme, it includes weekends and bank holidays.

Assessment costs

The TDA will pay a £500 assessment fee for RTP trainees assessed against the QTS standards, for the following DRBs:

- DRBs that are partnered with an accredited ITT provider and where that accredited ITT provider is carrying out the QTS assessment on behalf of the DRB;
- DRBs that will be successful in gaining accreditation later in 2005 during the first round of formal accreditation of DRBs.

The TDA will not pay assessment costs for trainees who withdraw from their programme.

Overseas Trained Teacher Programmes

The TDA allocates training grant and assessment funding for OTTPs and allows for an assessment only route, as follows.

Training grant

The training grant is payable by the TDA to DRBs for trainees attracting a training grant on the OTTP. DRBs may utilise this funding towards the provision of the formal teacher training programme and related activities – thus supporting trainees in meeting the standards for QTS.

The level of training grant for 2005-06 is fixed at £1,250 per trainee, irrespective of the length or intensity of training programmes.

Assessment costs

The TDA will pay either a £500 or £640 assessment fee for OTTP trainees assessed against the QTS standards, for the following DRBs:

- DRBs that are partnered with an accredited ITT provider and where that accredited ITT provider is carrying out the QTS assessment on behalf of the DRB;

DRBs that will be successful in gaining accreditation later in 2005 during the first round of formal accreditation of DRBs.

The standard assessment fee is set at £500 per trainee. The TDA will pay an additional £140 for each trainee who is assessed against the induction standards at the same time as the QTS standards.

The TDA will not pay assessment costs for trainees who withdraw from their programme.

Assessment-only routes

If they wish, DRBs may recruit trainees on to OTTP programmes on an assessment-only basis – that is, programmes not attracting any training grant from the TDA. The TDA will, however, pay for the assessment costs of these trainees, subject to the section above. The TDA has not set a limit on the number of trainees DRBs may recruit on an assessment-only basis.

NHS funding of teaching: an overview

Current funding arrangements: based on competitive tendering

The funding of nursing, midwifery and allied health professions is currently determined by HEIs entering into competitive tendering exercises with other local providers. The HEI bids are submitted to the Strategic Health Authority Workforce Directorate. Therefore, the funding per category of student currently varies considerably from one higher education provider to another.

Anticipated future funding arrangements: based on benchmark pricing

There has been a long negotiation process between the HE sector and the NHS regarding future funding arrangements based on national benchmark pricing. The information currently available is as follows, but this is subject to change.

- The benchmark prices, if agreed, will be phased in for new students from the financial year 2005/06. This is likely to benefit the institutions currently locked into lower priced contracts.
- A 5-yearly review at a national level of the framework and associated benchmark prices;
- HEIs prohibited from charging tuition fees directly to students. SHA will pay the HEI at the agreed benchmark price;
- Reasonable notice, as agreed between the parties, for changes to the learning and development, either in terms of the numbers of students commissioned on existing programmes, or in terms of changes to the programmes and the introduction of new programmes;
- The HEI to consult with the Authority on any significant changes to the use of premises for learning and development under this Agreement;
- Recognition that practice placements are the joint responsibility of the HEI, SHA and the Placement Providers;
- Agreement to a shared integrated quality assurance schedule (subject to consultation and testing in prototypes);
- A five-yearly 'strategic review' of the agreement between the SHA and the HEI, informed by long-term developments in the health and social care workforce, changes to the national model agreement, and information from the quality assurance process;

- Agreed Minimum Data Set for information to be provided to SHA by HEIs;
- Agreed procedures and responsibility for insurance/indemnity cover for students on placements.

Provisional benchmark prices

Although benchmark prices have not yet been finalised, the provisional figure for academic year 2005-06 are likely to be as follows:

- Band A (Nursing) £6479;
- Band B (Physiotherapy and Occupational Therapy) £6840;
- Band C (Midwifery) £7450;
- Band D (Podiatry, Speech and Language Therapy, Dietetics) £7866;
- Band E (Radiography) £8196.

We understand that a price for Clinical Psychology is yet to be determined, and that prices for some other subjects have yet to be assimilated into appropriate bands. All prices to exclude Criminal Records Bureau checks, the cost of which will be borne separately by the Department of Health/Strategic Health Authorities.

Applicability

Although the prices proposed are 'national' prices, it is anticipated that there will be scope for local negotiation on particular issues, we understand that there will be standard additions for:

- London weighting – to be applied at rates of 8 per cent for inner London and 5 per cent for outer London, using the same postcodes as HEFCE; based on the postcode of the main nursing/allied health provider's campus;
- part-time student premium – 10 per cent, in line with current HEFCE practice.

It is likely that other non-standard local costs may be negotiated locally, as follows:

- uniforms;
- local arrangements for student travel and for payment of additional accommodation when on placement;
- exceptional building costs arising e.g. from use of listed buildings or specific funding of current mortgages;
- exceptional and significant costs relating to multi-site provision that are outside the HEI's control, or incurred at the request of the Strategic Health Authority;
- exceptional and significant costs relating to students with a disability;
- profession-specific exceptional and significant costs such as podiatry clinics and expensive radiography equipment.

Annex D

Policies and Practices in Germany and the Netherlands

Egbert de Weert - Center for Higher Education Policy Studies (CHEPS), University of Twente, Netherlands

Introduction

In this annex we consider developments in workplace learning in Germany and the Netherlands.

Both cases will be described on the basis of the following questions:

Is there any legislation on workplace learning?

What (if any) policy initiatives are driving developments in workplace learning? Do these initiatives stem from a 'supply side' (such as governments pushing for an ever more highly qualified workforce) or is there a demand side push from employers as well?

Is workplace learning seen primarily as being for 'students' to make the move into the labour market proper); or rather for workers/employees already in the workplace to enable them to enhance their knowledge and skills?

What currently inhibits or enables the continuing development of these types of learning?

Germany

Universities and Fachhochschulen (polytechnics) are the two main sectors of the German higher education system. In 2004 there were about 2 million students, 73 per cent in universities (including colleges of art) and 26 per cent in Fachhochschulen. There are also the Berufsakademien (professional academies) which fall under a separate law, but offer education at the tertiary level, with students having already completed vocational (secondary) education. Since their foundation in 1975 the Berufsakademien have applied the traditional principle of dual training to the level of higher education, alternating theoretical studies at the Akademie and practical training on-the-job (in companies, including public organisations) throughout the curriculum.

This so-called system of dual learning has a long tradition in Germany and arouses much interest internationally, not least because of the low financial burden on the state, the high commitment from employers, and the relatively low rate of youth unemployment compared to other countries (BIBB, 2004). In the last few years there have been debates in Germany about the extent to which this practice could serve as a model for workplace learning in Fachhochschulen and universities as well. In addition to the 'classical' higher education courses with the mandatory practical periods (internships or stages), more dual programmes are now emerging with substantive practical components. The function of these programmes is not merely to utilize this work-based learning for future employment, but also to integrate it in the curriculum.

Basic features of the German dual model

The dual system has its roots in the training of craftsmen, but gradually it has evolved to a broader educational area. The training capacities are determined by the companies that hire the apprentices, employ them on a special apprentice status, and provide financial support. The basic idea is that apprentices learn and work during a period of two to three-and-a-half years. Students generally spend three or four days at the workplace to work and to receive on-the-job training. The

remainder of the week they spend at a part-time vocational school (Berufsschule), where they receive classroom instruction in the skills needed for their respective occupation as well as continuing instruction in general academic subjects. Enrolment in vocational schools is mandatory during the whole training period.

The dual system was legalised through the Vocational Education Act of 1969: under this legislation, the student/trainee and the employer are required to enter into a legally binding training contract at the start of the apprenticeship. This contract spells out the student's training programme, determines the pay rates and other employment issues. The federal government has primary responsibility to co-ordinate the dual system. The policy-making body at the federal level is the Federal Institute of Vocational Training (Bundesinstitut für Berufsbildung: BIBB).

The dual system has a mass base, involving the majority of a given age group. This is an essential point, with regard to the value and esteem of vocational pathways in Germany. They are not the pathways of last resort for the 'worst' students, as is the case for apprenticeship schemes in some other countries, but the normal path for young people of very different levels preparing to enter a whole range of occupations.

In considering the German dual system from an international perspective, some key features can be distinguished which make it rather unique compared to workplace learning practices in other countries. These features concern (1) the high level of standardisation and certification, (2) the workplace-relatedness of training and education, and (3) the professional identity.

(1) **Standardisation and certification**

One dimension of comparing vocational training models internationally is the extent to which vocational training conforms to the same standards and the extent to which access to jobs is based on training certificates. The German dual system is at one end of this continuum: both the theoretical and practical sides of training are highly standardised and the programme ends with a recognised certificate that serves as a precondition for entry into specific jobs and occupations (Blossfeld & Stockmann, 1999). This is in sharp contrast to other countries (mainly in the Anglo-Saxon world) where standardised on-the-job training with a recognised final certificate is not very common.

At the institutional level, the system depends on the co-ordinating body (Federal Institute of Vocational Training and Education: BIBB) which helps to develop a formal definition of the recognised 'training occupations' in collaboration with the social partners. The length and content of the training are co-ordinated at the federal level, while the detailed organisation is left largely to the companies. Training contracts are only possible for occupations which are recognised and approved, and the training ordinances contain the precise content of training programmes as well as the examination requirements. It is envisaged that apprentices acquire a more or less standardised set of competencies and skills, and successful completion leads to the award of a certificate relevant to a particular job. Essentially, the dual system leads to closed occupation-specific labour markets, a feature which has resulted in some reservations and criticisms (as indicated below).

(2) **Workplace-relatedness of education**

While in the dual system the role of schools and teachers may seem comparatively minor, it must be stressed that training as a whole has an educational objective that goes beyond the specific training for a given work situation or kind of job. This objective is assigned to the company as well as to the school. The school is first of all charged to provide a broad general initial education and the necessary knowledge and skills that are required for any work in a qualified job. The school is supposed to deliver basic vocational training, expand the apprentice's knowledge and general culture and to create a solid base for continuing education and training later on. Roughly 60 per cent of the classroom

curriculum is occupation-specific and 40 per cent consists of general academic courses such as German, mathematics, social science, economics and a foreign language.

(3) **Creating a professional identity**

In the dual system, students are motivated to perform well because it is the only gateway into most skilled occupations. For a job officially designated as an apprenticed position, federal law requires employers to hire only those workers with dual system certification for that position. Students must participate in the dual system if they wish to enter an 'apprenticed' occupation. Compared to other countries, there are in Germany more jobs restricted to those who are properly qualified, with a certificate for the right skilled-worker status. It reinforces a professional pride in proficiencies of workers or as Wolf puts it, 'acquiring the identity associated with having a Beruf, a vocation, is an important component of becoming an adult' (Wolf, 2002; see also Teichler, 1999). At the same time, since the dual system is an employer's only source for skilled workers, there is a good chance that a student's apprenticeship will result in a permanent job.

Having outlined the basic features of the dual system, it should be said that it is not without its critics. The main criticism is that the dual system leads to closed occupation-specific markets. The major problem is the very large number of different training occupations, which are too narrow and mutually exclusive. This tends to lead to inflexibility and a lack of occupational mobility later on in working life. The vocational principle underlying the dual system is particularly questioned because this insufficiently accounts for the fluid and changing labour market needs (for a detailed critique see Euler, 1998). Over time the BIBB has made important reductions in the number of job titles and corresponding examination requirements for each title, and the education for similar jobs is much broader and comprehensive today than say 20 years ago. Nevertheless, the company-specific character and narrowness as opposed to focusing on more general skills remains a major concern. Current reforms are facing the challenge to keep the beneficial aspects of the system while making it structurally more flexible in the future.

Drivers for the development of dual education

Although the development of dual education is the responsibility of the government, it does not require employers to participate in the apprenticeship system. The dual system is embedded in a setting of close co-operation between government and the social partners: the employer associations on the one hand, and the unions and the company-based works councils on the other. This co-operation entails permanent processes of deliberation and negotiation in order to accommodate the various views and demands. The Chambers of Commerce and Industry (as the employer associations) have a crucial role with regard to dual education in their member companies.

The costs of the in-company training are borne by the companies. Although companies are eligible for tax deductions when they participate in vocational training programmes, there are other important incentives. Employers know that the employees they train through apprenticeships will have the skills needed for specific occupations and a strong work ethic to meet the standards of the system. Firms are able to rely on the training guidelines and examinations (resources they pay for through a federal training tax) and co-ordinated course work in vocational schools. In addition, even if they do not participate, employers are required by law to hire only workers with certificates of completion for those jobs officially designated as apprenticed positions.

The engagement of employers is demonstrated by the following aspects:

- the number of apprentices is determined by the employers depending on the training places provided, and not by the offers made by vocational schools
- the proportion of time covered by in-company training amounts to three or four days per week, so young people spend most of their training time in the workplace
- the training directives developed for in-company training by the social partners with the

co-operation of the BIBB, and passed by the Federal Minister, largely pre-define the vocational-technical part of the curricula for vocational schools

- the certificates of the final examination are granted by the chambers of commerce and industry
- in the eyes of the trainees, the company has, in most cases, a higher priority than the vocational school. The students have a training contract with the company and, in the majority of cases, they can expect to be offered a job later by that company.

The driving forces behind dual education stem from a combination of actors, of which the employers as a whole constitute a major one, together with the federal government, the states, and the unions.

In higher education the driving forces behind discussions to transfer aspects of the dual model to Fachhochschulen and universities stem more from (regional) institutional initiatives and employer demands than from centrally regulated arrangements. The German Science Council (Wissenschaftsrat, 1996) in particular has stressed that the combination of learning and working at tertiary level will be of increasing significance, and that dual study programmes should provide an alternative form of higher education programmes rather than be a general model for reform.

Fachhochschulen (polytechnics)

In the last decade Fachhochschulen have continued to develop study programmes which combine learning and working. There are clear parallels with the dual vocational education, hence these study programmes are also labelled as 'dual learning'. Although practice-oriented education including internships has always been a strong point of Fachhochschulen, the development of study programmes which combine working and learning would underline the vocationally oriented profile of this higher education sector.

Normally these dual programmes exist alongside the regular programmes offered by the institution. The special practice-oriented qualification gained by this kind of training is likely to make polytechnics more attractive to a wider group of students.

University sector

Dual training programmes as described above do not exist in universities, at least no sources were found to date. However, internships (stages) are more common in university education and most study programmes require a period of practical training. The duration and patterns of the practical training periods are determined by the individual universities and vary widely between programmes.

There are some dual programmes at the masters and PhD level (e.g. in finance and management), but these occur on a limited scale.

Enabling and inhibiting factors

The dual system of vocational training is well-institutionalised in the German educational structure at tertiary and higher education level.

An 'enabling' factor of dual education in Fachhochschulen concerns the sometimes competitive relationship between Fachhochschulen and Berufsakademien. Fachhochschulen provide study programmes (incorporating practical education) that are at higher education level, but the Berufsakademien also claim to provide education at the tertiary level. However, the diplomas of the latter are not generally recognised, which causes problems such as doubts regarding the value of the education and difficulties in switching to universities or Fachhochschulen. Individual states are less prepared to change the regulations in this field, presumably because they fear competition with the

Fachhochschulen. However, a number of states have agreed not to discriminate between graduates of the two types of institutions. To illustrate this competition, the car manufacturer BMW used to co-operate with the Berufsakademien until it changed to a Fachhochschule. Although the Berufsakademie programmes take three years (one to two years shorter than the Fachhochschule programmes) the fact that they are not recognised caused BMW to make the switch. BMW-graduates have a nationally and internationally recognised diploma even though most of them find work at the car manufacturer.

The employers' perspective

Although the dual system is widely accepted by employers, who continue to attach much value to it, there are some criticisms as well. Most of these are related to employers' financial obligations and the fact that costs and benefits do not balance out. The complaints can be summarised as follows:

- During the last decade there has been a tendency to take up further study after completion of a dual programme. The consequences are not only that the age of higher education graduates increases but also that companies complain that their employees, in which they have invested, do not stay but leave for further education.
- In some regions it is not easy for enterprises to keep the students in the region. More attractive regions or companies might attract potential employees. For this reason many businesses are interested to bind students early to the company and optimise and stabilise their personnel policy.
- Except for some private institutions, most parallel and consecutive study programmes do not charge tuition fees. Students normally receive scholarships from the participating companies which cover a large part of the total costs. Nowadays companies have to pay their apprentices during the time they spend at the Fachhochschulen as well. This has caused many co-operating firms to withdraw from the programme.
- The number of apprenticeship places offered by companies is dependent on economic fluctuations as well as on regional and structural factors. Statistics show how a decline of trainee positions corresponds to a downward economic trend.
- In principle there is a belief that participation of employers is beneficial to all, by sharing the costs of training as risk investments on the basis that others will do so as well. In practice, however, there appears an unequal distribution of costs and benefits of vocational training, and if employers quit the system, the number of apprenticeship places is reduced.

German companies are regularly surveyed about the extent to which they consider on-the-job training in connection with a higher education course as meaningful, and under what conditions it is beneficial for them to participate in dual programmes offered by Fachhochschulen. One of the recent reviews (Mucke and Schwiedrzik, 2003), concluded that further expansion of dual programmes in higher education will only be possible on a modest scale.

Mobility throughout the educational system

A major problem of the dual system is its mutually exclusive character, which tends to lead to inflexibility and limited possibilities for occupational mobility later on in working life. Although the dual system has continuously been modernised by incorporating generic and transferable skills in order to increase the functional flexibility on the labour market, this has not solved all the problems. More importantly, however, is the fact that upward mobility is rather limited. In Germany formal higher education qualifications have become an increasingly important factor for access to high-level jobs, and have consequently reduced the career opportunities of those who are in vocational education, a trend which is also visible in several other countries. Higher education expansion has led to a displacement of formally less qualified workers by higher qualified workers, a trend which threatens to lead to a dead-end in career mobility (see Blossfeld and Stockmann, 1999; Brauns et al, 1999; Hillmert, 2002). For this reason, young people now find that the vocational

training trajectory on its own is no longer an attractive proposition, and many now opt for higher educational paths in order to increase their career opportunities in the long run.

One option to counterbalance this movement and to make dual education more attractive is to facilitate the permeability and the transferability between the various educational pathways: between vocational and general education on the secondary level, and between vocational education and higher education.

The development of dual education in Fachhochschulen can be considered in the context of making the system more permeable. It appears that a growing number of first-year students are entering higher education with vocational education and/or work experience. The regular academic study programmes do not meet the practical and financial expectations of this group of students. However, study programmes which offer a combination of working and learning could fulfil their expectations. At the same time a qualification-gap has been experienced between the level of vocational education and the level of Fachhochschule education, which might be filled by study programmes at Fachhochschule level that combine working and learning. Dual education is now developing to meet the needs of new student groups entering higher education, including workers already in the workplace seeking to upgrade their knowledge and skills, and students coming directly from the vocational educational streams.

This means that in Germany dual education is increasingly becoming a bridge between initial vocational education and training and continuing education, and serves to extend and use opportunities for second-chance education in the context of a strategy for lifelong learning (Bund-Länder Commission, 2004).

The Netherlands

Dutch higher education consists of two sectors, the university sector and the sector for higher vocational education (Hoger Beroepsonderwijs, or HBO). The HBO sector is an important part of higher education, with about 50 institutions providing a wide range of professionally oriented courses, with a standard period of study lasting four years leading to the bachelor degree. At present there are about 514,000 students in higher education, of which 65 per cent are in HBOs and 35 per cent in universities. In both sectors, the majority of students are full-time.

The binary structure is important to understand the place and significance of workplace learning in Dutch higher education. In the HBO sector students do internships as a mandatory part of their programme in their specific professional areas. For university students internships can be either mandatory or optionally, depending on the type of the programme. Since the implementation of the bachelor-master structure, most universities have taken internships out of the three-year bachelor programme and postponed them to the master phase. Apart from internships, other forms exist such as in-service training (teachers, nurses), and training opportunities for professional specialists (e.g. medical professions, accountancy).

Towards a legal framework

Workplace learning has a long tradition in Dutch higher education, and since the early 1990s various policies have sought to bring higher education closer to the world of work, and hence enhance the employability of graduates.

Gradually the overarching term 'dual education' has been adopted to describe higher education programmes in which the HE institution and the employer jointly determine the overall curriculum.

Since 1998 dual education has been recognised as a distinctive form in the Higher Education Law (in addition to full-time and part-time programmes). The law describes a dual programme as

when classes are alternated with practical periods which are related to these courses during one or more periods. The law prescribes that the practical period takes place on the basis of a contractual agreement between the higher education provider, the employment organisation, and the student. This agreement identifies the rights and obligations of all parties and defines the learning objectives throughout the learning path concerned. In particular it includes regulations regarding:

- the duration of the practical period;
- the supervision provided for the student;
- what students are supposed to achieve during the practical period, the quality of that experience, and how quality assessment takes place.

Another important characteristic of dual education is the requirement that the student has a contractual employment relationship with the employer. Wages should not exceed 130 per cent of the legal minimum wage, with a total work period of at least six months or several periods of a minimum of four months.

Given this legal framework it is important to emphasise that dual education is more than 'just' a combination of learning and having any kind of a job: it is also different from the practice of internships or other forms of periods of practical activity. It requires a clear institutional structure in which the responsibilities of all parties are laid down. From the employment sector, partners can be an individual firm, a consortium of firms and sometimes intermediate organisations like employment agencies, or collective associations (increasingly in SMEs).

Drivers for the development of dual education

As noted above, moves towards a closer integration of higher education and the world of work have been evident since the 1990s.

In the HBO sector particularly, dual education developed at a time when there was a huge demand for higher qualified people. Recruiting dual students was an attractive opportunity for many companies to hire high level personnel at relatively low cost.

Furthermore, HBO institutions consider dual programmes are an important part of their mission in increasing the flexibility of higher education courses.

At the same time student demand for dual education seems to have shifted from students for whom it coincides with initial education (for the standard 19-24 age group) towards a broader group of 'students' for whom dual education is an attractive option in the context of lifelong learning. This latter development is becoming more apparent in recent policy documents (by the Ministry and the Dutch employers association).

Although the basic idea of dual education applies to both HBO and universities, the context differs and each sector has developed in different directions. These differences are important when considering what inhibits or enables the development of dual education in the Netherlands.

HBO sector (higher vocational education sector)

A number of different models of dual education have emerged in the last few years. The main types are (Daale, 2000):

- Co-operative education. Following a full-time first year at the institution, students alternate three periods in the workplace and six periods at the institution. Each period consist of a half year. The aim of the working period is to test the acquired competencies and to reflect on individual performances. The emphasis is on the student's

independence, the learning and working behaviour as well as the personal development throughout the stages. This concept allows for fine-tuning with the needs of the workplace.

- **Concurrency-education.** This is especially for employees in particular labour market segments which enable them to attain a higher education degree. This form applies to educational programmes which start from the competencies which have been attained in the workplace or will be attained. It is particularly suited for educational programmes with a clear qualification structure whereby functional levels in the work correspond with subsequent stages in the course. Competencies attained at work can be used to achieve a shorter trajectory within the standard degree course. This requires much effort in assessments and intakes on the basis of which a translation takes place to exemption from parts of the course.
- **Trajectory route for small and medium-sized firms (so-called MKB route).** In their fourth and last year of study students alternate working and learning in SMEs. An important impetus of this form is the employment needs of SMEs for higher qualified people, a major characteristic of which is the multi-functional employability of the employees. Students are enabled to have specific work tasks and study paths (optional space in the curriculum) in order to achieve good linkages between the firm's needs and those of the student.
- **The 'Gilde (Guild) HBO'.** This concept involves combining working and learning throughout the four-year programme. From the first year onwards, students spend three days at the workplace and two days at the institution. This type of programme aims to achieve an optimal synergy between working and learning which enables students 'to act in unpredictable professional practices adequately'. This is achieved through 'action learning' (Prummel, 2000). Students have to carry out assignments around a particular theme and to work these out at their respective workplaces. They then exchange their experiences and results with their fellow students. This prevents there being a narrow focus to the programme as students not only reflect on their own working situation, but also acquire insights into other workplace contexts. A feature of this form is to translate all educational activities in terms of competencies. All learning objectives are distributed over the four years and programmed as much as possible within the working component, rather than being achieved on a pre-set, sequential basis. The 'Gilde HBO' is an example of what can be called a structured work experience which goes beyond the particular work-based environment.

The target groups for these main types differ, as follows:

- individuals who do not opt for a full-time higher education course and want to combine their studies with work;
- organisations who want to increase the educational level of a substantial part of their employees to a higher education level;
- individuals who otherwise would not opt for a higher education course at all.

The last group is especially interesting in relation to subject areas where there are shortages in the labour market (such as in the technical fields). For example, in the field of life sciences and chemistry as well as in civil and chemical engineering, programmes have started (in collaboration with the industry, for example with the Dutch Association for the Chemical Industry, VNCI) which attract a specific group of students - mainly secondary level school leavers who are more interested in earning money in the short run than staying in higher education for a long period. They are offered a learning path in combination with a paid job in a particular area of employment, rather than taking on a variety of occasional jobs. This is an interesting

development in that such programmes are linked with entry qualifications achieved in the vocational streams at the secondary level.

A recent development in the HBO sector is the establishment of the Associate Degree (AD) - a two-year short-cycle higher education programme embedded in a labour market relevant profile. This creates more flexibility within vocational education, particularly for people already in the workplace, for whom a two-year programme (which they can take on a part-time basis or in a dual form) should be more attractive than a four-year bachelor degree.

An initiative arising from the MKB route is the so-called LEV'L project initiated by a number of HBO institutions to implement demand-led dual education. The basic idea is to enable students to develop their own learning process through the use of vouchers. This learning process is further elaborated in collaboration with the institution and the company. Initial evaluations show that students are enthusiastic about this demand-led approach: they have more control of their own learning process. The effect is a more motivated attitude and better preparation to function in a dynamic professional practice (De Weerd & Vd Velde, 2004).

University sector

Dual education developments in the university sector date from 1998, but from the very beginning critics have argued that combining learning and work is not reconcilable with a university programme. Universities and politicians considered that the involvement of employment organisations in curriculum matters might violate the academic character, the academic autonomy and the academic values which are seen as synonymous with university study. The Parliament accepted the experimental character of dual education on condition that the academic character and the breadth of the programme should be maintained (no narrow vocationalism), and that dual programmes should meet the same quality standards as 'regular' courses.

About 30 dual programmes were developed with special government funds: these were evaluated in 2001 by the Inspectorate for Education. The Inspectorate pointed out that universities had not been able to develop a new curriculum in such a short time and had taken the safer route by considering the time at the workplace as an 'add-on' to the full-time programme, with consequently a longer total study duration compared to the standard programme for non-dual students. The major criticism of the Inspectorate was that the workplace experiences did not constitute an integrated part of the academic curriculum (Inspectorate, 2001). Another finding was that the quality of the workplace learning was not yet sufficiently assured: criteria for the workplace and the supervision of WPL were often lacking or were not explicitly determined.

Despite these criticisms, the Ministry continues to support the further conceptualisation of dual education as a regular learning pathway in the university sector, and the further enhancement of relevant expertise to assure the quality of provision. In particular, it subsidises the national Platform for Dual Academic Education (LODA), and in 2001 dual academic education as a regular learning path in university was included in the Higher Education Law.

Another important 'driver' is the employers' association which advocates dual university programmes particularly at the postgraduate phase (masters and doctorate). In such programmes, it is not the aim to achieve an occupational link (as it is in HBO programmes): rather, the aim is to connect disciplinary competencies with general competencies and their application in practical contexts.

Currently most dual university programmes are at postgraduate level. About 30 masters programmes have been designed to alternate periods of learning and working. At doctoral level several research institutes are collaborating with industry in setting up doctoral training programmes, mainly in the engineering sciences. Employees remain within their enterprise and

apply their knowledge in the workplace environment while at the same time integrating this with work on their dissertation.

Enabling and inhibiting factors

There are various factors that enable or inhibit the further development of dual education in Dutch higher education: funding issues, quality assessment, practical issues, and the development of competency-based learning. These will be discussed in turn.

(1) Funding issues

Funding issues relate to the basic funding from government and the funding that employers are willing to invest in dual education.

As far as basic funding is concerned, there appear to be differences between the costs of dual education and those of regular programmes. The costs of dual education appear to be higher, due to the fact that these are more tailor-made, jointly-designed programmes, organised for a smaller student population which requires intensive supervision and coaching. Up until now the government has allocated specific means to support dual education, and HE institutions have had the possibility of charging higher tuition fees (though institutions have chosen not to do so). Currently the Ministry is developing a new funding structure, based on the provision of learning entitlements which can be used by students in a flexible way. A new student financial aid system is also under way which reflects the differences in costs between different types of programme. It is expected that the new funding structure will contribute to a further expansion of dual higher education.

In principle the Ministry considers that employers should not contribute directly to the costs of dual education when it forms part of students' initial education. The Dutch Employers Association VNO-NCW shares this view.

But there are fiscal arrangements available to employers who hire a 'dual education' student (through a reduction of income tax). This arrangement has been in place for a long time for HBO students and has recently been extended to cover university students on dual programmes. However, employers have made very little use of this arrangement, partly because they are not aware of it, and partly because the financial benefits do not cover the administrative costs involved.

Related to the issue of funding is the current contractual requirement that workplace learning students have to have the status of an employee. The national employers association questions this requirement and argues that an arrangement which regulates an internship would better suit a dual academic course. Such an arrangement would also meet the specific conditions placed on the workplace and supervision (Renique, 2005).

(2) Quality

Quality assurance is an important factor. One reason why universities treat workplace learning as an add-on, rather than as an integral part of the curriculum, stems from the scepticism in university circles regarding dual education, and the extent to which such education can meet appropriate quality standards (and hence be designated as an academic course). Important aspects of quality component are how to support learning in the workplace, how to stimulate learning derived from workplace activities, and how to assess and evaluate workplace learning outcomes. The Ministry (and the relevant advisory committee on dual education) consider that quality assurance processes for dual education should take into account the specific characteristics of dual courses rather than following the standard procedures and criteria derived from the regular courses.

In HBOs the issue of quality takes place in a different context, due to the fact that both dual and regular programmes are closely connected with the professional profiles in the different occupational areas.

For the Associate Degree an important 'enabler' is the recognition of different levels of professional practice in the context of the European Framework for Qualifications in the European Education Area. The European working group has adopted descriptors for the 'Higher education Short Cycle' (which includes the Associate Degree) within a bachelor degree.

(3) **Issues emanating from the workplace**

In the current economic climate, companies are less inclined to invest in dual learning paths and are reluctant to employ students, even if they have to pay a relatively low salary. In particular, the (formal) requirement of an employment contract may be an inhibiting factor for companies to recruit students on a dual programme. This is reinforced by the fact that institutions cannot select their students for dual programmes, which is at odds with the normal selection procedures in companies. These formal procedures and the employment status inhibit the availability of workplace learning environments.

Practical problems arise from the availability of supervisors at the workplace, the quality and sequence of the work tasks, and the fact that after a while the student leaves for a study period at the institution. There is an underlying tension between what the student is doing in the context of learning and what the student, as an employee, is doing in terms of being a productive worker for the organisation.

SMEs encounter specific problems in terms of providing adequate supervision (for higher level education) and ensuring exposure to an adequate range of workplace activities within the company. SMEs are now collaborating more to provide dual tailor-made trajectories on a joint basis (MKB-Nederland, 2004).

(4) **The search for competencies and lifelong learning.**

In Dutch higher education there is a general tendency to formulate learning outcomes in terms of competencies, defining what the student is expected to know and be able to do. The challenge is to develop learning environments in which students are challenged to learn in an active way and define competencies that enable them to function adequately within a particular context. Further developments in dual education raise questions about what competencies can (and cannot) be learned in the workplace, and what areas need further reflective practice.

In line with this competency-based approach, dual education is increasingly placed in the context of lifelong learning. Whereas in its early development dual education was primarily for students who had yet to move into the labour market proper, there is now a clear shift towards workers already in the workplace seeking to develop their professional competencies. This can be seen both for those who completed vocational training at the secondary level and who now want to do some higher education course (for example the short-cycle Associate Degree), and in the strong emphasis on university dual education at the masters level. Using dual education in this way presupposes an assessment of the competencies acquired elsewhere, and translating these into academic terms. Competencies which include workplace learning are increasingly being recognised.

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Annex E

List of Organisations Interviewed

Anglia Ruskin University
University of Bath
University of Birmingham
Brunel University
University of Chester
King's College, London
University of Leeds
Leeds Metropolitan University
Manchester Metropolitan University
Middlesex University
Open University
University of Warwick

Association of Colleges
Department for Education and Skills
Foundation Degree Forward
Higher Education Academy, Work Placements Organisation Forum
Ufi/ Learning through Work
University Vocational Awards Council (UVAC)

British Chambers of Commerce
CITB-Construction Skills (Sector Skills Council for construction industry)
e-skills UK (Sector Skills Council for IT and telecoms industries)
SEMTA (Sector Skills Council for engineering and science industries)
Skillset (Sector Skills Council for TV, broadcasting and media industries)

Annex F

Members of Steering Group and Working Groups

Members:

Mr Dick Coldwell (Chair)	Board Member, HEFCE
Dr Liz Beaty	HEFCE
Mr John Berkeley	University of Warwick
Mr Joe Eason	Management Board, Foundation Degree Forward
Mr Malcolm Gillespie	Learning and Skills Council, South West
Mr Walter Greaves	Business and Community Committee, HEFCE
Ms Gillian Hayes	Quality Assurance Agency
Prof Derek Longhurst	Director, Foundation Degree Forward
Mr John Mumford	BP Oil UK
Dr Mike Prosser	Higher Education Academy
Dr Lis Smith	North West Development Agency
Ms Wendy Stubbs	Quality Assurance Agency
Prof Richard Taylor	University of Cambridge
Prof Sir David Watson	Institute of Education, University of London (formerly of Brighton University)

By Invitation:

Ms Val Butcher	Higher Education Academy
Ms Margaret Dane	Association of Graduate Careers Advisory Services
Ms Pauline Gibson	Sector Skills Development Agency
Ms Vicky Gill	Chartered Institute of Personnel and Development
Mr Martin Haywood	University of Sunderland
Mr Neil Higginson	Business West
Ms Kate Lester	National Union Students
Mr Bob Lyall	BMW Group
Mr Norman Mackel	Federation of Small Businesses
Mr Ian Murray	Trades Union Congress
Mr Julian Nicholds	National Union of Students
Ms Liz Rhodes	National Council for Work Experience
Mr Jeff Skinner	University College London
Ms Liz Smith	Trades Union Congress
Mr David Stephen	Learning and Skills Council
Ms Cath Walsh	Manchester Enterprises Limited
Mr Rob Ward	Centre for Recording Achievement
Mr Paul Warner	Association of Learning Providers
Ms Jo Wiggans	Aimhigher Partnerships
Ms Gill Wilson	Careers Research Advisory Centre

Annex G

List of Centres for Knowledge Exchange funded under HEIF 2

Institution	Name of Knowledge Exchange
University of Brighton - lead HEI in collaboration with: University of Sussex	Brighton and Sussex Community Knowledge Exchange
Brunel University - lead HEI in collaboration with: Kingston University Royal Holloway, University of London St George's Hospital Medical School Roehampton University Thames Valley University University of Westminster	WestFocus
University of Cambridge - lead HEI in collaboration with: Anglia Ruskin University Cranfield University University of East Anglia University of Essex University of Hertfordshire University of Luton Norwich School of Art & Design Open University Writtle College	i10
University of Central England in Birmingham - lead HEI in collaboration with: Aston University University of Birmingham Birmingham College of Food, Tourism & Creative Studies Coventry University Harper Adams University College Keele University Staffordshire University University of Warwick University of Wolverhampton University of Worcester	Contact The Knowledge Exchange
University of Central Lancashire - lead HEI in collaboration with: University of Portsmouth University of Salford Queen Mary, University of London Royal Veterinary College	Crime Solutions

Institution	Name of Knowledge Exchange
De Montfort University - lead HEI in collaboration with: University of Derby University of Lincoln Nottingham Trent University	East Midlands NTI Knowledge Exchange
University of East London - lead HEI in collaboration with: Goldsmiths College, University of London University of Greenwich London Metropolitan University Queen Mary, University of London Ravensbourne College of Design and Communication Trinity Laban	Knowledge East
Harper Adams University College - lead HEI in collaboration with: University of Birmingham Bournemouth University University of Central Lancashire University of Gloucestershire University of Hull Keele University University of Newcastle upon Tyne University of Reading Royal Agricultural College University of Warwick University of the West of England, Bristol University of Worcester Writtle College	National Rural Knowledge Exchange
University of Hertfordshire - lead HEI in collaboration with: Anglia Ruskin University University of East Anglia Norwich School of Art & Design	Film and Digital Media Knowledge Exchange
University of Huddersfield - lead HEI in collaboration with: University of Bradford University of Leeds Leeds Metropolitan University	West Yorkshire Knowledge Exchange
University of Hull	Business and Community Knowledge Exchange
Liverpool John Moores University - lead HEI in collaboration with: University of Liverpool Liverpool Hope University	Business Bridge

Institution	Name of Knowledge Exchange
University of the Arts London (formerly London Institute) - lead HEI in collaboration with: Goldsmiths College, University of London London Metropolitan University Royal College of Art	Knowledge Exchange for the Creative Industries in London
University of Luton	The M1 Knowledge Exchange
Nottingham Trent University - lead HEI in collaboration with: University of Leicester University of Nottingham	The BioScience Knowledge Exchange for the East Midlands
Oxford Brookes University - lead HEI in collaboration with: Brunel University Cranfield University University of Hertfordshire	Motorsports Knowledge Exchange
University of Portsmouth - lead HEI in collaboration with: University of Brighton Buckinghamshire Chilterns University College	South East Knowledge Exchange for Product Development
University of Salford - lead HEI in collaboration with: University of Central Lancashire Leeds Metropolitan University London South Bank University University of the West of England, Bristol University of Wolverhampton	The Construction Knowledge Exchange
Sheffield Hallam University - lead HEI in collaboration with: University of Sheffield	software Factory
University of Sunderland - lead HEI in collaboration with: University of Durham University of Teesside	The Global Automotive Technology Exchange
University of Teesside - lead HEI in collaboration with: University of Sunderland	The Digital Knowledge Exchange
University of the West of England, Bristol - lead HEI in collaboration with: University of Bath Bath Spa University University of Bristol University of Gloucestershire Royal Agricultural College	Knowledge West

Annex H

Higher Education Accreditation of In-House Continuing Professional Development

Positive and negative aspects of external accreditation of in-house continuing professional development

Feature	Positive	Negative
Educational Philosophy/epistemology and policy	Willing to acknowledge that high level (HE level) learning takes place outside the university	High level (status) knowledge is only generated by the university
Partnership working	Equal partnership valuing knowledge and expertise not only of the University but also of the external partner organisation(s)	University as the dominant partner, in extreme cases external partner seen as provider of fees only
Relationship to university programmes	Flexible/negotiated programmes which can incorporate accredited external activity as part of customisation to meet the needs of individuals and their organisations e.g. Work-based Studies framework at Middlesex University	Predetermined university programmes with little or no flexibility which allow little opportunity for progression/advanced standing unless the external accredited course has been designed for this purpose- i.e. customised to the needs of the university
Assessment of participants undertaking the accredited activity	Assessment should reinforce the learning outcomes of the programme which are valued by the client/participant. University expertise focuses on developing assessment fit for purpose which meets client/participant needs as well as university requirements	Assessment is a university imposition which distracts from and may even detract from the "business value" of the accredited course
Formal university accreditation procedures	Established process which has internal and external credibility: rigour and responsiveness. Regulatory structure approved by Academic Board. Appropriate agreements/procedures for award of credit to individuals completing accredited activity	No procedures – open to individual whim/academic authority unclear Over regularised, unresponsive and possibly perceived as irrelevant
Academic credit	Able to quantify amount and level of demonstrable learning achievement. Use of general credit allows maximum flexibility to recognise the full value of the learning achievement by reference to general rather than university course-specific criteria	No credit system: limits recognition entirely to university predetermined course units. Specific credit allows more flexibility but still limited by specific predetermined outcomes at the level of unit or programme.
Staff development	Need university staff who can act as advisers or assessors and as accreditation board members, chair, secretary and external examiners. Development of staff external to the university is likely to be needed in respect of assessment of individuals taking the accredited activity	Lack of staff development likely to lead to lack of confidence and credibility internally and externally

Administrative infrastructure	Administrative processes and personnel for the initial accreditation and for the subsequent operationalising of the accredited activity	No specialised procedures or dedicated personnel likely to lead to inefficient process
Resources	Accreditation is time consuming and the initial accreditation activity and subsequent ongoing monitoring needs to be resourced. It is a service which universities can/should charge for in order to provide for resources so that it can be done on a professional basis. An agreed scale of university charges for services, accreditation contracts and ongoing memorandum of co-operation identifying ongoing costs facilitates this	No charges: likely to be dependent upon goodwill and free time. Possibly a drain upon university resources. No fixed scale is likely to lead to wide variation across a university, and potential client confusion
Marketing/publicity	Accreditation has the potential to be used as a strategic tool by universities to develop partnerships with other learning providers (e.g. employers, and private training and educational providers)	External organisations often have limited expectations (often based upon experience) of what universities can provide

Source: Personal communication with Professor J Garnett, Director of Centre for Excellence in Teaching and Learning in Work-Based Learning, Middlesex University.

Annex I

Funding Workplace Learning

Bridget Josselyn and Nick Ratcliffe - KPMG

1 Introduction

1.1 Background

This report concerns the funding of workplace learning in higher education. In March 2005, HEFCE engaged the Centre for Higher Education Research and Information (CHERI) and KPMG to advise on a strategy for workplace learning in higher education in England.

The first stage of their work resulted in an interim report which was presented to the project steering group in July 2005.

In the second stage, the project team engaged with a wider group of stakeholders from the HE sector (including representatives of employers, learners and HE providers) to discuss strategies which might encourage the development and delivery of workplace learning and any barriers which might exist to such development and delivery.

From discussions with stakeholders, it became apparent that funding for workplace learning was a key issue.

No research has been done as part of this project into the increased costs associated with different types of workplace learning. As a result the suggestions below do not reflect any detailed analysis of any additional costs involved with providing workplace learning.

1.2 CHERI/KPMG report on workplace learning strategy

The outcome of the second stage of the project was reported to the project steering group at a meeting on 18 November 2005. The project team presented a draft report, setting out their conclusions.

Officers from HEFCE welcomed that report, but also asked to see a more detailed technical report on issues around the funding of workplace learning. These include the issue of so called 'closed courses' and the metrics of funding workplace learning. These topics were the subject of specific work by KPMG during the second stage of the project.

2 Metrics and funding allocations

HEFCE currently supports a wide range of workplace learning within higher education. Some of this provision is likely to be making a greater contribution than others to achievement of the Government's skills strategy.

HEFCE is currently reviewing its teaching funding method and consulting on proposals for changes to the way that higher education teaching is funded (HEFCE 2005/41). That document proposed a new funding method based on three principles, as shown in Table 1.

Table 1: Proposed shape of new funding method

Core teaching funding method – cost-informed block grant allocated against two principles		Special funding
Principle A: Tariff to reflect volume and subject	Principle B: Targeted allocations that address strategic aims of the funding method	Principle: Cost-informed and time-limited investment projects
<ul style="list-style-type: none"> • Base price including sector-wide fee assumption phased in during introduction of variable fees • Multiplied by subject weighting and student load • Potentially based on data from HESA only • Subject to a tolerance band 	<ul style="list-style-type: none"> • Driven by formula • Outside the tolerance band • Uses various data sources as appropriate 	Examples include Centres for Excellence in Teaching and Learning (CETLs) and support for strategically important and vulnerable subjects

In order to support the predictability and sustainability of funding for HE and to give institutions notice of proposed changes, HEFCE does not intend to introduce a new structure until 2007-08. Therefore, in terms of a strategy for supporting and encouraging the provision of workplace learning, it is necessary to consider the short term (2006-07) where funding will be on the basis of the current methodology, and the medium to long term – 2007-08 onwards.

In the short term, as discussed below in section 8.3, HEFCE could use special funding to support increases in the delivery of workplace learning.

In the medium to longer term, assuming the proposals for change to the teaching funding method are implemented, funding for workplace learning could be allocated through Principle B.

2.1 How far should HEFCE use its teaching funding methodology (or other funding methods) to encourage the development and delivery of new workplace learning provision?

Funding for workplace learning (both initial formation and continuing professional development) could help to deliver the Council’s current strategic aim of enhancing excellence in learning and teaching. However, in order to ensure that this would be the case, the allocation of funding would either need to reflect:

- what is currently seen to be excellent practice; or
- the development of excellent provision.

2.1.1 Excellent practice

There is no comprehensive source of data on what is currently excellent practice in the design and the delivery of workplace learning. The parallel study by The KSA Partnership on ‘Workplace learning in the North East’ has highlighted examples of good practice in the region, but there may be others that are of equal (or higher) quality. The KSA study only relates to one of the nine English regions, which was chosen for study because workplace learning issues are particularly evident. Whilst some of these issues will be common to other parts of the country, it would be unwise to use it as a data source for any national funding system, without further research to determine how far the North East is typical of England as a whole.

QAA reviews may also highlight examples of good practice in the delivery of workplace learning, but their findings in this area have not been brought together in one place. In any case, the QAA review cycle is such that even a compilation of all the available evidence on the quality of workplace learning, from their reviews, would not represent an up-to-date picture of excellence in the delivery of workplace learning.

2.1.2 Using special funds to support excellent practice

The advantages and disadvantages of using special funds to support excellent practice in the provision of workplace learning are summarised below.

Advantages:

Transparency Special funding for the development of excellent provision would be transparent (as to how much funding was allocated for this purpose).

Fairness Differences in the funding between institutions would be justifiable in so far as the data set used to inform the allocations was objective and robust.

Efficiency If data were available on the volume of workplace learning, this could form the basis of the allocation of funds.

Disadvantages:

Unpredictability Within a fixed sum, earmarked for the purpose of funding workplace learning, institutions will not be able to predict their share of funding with any accuracy. Their share will depend on the success of other institutions in increasing (or maintaining) the volume of workplace learning that they deliver. An institution will not be in a position to be sure that it will receive the same funding from one year to the next for the same volume of activity.

2.1.3 Using special funds to support the development of excellent provision

There is no available measure of subjects or institutions where there is potential for the development of excellent provision in workplace learning in higher education. It would be possible for HEFCE to use special funding to support projects or activity which will develop excellent provision. It would also be possible to use a measure of the volume of existing workplace learning delivery as the basis for allocating special funds for this purpose.

Advantages:

Transparency Special funding for the development of excellent provision would be transparent (as to how much funding was allocated for this purpose).

Disadvantages:

Unfairness An approach based on a funding formula would have to be based on some measure of the need for development funding, or the potential for development in a particular institution. There is currently no objective indicator of either need or potential for development of excellence in this area.

Unpredictability Funding for the development of excellence in the provision of workplace learning would not be predictable. Within a system for allocating a fixed resource between HE institutions, each institution's share of the available funding would depend on its performance relative to other institutions, which individual institutions would not be in a position to measure or predict.

2.2 Metrics for supporting different types of workplace learning

The recent study by JM Consulting and PA Consulting commissioned by HEFCE on 'The use of costs to inform the funding of teaching' considered the merits of a cost-based approach to funding teaching in HE.

It concluded:

'We do not recommend cost-based approaches to future teaching (T) funding that imply funding based directly on the costs incurred with no qualifications for results delivered, value-for-money, institutional strategies and the inherent circularity whereby costs incurred tend to reflect the funds available. We do however see significant benefits, for HEFCE and for the sector, from more cost-informed approaches in which the actual costs of delivering specific policy objectives are explicitly recognised in the funding model.'

The CHERI/KPMG study of workplace learning would tend to support a similar conclusion. The main study report, and to some extent the parallel report by The KSA Partnership on workplace learning in the North East of England, show how diverse the existing workplace provision in HE is. Anecdotal evidence suggests that a study of the costs of delivering workplace learning would reveal the heterogeneous nature of the existing provision. There are likely to be a wide range of factors affecting the costs of delivery. These cost drivers are likely to include:

- up-front costs for HEIs of negotiating with employers (for example, negotiating employment-based programmes, which may include aspects of assessing prior knowledge and skills of individual employees);
- the length of the course (where this is different from a course leading to the same qualification, delivered without a workplace element);
- the delivery model (e.g. delivery in the workplace, day release, block release);
- the assessment model;
- the extent to which the employer provides facilities or materials for use in delivery of the course.

Any model which attempts to capture or forecast the actual costs of delivery is likely to reflect only some notional average cost, rather than the actual costs involved. There are obvious inherent disadvantages in trying to use actual costs as a basis for funding; leaving aside the burden that such a system would place on institutions in capturing cost data in the first place.

The JM Consulting/PA Consulting report referred to above notes that 'funding is one of the most powerful drivers of institutions' behaviour, but it is useful to remember that funding is not the only policy mechanism available to HEFCE'. It goes on to identify a range of other mechanisms which HEFCE uses to influence institutional behaviour. These include the financial memorandum, peer pressures (through league tables, performance indicators and benchmarks) and good practice advice. Whilst this report concerns the potential use of funding mechanisms to encourage workplace learning, it is important to consider other mechanisms which may be a means to the same end.

In the remainder of this section of the report, we look at the current and possible future options for funding different types of workplace learning. The discussion about potential future funding options below is based on allocating funding to recognise the importance of workplace learning within HEFCE's strategic aims for the HE sector.

2.3 Initial formation: HE-based programme with workplace learning module or longer placement in workplace learning environment

2.3.1 Current funding

If a short project is undertaken as part of an HE qualification which involved a placement in work, for example, as a final year project, HEFCE would not distinguish between that module and other modules on the course in funding terms. That is, if the project were undertaken as part of a degree in chemical engineering, it would be funded at price group B rates.

Until 2004-05 students on sandwich placements were funded at the price group relating to the course they were studying, but were counted as 0.5 FTE, effectively meaning that the institution received half the resource for that year than for the other years on the course. Following the initial consultation on changes to the teaching funding method, the funding of sandwich years was changed to reflect the costs involved in running the placement, rather than teaching the subject studied. All sandwich placements are now funded at price group C and are still counted at 0.5 FTE.

2.3.2 Potential future funding arrangements

The cost of running this kind of provision will vary with the type of structure the institution has in place to deal with it and the relevance to the course being studied. It may be that the student has a part-time job whilst they are studying and they are able to use their experience in that workplace to count towards their studies. Alternatively, it may be that the HEI has the obligation to find a placement opportunity for the student, and the costs of that operation may vary depending on whether a central team finds the placement or it is done by each department.

It would be difficult to measure the costs associated with this kind of placement because of the differing potential arrangements. As indicated within the main report, discussions with institutions have revealed that there is sufficient funding within institutional allocations to cover the cost of this type of workplace learning and so funding should remain the same as currently.

2.4 Initial formation: HE-based programme with alternating sequence of taught modules and short practice in relevant occupational settings

Courses in this category are primarily funded by bodies other than HEFCE, such as the NHS and the TDA. Section 8 of this report considers their funding methods.

2.5 Learner in the workplace: HE-based programme – foundation degrees

2.5.1 Current funding

Foundation degrees (FDs) attract a 10 per cent premium in the HEFCE teaching funding model. This premium was introduced in 2004-05 to reflect the partnership costs involved in running FDs. Some additional funding was provided to institutions that bid for additional FD places in 2001-02 (as part of the prototype scheme) and again in 2004-05 for use in developing FDs. In 2004-05 the annual bidding round for additional student numbers was only open to those institutions wanting to bid for FD places.

2.5.2 Potential future funding arrangements

JM Consulting undertook a study in 2003 on the costs of alternative modes of delivery, part of which related to foundation degrees. It was as a result of this study that HEFCE introduced the 10 per cent premium. However, during the study JM Consulting investigated 22 FDs and there were 20 different models. Since there is no standard model for a FD, there is no standard cost. JM Consulting found that some models were more expensive than others, with some courses costing the same as their respective price group comparators, and others up to 56 per cent more. The study indicated that the increased costs were associated with an increased number of partner bodies, including FECs and employers.

Although the 10 per cent premium currently applied to FDs will encourage institutions to start providing them, it does not reflect a standard additional cost associated with that type of provision. If HEFCE wishes to continue to encourage institutions to run FDs then it should continue to allocate the premium funding. However, if it would rather reflect the costs involved, it could add a question to the survey of interactions between higher education and business and the community, to find out the number of partner bodies involved in the FDs and allocate funding according to that. The extent to which HEIs have supported the introduction of FDs is one indication of how far the current funding arrangements reflect the costs involved.

2.6 Learner in the workplace: employment-based programme negotiated between HEI, learner and employer

2.6.1 Current funding

If the course is only open to employees of the company, it is a closed course and so does not attract any HEFCE funding – it will be entirely funded by the employer. If it is open to anyone, for example a Learndirect “Learning through Work” programme, than it will be fundable by HEFCE if it is credit-bearing and leads to an HE qualification. It would be funded as part-time provision and, as a result, would attract a 10 per cent premium. This type of provision may not be fundable in FECs if the study does not lead to one of the HE qualifications funded in FECs by HEFCE, that is, if it is ‘bite-sized chunks’ of HE such as modules.

2.6.2 Potential future funding arrangements

The JM Consulting and PA Consulting study on ‘The use of costs to inform the funding of teaching’ suggested that the costs can increase because of:

- small cohort sizes;
- level of support in the workplace;
- additional time for staff to travel to the learner’s workplace;
- time involved in collaborating with employers – especially where they are actively involved in the training.

The study also showed that there can be reduced costs where:

- employers are involved significantly with the development of the learner with no additional cost to the HEI;
- training facilities are provided by the employer at no extra cost.

HEFCE could change its funding to try to reflect the additional costs. However, there has been no detailed investigation as to the level of such costs. As suggested above, any change to the

teaching funding formula which attempted to capture and reflect these costs would be likely to be complex, and collection of the data required to inform it would be an additional burden on providers.

2.7 Limitations of teaching funding method as a means to encourage the provision of workplace learning

As noted above, funding is one of the most powerful drivers of institutions' behaviour. However, in developing workplace learning, it is necessary to consider how to increase demand for such learning, as well as supply. Increasing funding for HEIs delivering workplace learning is likely to lead institutions to be more willing and able to offer such provision.

There is evidence that the UK is a low skills environment. However, there is no guarantee that an increase in the availability of workplace learning provision will lead to an increase in the demand for such provision from learners and employers. There are a number of possible reasons for this. Workplaces differ in their potential as a learning setting. Some employers will be unwilling for their employees to gain additional qualifications, lest this lead to increased turnover of staff (as their new qualifications make them attractive to other employers), or to pressure for increases in pay and rewards. Employees themselves may not be aware of the increased opportunities for workplace learning available to them, particularly where they do not currently have a higher level qualification.

As well as considering the use of funding levers to support an increase in the provision of workplace learning, HEFCE should consider what levers it has to stimulate increased demand for workplace learning from employers and employees. It should work with the Sector Skills Councils in doing this.

3 Entitlements

3.1 The concept of an entitlement in relation to workplace learning

In developing workplace learning in higher education, we discuss the idea that employers, learners and providers might each have an entitlement in relation to workplace learning. There would be advantages for all three parties if there could be agreed 'rules of engagement' which detailed what those entitlements might be. These could be agreed at national level between, for instance, the National Union of Students, the Confederation of British Industry, Sector Skills Councils, Universities UK and the Association of Colleges.

As part of this project, CHERI and KPMG facilitated discussion with groups of stakeholders around the delivery and funding of workplace learning in HE. As part of those discussions, stakeholders representing providers, employers and learners discussed what might constitute an entitlement in relation to workplace learning. They considered this in relation both to learners engaged in initial formation of higher education, and to learners in employment who are engaged in continuing professional development or some form of 'up-skilling'.

It was clear from these discussions that there were elements of the employer and learner/employee entitlements which seemed likely to increase the cost to the HE provider of delivering the course or qualification. For instance, the employer might have an entitlement to expect that the staff involved in teaching a qualification with an element of workplace learning should have some recent relevant experience of the industry or skills sector to which the course related. This would represent a potential cost to the provider, in allowing staff the time to gain this experience.

However, as well as a cost to the provider, there might be savings to the provider arising from a workplace learning element within a qualification. For instance, a learner who has access to equipment or facilities at his or her place of work, which can be used for practical work in relation to a higher qualification, may not need to access the same facilities on-campus, or may only need to access the HE provider's own facilities for a short period. In some cases, the facilities available to the learner at their place of work or on their work placement may be a better learning environment than the equivalent facility provided by the HEI – by nature of the scale, complexity or simply because it is more 'real'. Some situations or processes can only be simulated on a reduced scale in the classroom or the laboratory because of space or cost constraints. A work placement may offer experience of the real thing.

There may also be advantages to an HE provider in building links with employers, particularly where it has research interests in a subject or field which is also of interest to the employer. Relationships built around the management and delivery of work placements may be a good foundation for other relationships linked to research or knowledge transfer.

The concepts of learner, employer and provider entitlements in relation to workplace learning were felt to be useful by stakeholders involved in discussions as part of this project. HEFCE should expect institutions to have 'rules of engagement' so that individual departments that seek to engage with employers and workplace learners do so on the basis of an institutionally-agreed set of standards. These rules of engagement might include statements about the 'entitlements' of learners, employers and the institution in relation to the workplace learning.

Similarly, organisations involved in the promotion of workforce development and training (e.g. Sector Skills Councils, trade bodies, UK Skills or Investors in People) may want to encourage the development of sector-wide standards for use by employers in the management and planning of work placements for HE learners.

3.2 Responsibility for developing statements of entitlement

We would expect Sector Skills Councils and skills academies to play a role in developing sector-specific standards for the management and delivery of workplace learning in higher education.

The QAA would have an interest in the development of entitlements in relation to the assessment of workplace learning and support for learning.

4 Risk and reward

HEFCE could provide funding to support brokerage either through the private sector, the voluntary sector, an experienced HEI or a consortium of organisations.

Different models of brokerage can be envisaged, but it is important that any mechanism for funding such activity does not unnecessarily constrain the development of innovative models, where these may be best able to bring together employers, learners and providers

4.1 Possible brokerage models

The following models are examples of possible brokerage arrangements, but others may also exist or be possible.

Model A - The industry model

In this model, a body representing more than one employer, working in the same skills sector (e.g. mechanical engineering) could act as the broker. It would also be possible for an individual employer (such as the National Health Service) to broker arrangements between individual health authorities or primary care trusts and appropriate HEIs. Possible brokerage roles would include:

- helping one or more HEIs to identify work placement opportunities for students undertaking initial formation;
- helping employers in the relevant skills sector to identify appropriate HE provision to meet the continuing professional development needs of their employees. This may be existing taught provision, or a mixture of existing taught provision and the identification of potential learning outcomes appropriate to a higher level programme, from workplace tasks which the learner(s) may already undertake.

Model B – The consortium/ lifelong learning network model

In this model, two or more HE providers (which might be HEIs or FE colleges) would work together to promote the availability of workplace learning opportunities to learners and employers. This might be an informal relationship, or might take place as part of the work of a Lifelong Learning Network. Possible brokerage models would include:

- helping employers to identify appropriate HE provision to meet the continuing professional development needs of their employees;
- helping employers to engage with learners undertaking initial formation of higher level skills with an offer of work placements which might, or might not, contribute towards the formal assessment of their course.

Model C – The third party model

In this model, a third party which is neither an HEI, nor an employer whose employees will access the workplace learning provision, acts to bring together learners, employers and HE providers to develop and deliver workplace learning provision.

The third party could be a private company, a public sector body (such as a Sector Skills Council, Learndirect or Business Link), or a body with charitable status (such as Foundation Degree Forward, the UK Career Academy Foundation or a trade

union).

A body involved in brokering workplace learning provision may choose to do so because it has good contacts with learners, employers or providers, or possibly two or three of these groups. The broker may already be offering advice and guidance to learners or employers on available training and learning options.

The third party broker may be able to play a role in relation to workplace learning as part of its existing programme of activity, without the need for additional funding.

Potentially the third party could undertake a wide range of roles, depending on its current business and the clients with whom it engages. Roles for a third party broker might include:

- helping learners seeking an initial formation of higher learning to access an appropriate course, with a workplace learning component;
- helping learners already in employment to identify opportunities;
- helping employers to engage with HE providers offering courses with a workplace learning component;
- helping employers to engage with HE providers to design and develop HE provision which meets the specific needs of their current or future employees;
- helping HE providers to engage with employers with a view to identifying opportunities for learners engaged on vocational qualifications to undertake work placements.

The third party broker could potentially operate at a local, a sub-regional, a regional or a national level.

Learndirect already operates a national brokerage service for further education, higher education and adult education provision. Its database includes some higher education courses involving workplace learning. The focus of Learndirect is advice for potential learners, rather than help for employers or providers.

Ufi/Learning through Work provides information, advice and guidance for employers (as well as individual learners) and there is scope for this service to put employers in touch with appropriate HEIs.

The KSA Partnership report – ‘Workplace learning in the North East suggests that Business Link funding is reducing and that there is a role for increased sector brokerage (perhaps along the lines of model A).

Model D – The learner centred model

In this model, the focus is on the provision of information, advice and guidance at an institutional level. Learners applying to study at an institution are given advice and information on the potential for them to incorporate workplace learning in their course of study. There may be related opportunities for part-time work with an employer and possibly sponsorship from that employer. The role of the information and advice service, as broker, may include bringing together learners and employers offering workplace learning opportunities.

Different institutions offer different types of information service, depending on demand from learners and employers for brokering workplace learning opportunities.

4.2 What funding levers would best support these models and how would they work?

There is existing brokerage work, bringing together learners, employers and providers in the design and development of workplace learning in HE. This activity may continue or expand without intervention or support from HEFCE.

If HEFCE wishes to support the development of new or expanded brokerage delivery, in order to reduce or remove some of the identified barriers to workplace learning, funding is one lever which can help to achieve this.

4.2.1 Funding brokerage Model A

According to the KSA report there is currently debate within the Sector Skills Councils about their role in respect of brokering the delivery of training related to their sector. For many Sector Skills Councils, the focus of their work will be skills up to Level 3. Certainly the four Sector Skills Academies, launched by the Secretary of State for Education and Skills on 31 October 2005, are focusing on the delivery of provision to be funded by the Learning and Skills Council (with contributions from employers), rather than higher level skills (but see also section 4.2.3 below).

However, there is a role for Sector Skills Councils and other sector-specific bodies to ensure the availability of progression routes from Level 3 to higher level qualifications; and to ensure that employers can fill posts requiring higher level skills, either through recruitment of staff qualified to this level, or by enabling existing staff to study to acquire higher level skills.

There may also be occasions when employees with higher level qualifications (such as a first degree) in a non-vocational subject may wish to access training in a vocational subject at Level 3 (or below) where this is relevant to their work situation.

HEFCE may wish to explore the use of special funding to enable the development of industry-focused brokerage models. However, this is unlikely to involve funding of HE providers, and there may be issues about HEFCE's powers, or use of state aid, if public funds are used to help employers to train and develop their own staff. HEFCE's role in relation to model A brokers may be to encourage them to give proper consideration to the need for higher level skills in their industry.

4.2.2 Funding brokerage Model B

HEFCE already funds institutions and Centres for Knowledge Exchange and has made available funding for the development of Lifelong Learning Networks. Where an HEI wishes to work with other institutions to offer a brokerage service, it should be possible for those institutions involved to agree how any additional costs should be shared and met. It would be possible for HEFCE to use special funds to encourage the establishment of such brokerage or consortium arrangements, where the costs of such arrangements are felt to outweigh the benefits in terms of additional student numbers and additional fee income.

Unless funding were made available exclusively for new brokerage arrangements, there would be an element of 'deadweight' in that institutions with existing brokerage arrangements would seek funding for costs which they are currently meeting from other sources. If special funding were limited to new arrangements, there is a risk that institutions may either 're-badge' existing arrangements as new, or may curtail existing activity, in order for it (or something very like it) to be eligible for funding as 'new arrangements' after some time has passed.

One advantage of offering special funding for brokerage arrangements under this model would be that it would enable HEFCE to gauge the extent, nature and complexity of existing and potential brokerage arrangements in the sector.

One disadvantage of offering special funding for brokerage arrangements under this model is that demand from institutions may exceed the funds available, and HEFCE might need to develop a basis for allocating the available funding between institutions. There is also a danger that consortia or collaborative arrangements will seek to meet targets for brokerage activity in inappropriate ways, for example by engaging with employers for the sake of it, rather than because there is potential advantage to them and to their employees.

Options for allocating funding between bidding institutions would include:

- to offer a contribution (of less than 100 per cent) towards the costs of brokerage arrangements, so that every scheme submitting a bid before a specified date would receive some funding. This has the advantage that every bidding institution would be funded to develop brokerage arrangements, so this might be a way of generating the maximum amount of new activity for a given amount of HEFCE funding. The allocation method would also be transparent. A disadvantage of this option is that it might encourage institutions to overstate the cost of their schemes, so as to secure more funds;
- to allocate funds on a 'first come first served basis'. This has the advantage of being simple and transparent, but is also potentially unfair. It might not result in the most efficient use of funds, as it would take no account of the quality of proposals.
- to allocate funds to institutions according to their projection of the number of employers or learners who would benefit or benefit currently from the proposed scheme. This has the advantage of appearing fair to all institutions (provided their projections are drawn up on an objective and reliable basis). The disadvantages of this option include its reliance on un-audited data, and the need to measure outputs. If an institution or consortium is unsuccessful in achieving its projections for the outputs from its brokerage service, there may be good reasons for this. If bidders face the prospect of having to repay funding if their targets are not met, they may be cautious in their proposals (or not bid at all). The level of new activity generated by the available funds may be less than would otherwise be the case;
- to allocate funds to schemes which have the potential to increase the provision of workplace learning in institutions which do not currently offer much (or any) such provision. This has the advantage of appearing to be fair. However, the fairness of the allocation will depend on how far it is possible to reach an objective measurement of the potential to increase workplace learning provision;

to allocate funds on the basis of a set of criteria to be agreed with the Sector Skills Councils, such that brokerage schemes under model B complement (rather than duplicate) existing brokerage models and the work of organisations such as Foundation Degree Forward. This option, whilst potentially the most complex, has the potential advantage of achieving buy-in from Sector Skills Councils and would help HEFCE to raise the profile of workplace learning in HE in the work of Sector Skills Councils. One disadvantage is the potential absence of existing data which could be used as the basis of the assessment criteria, since (as evidenced in the main CHERI/KPMG report) practice in the delivery of workplace learning and employer engagement in workplace learning are so variable. It might also prove difficult to agree a single set of criteria with all the Sector Skills Councils.

4.2.3 Funding brokerage Model C

Funding for this model would need to have regard to HEFCE's powers for funding higher education and the need to ensure proper use of public funds. However, it does offer the potential to use HEFCE funds to help steer work by other public bodies to facilitate greater provision of workplace learning in higher education.

The description of model C above identified three types of third party who could be involved in a brokerage arrangement:

- a private company;
- a public sector body;
- a body with charitable status.

The options for funding are different for each, and are discussed below

4.2.3.1 Funding a private company

There would be issues here about the proper use of public funds and the process used to allocate them. If HEFCE wished to engage a private company to take the role of brokering the provision of workplace learning in higher education, it would probably need to go out to external tender for the provision of this service. This would depend on the Council's procurement practices and probably EU procurement rules too (depending on the value of the service to be provided).

The specification for the delivery of this service could be as wide or as narrow as was appropriate. A narrow specification could relate (for instance) to provision of a brokerage service for employers, learners and providers in a particular geographic area; or to a particular skill sector (or sub-sector), or a particular group of intended learners. A wider specification could simply specify the type of service to be provided, without specifying the learners, employers or providers to be engaged.

The specification would need to include some expected outcomes from the delivery of the service, such as the number of placements to be brokered.

Any contract with a broker who was successful in the tender process could either be for a fixed sum (e.g. £10,000 to provide the service for a twelve month period); input related (e.g. £12,000 for the employment of a member of staff working a set number of hours a week); or output related (e.g. £200 for each placement brokered). Where payment is related to a specific input or output, the contract would need to specify how the input or output would be measured.

The specification could stipulate whether the contract would be for the provision of a new brokerage service or to support (and potentially expand) existing arrangements.

4.2.3.2 Funding another public sector body

There would be nothing to preclude a public sector body tendering to deliver a brokerage service in response to a tendering exercise such as that described above. However, some public bodies may have difficulty in responding to such invitations to tender because of limits on their aims and objectives and/or constraints in relation to engagement in what may be regarded under the government accounting rules as 'trading operations'.

Brokerage arrangements involving public bodies under this heading are more likely to take the form of collaborative or partnership arrangements (with some cost-sharing), particularly where the public sector body has an existing responsibility or objective for the delivery of a related service. HEFCE could, for instance, explore whether Learndirect could increase the quality and quantity of information about workplace learning in HE that it makes available through its advisers, online and through its publications. Learndirect is an established national brand, albeit its focus has not been on skills at a higher level. With support from HEFCE it is possible that the HE offer, and the opportunities for workplace learning, could be given more emphasis, where appropriate to the aspiring learner.

Business Link aims to help employers meet their skills and other business needs. However, its funding is reducing and its employer focus means that local offices may not have strong links with HE providers or potential learners.

Sector Skills Councils exist to help develop the provision of qualifications, competence standards and training to meet the skills needs in their particular industry. Four are now engaged in developing Skills Academies with funding from the Learning and Skills Council. HEFCE could do more, potentially at little cost, to encourage Sector Skills Councils to help broker the development and delivery of workplace learning in HE. Where Sector Skills Councils are involved in the development of Skills Academies, HEFCE should seek to ensure that progression routes into HE are clear, and to encourage academies to plan to grow the number of learners undertaking HE courses with a workplace learning element. In this example, it may be possible to encourage the development of brokerage arrangements at no cost to HEFCE, provided funding for additional student numbers is available to institutions working with Skills Academies.

HEFCE support for an HE element in a Skills Academy

The Financial Services Skills Academy is developing a delivery model, based initially on three regional centres in Manchester, Norwich and Tower Hamlets in London. The focus of the Manchester centre is work-based learning at Levels 2 and 3. The London centre will concentrate on further education provision, for young people and adults at Levels 1-3. The focus of the Norwich Centre will be a foundation degree with a range of professional qualifications. These will be delivered by Norwich City College working with the University of East Anglia.

If HEFCE can allocate additional student numbers to the University of East Anglia, these will enable the delivery of additional foundation degrees and workplace learning as part of the financial services Skills Academy. The academy will act as a broker to bring together employers (including Norwich Union Assurance) and providers for the development and delivery of HE qualifications with a workplace element.

4.2.3.3 Bodies with charitable status

Bodies with charitable status would be able to tender for the delivery of a brokerage service through the process described in section 4.2.3.1 above. There may also be scope for HEFCE to influence these bodies to do more to broker the provision of workplace learning in higher

education, without paying them to do so, provided such a role is consistent with their charitable purpose. HEFCE could directly fund bodies with charitable status, to deliver a brokerage service, but would need to be sure that any decision to fund this service without a formal tendering process was consistent with its procurement policy and EU procurement rules. There may be good reason for choosing to work with a body such as Foundation Degree Forward, without the requirement to go out to tender, although doing so might limit the offer to foundation degrees – which would not be appropriate in every case.

4.2.4 Funding brokerage Model D

HEFCE could make available additional funding for HEIs explicitly for the development and delivery of a brokerage service for workplace learning through information, advice and guidance services. However, in the absence of baseline data on current levels of such brokerage activity, it would be difficult to demonstrate additionality through such an allocation. There is also a danger that there would be competition and duplication of effort in engaging with employers where there is more than one HEI in the locality of a particular employer's premises.

4.3 Conclusion

If HEFCE has funds available for this purpose, it may wish to market test the provision of a brokerage service for workplace learning in HE by inviting expressions of interest for the delivery of such a service. The initial invitation to express an interest may need to be limited in scope to avoid raising expectations which cannot be met – particularly amongst HE providers and Lifelong Learning Networks already engaged in brokerage work.

On the other hand, an invitation which is limited in scope might lead to the development of arrangements which are sector or geographically specific, where a more wide-ranging service would be more efficient. For this reason, it is suggested that any service to be procured through a market testing exercise be time limited.

HEFCE could consider a soft market test to determine what sort of invitation the market for the provision of brokerage services would like to respond to in the future.

5 Costs

As discussed in section 2.2 above, there are likely to be a wide range of factors affecting the costs of delivery of workplace learning in higher education in England. Within the second stage of this project, we have not been able to identify different cost structures underpinning the different types of workplace learning, beyond the analysis in section 2 of this report.

The KSA Partnership report on workplace learning in the North East does not provide evidence on common costs across all types of work place learning or dominant costs in particular areas.

Previous work by JM Consulting on the costs of alternative modes of delivery found a wide variety of models for delivery of foundation degrees, and wide variations in the costs of delivery compared with their respective price group comparators. This suggests that there is likely to be similar variation in the costs of delivery of workplace learning in HE.

From our work with the wider steering group for this project, there is anecdotal evidence of additional costs associated with particular aspects of the delivery of workplace learning. Participants made particular reference to the costs of setting up placements and matching learners to employers, where learners were not already in employment. Section 4 of this report suggests ways in which HEFCE might fund brokerage services which might be a more cost efficient way of managing this aspect of the delivery of workplace learning.

Further more detailed quantitative research would be needed to determine the precise cost drivers for different models of workplace learning. However, experience from the work previously undertaken by JM Consulting suggests that such research might not yield data that is useful as a basis for funding teaching in HE, as part of a clear and efficient funding method.

This study has shown the complexity of different models for the delivery or workplace learning, and any system for funding this provision based on the costs of delivery might need to be based on data which is not currently collected from HE providers. There is a balance to be struck here between fairness, on the one hand, and complexity and efficiency on the other.

6 Closed courses

6.1 Funding of closed courses

HEFCE does not currently fund any courses that are closed, that is not open to any suitably qualified candidate. The definition of closed courses, as published in HESES, the annual student number return to HEFCE is:

‘These are courses that are restricted to certain groups of people and are not generally available to any suitably qualified candidate. For example, where a course is only available to employees of particular companies, that course is closed.’

The rationale behind this ruling is that if a course is only open to employees of a particular company or organisation, then it would seem appropriate that the organisation (whether public or private) should meet the full costs of the provision. It should also be remembered that the provision of public funding for the benefit of a private company is likely to come under EC regulations on state aid.

6.2 Development of bespoke learning programmes for employers

The definition as it stands may be considered counter to certain HEFCE and government policies, particularly their support for foundation degrees, where the course may have been developed with the learning needs of employees of a particular sector in mind. This would mean that the course, although provided by a publicly funded HEI and available for anyone within that sector, could potentially only have students on it from a particular group of companies within the region.

There is need for greater clarity about which courses might be considered 'closed'. In particular, it is not clear how EC state aid regulations would apply to the range of courses which are closely related to the needs of employers, and whether there are distinctions which might apply between public and private sector employers. There are examples within the public sector of courses that may be 'closed' since they require the learner to be employed within a specific role before enrolling on the course, for example as a Special Constable with a local police force. Other courses appear open, but are possibly closed in practice since they require that if the applicant is not employed by particular organisations, they must be able to arrange their own training necessary to complete the employer-supervised work-based element. Further work is required to investigate whether government departments might 'join up' their approaches to enable more effective funding for public sector training.

There has been dialogue between HEFCE, the Home Office and Foundation Degree Forward around the arrangements for funding. The Home Office has delegated funding for police training to local police authorities. This has had the effect of reducing the volume (and value) of training delivered on a national basis, and encouraged local police authorities to source training (including training at and above Level 4) within their local area. HEIs are working with police authorities to develop training courses which meet their specific needs. However, this is giving rise to issues around the extent to which courses designed specifically for serving police officers are 'open' or 'closed'.

Where the local police authority is meeting the full cost of the course and no HEFCE funds are being applied to support the provision, there is not a problem. Nor is there a problem where the costs are met partly by the employer and partly by the learner. The issue only arises, if the HEI is contributing to the costs of the provision, because of the principle in HEFCE's funding guidance about not funding closed courses. If the Government were to decide that the funds allocated through the funding method (for instance) included funding for employees in certain

occupational groups – particularly certain groups of public sector employees (teachers, nurses, police officers) there would be no problem in treating bespoke HE provision for such learners as ‘fundable’.

6.3 Higher education for public sector employees

It would be interesting to consider whether there are other groups of public sector employees (e.g. fire-fighters, armed service personnel, civil servants) whose training at or above Level 4 is funded differently.

6.3.1 Fire-fighters

Training for fire-fighters is delivered through the Fire Service College based in Moreton-in-Marsh in Gloucestershire. This is now an executive agency, attached to the Office of the Deputy Prime Minister. Fire authorities are expected to meet the full cost of training for officers attending courses at the college. Interestingly, the College works with at least one FEC for the delivery of first aid training for officers. This training is funded by the Learning and Skills Council.

6.3.2 Civil servants

Similarly, training for civil servants, particularly those at Grade 7 (Principal) level and above, is delivered by the Centre for Management and Policy Studies (previously the Civil Service College) based at Sunningdale in Berkshire. The cost of this provision is met by the department or agency employing the learner. Departments also subsidise the cost of HE provision for employees who choose to study for higher qualifications which will enhance their performance in their current employment (Masters of Business Administration for instance).

6.3.3 Armed services personnel

Training for armed services personnel is delivered by the Ministry of Defence. Higher level qualifications are a particular focus of the Royal Military Academy at Sandhurst. The academy offers higher level training in communication and management studies, defence and international affairs and war studies (the study of war and modern military history). The cost of this provision is met by the Ministry of Defence.

6.3.4 Teachers and nurses delivering personal social health education programmes in schools

The Department for Education and Skills (DfES) and the Department of Health (DH) fund continuing professional development programmes for teachers and for community nurses involved in the delivery of personal, social health education in schools in England. These certification programmes run for a year during which time participants are required to develop a portfolio of evidence of learning which is then independently assessed. Some HEIs award credit points for these courses, but recent research in this area by the Thomas Coram Research Unit at the Institute for Education at the University of London suggests that there is a lack of consistency in how many points participants are awarded.

The courses are a good example of continuing professional development tailored to meet the needs of learners who are employees. The cost of the courses is met by grants from the DfES and the DH paid to local authorities, rather than through funding from HEFCE. As with other provision for public servants, more could be done to accredit their learning. The DfES and DH are exploring future options for delivery of these programmes, and there may be scope for HEIs to play a greater role in their development and delivery. There is a danger that HE delivery of these programmes to teachers and community nurses would constitute ‘closed courses’.

However, the DfES and DH are keen to open up the programmes to other professionals involved in working with young people (e.g. police and probation workers), so the problem of closed courses may be avoided. It does not arise at present, because the courses are not HEFCE funded.

7 Levies

Where there are additional costs to the employer, associated with offering workplace learning opportunities, there may be other sources of funding which can be used to help meet these. For instance, in certain industries, notably the construction industry and the film industry, employers pay a levy to help support the costs of workforce development.

7.2 Film industry

In 2005, a consultation with employer and employee organisations in the film industry in Great Britain sought to establish whether there was support for the establishment of an Industry Training Board. There was support for such a board, funded by a levy on employers in the industry. The funds raised through the levy will be used to provide new courses at further, higher and postgraduate level. HEFCE now has a formal agreement with Skillset (the film industry Sector Skills Council) which allows institutions funded through the film industry levy to leverage additional funding from HEFCE.

7.3 Construction industry

Employers in the construction industry already pay a training levy which is used to support the costs of workforce development and apprenticeships. Given that they are already contributing to the costs of training in this way, through a statutory scheme, employers may have increased expectations of the service which FECs and HEIs can deliver.

There may be potential for HEFCE to use funding for teaching to lever in a matching contribution from the Construction Industry Training Board-Construction Skills (the Sector Skills Council) to help meet the costs of industry-related HE provision with a workplace learning element. The CITB-Construction Skills new entrant training grant scheme offers help to students in employment with course costs such as equipment, materials and travel. These may be relevant to learners studying an HE course with a workplace element.

In order to encourage greater provision of workplace learning in HE courses related to the construction industry, HEFCE should discuss with CITB-Construction Skills whether special funding from HEFCE for such provision could be matched by CITB-Construction Skills funding for HE students. There is, however, no certainty that increased HEFCE funding for such provision would lead to greater demand for such provision from employers or learners.

7.4 Other industries

If there were support in other industries, it would be possible to raise funds through a levy which could support the provision of industry-specific HE provision, tailored to the needs of employers, and firmly in line with the objectives of the Government's skills strategy. HEFCE could use the offer of its own teaching funding to ensure that there was an HE component in the education and training supported through any new levy. The offer of funding from HEFCE might be particularly important where the start-up costs associated with new provision (in a new subject area, or in an existing subject but delivered in a new location or through an innovative delivery model) may be substantial, and take-up of the new provision may be uncertain.

Given that such levies would be used to support further and higher education, it would probably be appropriate for the DfES (rather than HEFCE on its own) to take forward any development of policy on industry levies.

8 Other agencies

8.1 How far have other funding methods (TDA/NHS) been successful in achieving their aims in relation to workplace learning?

TDA's annual report 2004-05 states that it has met its targets:
to recruit sufficient able and committed people to teaching;
to improve the quality of training for teachers and the wider school workforce;
to ensure the supply of good provision of training for teachers and the wider school workforce;
to communicate clearly, effectively and persuasively with all audiences;
to plan and use resources effectively, seeking to improve the quality of services.

The number of students on courses of initial teacher training increased, including nearly 7,000 students on the work-based training scheme; and there was an increase in the quality of the provision, as inspected by Ofsted. The success at meeting the targets, particularly those relating to recruitment and quality, indicates that the funding method the TDA employs is successful and fit for purpose.

The NHS funding regime has not been in place for long and it is too soon to tell whether it has been effective in achieving its aims and objectives.

8.2 What lessons learnt from these systems can be applied to the funding of higher education by HEFCE?

Designated recommending bodies for employment-based training could have a similar model in the HEFCE system, with HEIs leading a consortium of employers and trainers with work-based learners.

9 Higher Education Innovation Fund

According to the HEFCE web-site, The Higher Education Innovation Fund (HEIF) aims to 'support HEIs in knowledge exchange and productive interactions with business, public sector organisations and the wider community, for the benefit of the economy and society'.

The KSA report includes a summary of outcomes from a regional workshop held in September 2005. One reported finding is that:

'Flexible funding regimes are critical to encouraging innovation and alternative, more responsive means of delivering higher skills (e.g. continuing professional development short course or bite sized provision). Mainstream funding can be difficult to obtain for innovative workplace learning projects, as it includes no specific development element. Alternatively funded provision can be more flexible as it may not be constrained by mainstream funding regulations.'

This evidence, albeit anecdotal, supports the current policy of developing capacity of the sector through HEIF to support employer engagement, which in turn benefits workplace learning.

9.1 What impact would using data on the number of student placements as a basis for allocating HEIF have?

Using data on the number of student placements at individual institutions as a basis for the allocation of HEIF might have positive and negative impacts:

Potential positive impacts:

it could increase the number of placements occurring – so that institutions can receive more funding if it is a formula-based allocation.

Potential negative impacts:

- it could encourage institutions to develop provision with a placement element purely as a means to attract funding, where the placement offered little or nothing of value to the student (or employer);
- the focus of HEIF could move away from building links with business and the community if there is an increased focus on placements;
- HEIF could lose its focus, in that student placements are not necessarily innovative (although there is potential to develop them in innovative ways).

9.2 Use of HEIF to lever in other funding for workplace learning in HE

The Government has allocated funds to a wide range of agencies and departments to support the delivery of its skills strategy. These include the DfES, the Department of Trade and Industry, the Office of the Deputy Prime Minister, the Regional Development Agencies, the Learning and Skills Council and Job Centre Plus. The focus of many programmes seeking to develop training in areas where there is demand for skilled labour is training up to Level 3. There has been less emphasis on training in higher level skills.

There is, therefore, an opportunity and a need for HEFCE to raise the profile of HE provision as a key element of delivering the Government's skills strategy. HEIF could be used to help achieve this. HEFCE could develop new models for the allocation of HEIF which would help lever in additional funding from other agencies or from employers.

9.2.1 Approaches to using future third stream funding to support workplace learning

One approach would be to allocate funds on a matched funding basis, whereby, for example, HEIF might support part of the cost of a project (say 50 per cent), and the balance would need to be funded from another source – such as European funds, the Single Regeneration Budget, or Regional Development Agency funding.

Another approach, rather than being prescriptive about what proportion of the costs of a project HEIF would fund, would be to limit the purposes for which HEIF could be used, so that some project costs (e.g. capital costs or marketing costs) were not eligible for support and would need to be funded from elsewhere. This approach might be more complex to administer (since the HEIF contribution to a project would not be a fixed amount of the total cost). However, it would enable project managers to demonstrate clear 'additionality' in relation to other funds, in that there would be a clear division between the parts of the project supported by HEIF and those supported by other funds.

It would be possible to develop more complex versions of either of the approaches suggested above, so that, for instance, the proportion of the costs of a project funded from HEIF could vary, according to the total value of the project. The 'grant' rate could be higher for smaller projects, and lower for larger ones. This would have the advantage of allowing HEIF funds to be spread across more projects. In the same way, the purposes for which HEIF could be used could be wider for small projects, and narrower for projects above a certain value. The advantage of this approach would again be that it would enable HEFCE to support more projects for a given cost. The disadvantages of these more complex approaches are a potential appearance of unfairness and lack of transparency.

HEFCE should consult with HEIs on opportunities for using HEIF to lever in additional funding for workplace learning. The criteria for allocating HEIF could give priority to projects which can demonstrate leverage of additional funding. The timetable for allocating HEIF would need to be flexible so that the development of proposals could fit in with the timetable for allocation of other funds. HEFCE should also look at the information required by agencies such as the Regional Development Agencies to support bids for funding and, where possible, align its data requirements so as to minimise the burden on HEIs bidding for funding from more than one source.

9.2.2 Employer contribution to costs of workplace learning

It would also be possible to introduce a requirement that future third stream projects which support the employer engagement agenda should be part funded by one or more employers. The LSC makes an assumption about employer or learner contributions in its formula for allocating funding for further education. It should be said, though, that assuming a contribution is not the same as requiring a training provider to obtain a contribution from an employer or learner.

If there were a requirement for employers to part fund workplace learning, HEFCE would need to decide whether employer contributions in kind as well as in cash would be acceptable. Employers might argue that they already bear part of the cost of workplace learning by their employees or placement students, although this cost does not take the form of a direct payment to the HEI. The cost may be related to the employee having time off for study (rather than working). This would not be easy to audit, as it would require the employer to put a value on time off for study, or on the time spent by managers in mentoring and assessing the learner. A

cash contribution to the HEI would be easier to measure, provided it were not tied up with the delivery of other services to the employer.

10 Higher Education-Business and Community Interaction Survey

Data on the engagement between higher education providers and employers is currently collected through the Higher Education-Business and Community Interaction (HE-BCI) Survey. The results of this survey are not currently used to allocate funding for teaching. However, allocations under the third round of HEIF 3 have been informed in part by HE-BCI results.

10.1 What changes might be needed to produce data which would be robust and would form an appropriate basis for the allocation of funding for teaching and learning?

It may be necessary to ask specific questions about the number of employers that institutions are engaged with, or if they have one of the four models indicated in the JM Consulting report on the costs of alternative modes of delivery (available on the HEFCE web-site under Publications/R&D reports):

- no academic support at workplace (only occasional visits for quality assurance);
- some academic (didactic) delivery at or near the workplace;
- learning support and guidance provided by academics to students at the workplace;
- workplace staff providing significant delivery and assessment.

10.2 How would institutions' responses to the HE-BCI survey be audited?

HEFCE could make it a condition of grant that HEIs complete the survey and their return could be included in the annual data audit. However, this creates more work for audit and institutions so is not an ideal solution – it would be better to use an existing data collection method.

10.3 What are the advantages and disadvantages of using outputs from the HE-BCI survey for the allocation of funding for HE?

The HE-BCI survey is not completed by all HE providers (FECs do not submit a response). There is currently no audit of responses, since no funding is attached to the data provided. If HE-BCI data were to be used in future as a basis for the distribution of funds, the advantages and disadvantages would include the following.

Advantages:

- transparency – the data source used for the allocation of funds would be clear;
- fairness - allocations would reflect actual levels of employer engagement, as self-assessed by institutions;
- efficiency - use of an existing data source, albeit one where the return rate is less than 100 per cent, would not pose an additional burden on institutions.

Disadvantages:

- lack of transparency – HEFCE would need to decide whether and, if so how, to allocate funds to institutions which have not completed the HE-BCI survey. If a value were to be

assumed for institutions that have not made a return, the basis for that assumption would need to be robust and justifiable.

- unfairness – if the allocation of funds includes all institutions and a value greater than zero is assumed for non-returners, this may appear to disadvantage any institutions that did complete the survey and returned figures which are less than the assumed value for non-returners. This problem could be overcome (at a price) by treating the value assumed for non-returners as the minimum value for all institutions. This would, however, tend to flatten the pattern of distribution and reduce the value of using HE-BCI data to allocate funds.

10.3.1 Allocations in future years

The current set of data collected through the HE-BCI survey has the advantage of being a relatively objective self-assessment of institutions' employer engagement. When the data was collected, there was no financial incentive to institutions to overstate the extent of their work with employers. Once a decision was made to use HE-BCI survey data for funding purposes, there is a danger that institutions will self-assess more generously if this seems likely to increase their entitlement to funding.

It may be possible to introduce some objective measures of employer engagement into the survey to reduce the potential for institutions to overstate their performance. However, unless these can be subject to some independent audit, there remains a potential for institutions to be generous in their own assessments.

It would be open to HEFCE to continue to use the existing HE-BCI data set as a basis for allocation for some years to come, but this would have the disadvantage that the current data set is incomplete, and that institutions may have self-assessed according to subjective criteria. If the latest data set were used as a basis for allocation for a number of years, there is likely to be pressure from institutions who do not benefit from use of this data to change or update it to reflect a more 'accurate' and current position.

11 Conclusion and recommendations

The main report of the CHERI/KPMG study of workplace learning in HE considered the existing enablers and inhibitors to workplace learning in HE. Although providers would welcome an increase in funding for workplace learning, there is no objective evidence that cost is an inhibitor to the development of workplace learning. Inhibitors which have been identified include the difficulties of developing and delivering workplace learning, and in particular the need to manage the tripartite relationship between learner, employer and provider.

Brokers may have an important role in helping to manage this relationship. They will look for some payment or reward for undertaking this role. In this report, we consider how far it would be appropriate for HEFCE to use its funds to support that brokerage role.

This report also considers how far HEFCE could or should use funding for teaching to encourage greater provision of workplace learning. Additional funding for institutions delivering workplace learning may not, in itself, increase the quantity or quality of workplace learning provision. There also needs to be a willingness on the part of employers to engage with HEIs and on the part of learners to enrol on programmes with a workplace element.

Unless there is evidence of unmet demand from learners and employers, supply-side changes in relation to the funding of workplace learning will not, in themselves, increase the provision of workplace learning.

There also need to be changes on the demand side to promote workplace learning in HE as a means by which employers can train their workforce (present and future) and by which learners can acquire skills which will be valuable to them and to their employer.

There may be a case for HEFCE using its special funding to support some time-limited and focused projects to develop brokerage schemes which bring together employers, learners and providers in developing and delivering workplace learning in HE. HEFCE should consider whether such funding should be limited to schemes involving HEIs, or whether it also wishes to encourage schemes involving FECs delivering workplace learning. FECs may be more familiar to some employers as a source of vocationally related training and it may be possible to identify progression routes from existing programmes at Level 3 into higher qualifications at and above Level 4.

If it is decided to use special funding to support workplace learning, HEFCE may wish to explore with the Regional Development Agencies the potential for using such funds to lever in additional investment from the agencies themselves or other public subsidy (e.g. European Social Funds or regeneration grants). There may be particular opportunities in relation to provision which meets identified regional or local skills needs.

HEFCE should consult with HEIs on opportunities for using HEIF to lever in additional funding for workplace learning. The criteria for allocating HEIF could give priority to projects which can demonstrate leverage of additional funding.

There appears to be a lack of consistency in the Government's approach to the delivery and funding of higher level education for public sector employees. Whilst we understand that there has been some dialogue between HEFCE, the DfES and the Home Office about the funding of training for police officers, there are other anomalies which might merit further consideration.