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**A Review of Work Based Learning
in Higher Education**

by John Brennan and Brenda Little

October 1996

Department for Education and Employment

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Preface

The idea of *work based learning in higher education* might sound like a contradiction in terms. Surely, work based learning is *in* the workplace. The senses in which it might also, in certain conditions, be *in* higher education are explored in this review.

Over the last few years, there has been a growth in the number of arrangements whereby people can obtain academic recognition for learning which has taken place outside of educational institutions. These include some quite traditional forms of professional education and sandwich courses, but to them must be added a host of relationships between individual employers and higher education institutions which involve quite fundamental questioning of the roles and responsibilities of each in the continuing education and training of adults. These developments can be related to broader themes concerning the organisation of knowledge in society, the changing nature of work and career, the learning society and the implications they hold for individual workers, their employers and educational providers.

Many of these developments have been supported by government-sponsored schemes. For example, the (then) Employment Department, through the Higher Education branch of its Training, Enterprise and Education Directorate, supported a range of development projects located primarily in higher education institutions with the aim of assisting the development of a higher education system responsive to the changing needs of the economy and individual learners. Since the late 1980s a series of projects have been sponsored within a number of broad areas, including work based learning in higher education; access to, and accessibility of, further and higher education; credit frameworks and learning outcomes; guidance and learner autonomy.

The Department for Education and Employment sponsored the present study in order to produce a substantial literature review of progress made and issues raised in the field of work based learning in higher education. Its objectives and scope were to analyse detailed practice as recorded in the literature, to review and sharpen the conceptualisation of work based learning, and to evaluate the literature for evidence of progress and identification of problems. As such, it is a review of debates, policies and practices as evidenced in the available literature. Of course, much practice goes unrecorded. Furthermore, much of the literature tends towards theory or advocacy; evaluated practice *per se* seems to be less prevalent. Nevertheless, in this review we do try to distinguish between advocacy and evidence.

The first part of the book provides a contextual and conceptual backdrop against which more practical aspects of work based learning are then considered in part two. The final part considers strategic issues of implementation for higher education institutions, employers and individuals, before turning to more wider ranging issues of policy.

Our thanks go to members of our Steering Committee (Walter Greaves, Gaie Davidson-Burnet, Oliver Fulton, Angela Glasner, Jim Sullivan, Freda Tallantyre, Peter Wright, David Pierce) who have helped to shape this publication through critical discussion and positive comments. We are also grateful to our two critical readers, Mary Henkel and John Rear for the external perspective they brought to bear on an earlier draft, and to Malcolm Frazer for his help throughout the project and in sharpening up our final version of this review.

The book is aimed primarily at those in higher education who have an interest in teaching and learning which seeks to embrace learning that people acquire through the workplace. Through our review of the literature, we have tried to produce a publication which will stimulate thought about future forms of teaching and learning within a society where lifelong learning is becoming the watchword. It is not a 'how to' manual, but the inclusion of appendices providing examples from current practice is intended to point to resource material which could serve to guide institutions of higher education and their partners in the workplace.

John Brennan
Brenda Little
October 1996

Part One Contexts

Chapter One: Work Based Learning and Higher Education

Introduction

Individuals learn throughout their lifetimes. Learning does not abruptly cease on leaving an educational institution. In particular, much learning takes place as part of doing a job: there is nothing new in the notion of 'learning through doing'. The purpose of this review is to examine the relationship between such learning and certificated learning within higher education. Its focus is on the extent to which learning at work might receive greater formal recognition and educational certification.

In a variety of policy statements, the Government has promoted the idea of a continually developing work force possessing high levels of skills, enterprise and initiative is essential to competing internationally in the global market place. In consequence, employers have been urged to invest in effective action to ensure that people at all levels of the workforce have the necessary skills to operate effectively. Investors in People (launched by the Employment Department in 1991, with the support of the TUC and CBI) is but one of several initiatives to achieve this end. Likewise the education system has been urged to ensure that people are given an effective foundation for working life and are motivated to achieve their potential, to take more responsibility for their own development and continue to develop the skills they, and employers, need.

Effective and flexible systems of training and education are sought which will achieve these ends. For example, the Government's introduction of Training Credits (now renamed Youth Credits) in 1991 was intended to motivate young people to improve their vocational qualifications through increased feelings of ownership and control. At higher education levels, the Government's Enterprise in Higher Education initiative, launched in 1987, aimed to improve the quality of preparation of students for working life *in association with* employer partners.

Calls for increasing partnerships between employers and higher education have been on the policy agenda for some time. Sir Christopher Ball, writing about the need for an expanded and more diverse system of higher education in the UK, referred to a successful system resting on a "true partnership between providers and employers, rather than a contractor-supplier relationship" (Ball, 1990, para 1.21). Others have questioned whether the emphasis on continuing to develop skills demanded by employers is the correct one. Questions are raised about whether calls for the creation of 'learning organisations' hide underlying issues to do with empowerment or exploitation of individuals (see for example, Hughes and Tight, 1995). As Patrick Coldstream, then Director of the Council for Industry and Higher Education, noted

employment is for the satisfaction and development of people, not the other way round. The economy of the future will be how educated people, they not we, decide it is to be.
(Coldstream, 1994, p160)

Notwithstanding such objections, it is the case that the closer integration of learning and work is a central theme of policy debates across Europe about skills formation of the workforce and strategies for economic competitiveness and enterprise renewal (see for example, Sommerlad, 1996).

This tension between employers' needs and the needs of individuals for continuing education and personal development are also to be found in debates about the relationship between work based learning and further and higher education. Whilst there are undoubtedly questions about *whose* purpose is being served through calls for education to provide 'an effective foundation for working life' and 'continuing to develop skills', there is little disagreement that people do continue to learn and develop at and through work, albeit often in unstructured ways. Thus, in a

very broad sense, work based learning can be seen to relate to any learning linked to the requirements of people's jobs.

Drawing on work undertaken as part of a recently completed European Union-funded initiative on work based learning, Sommerlad identifies four key reasons underlying current interest in work based learning: (i) economic restructuring and productivity changes requiring increased investment in human capital; (ii) workplace reorganisation, whereby firms seek to optimise key skills of employees through process-driven strategies for education and training embedded in the production process itself; (iii) knowledge assets as the source of competitiveness (of central concern are learning processes that contribute to creation and mobilisation of knowledge as the foundation for continuous innovation and competitiveness); (iv) financing of continuing training; governments' interests in supporting work based learning initiatives as a way of shifting costs that have traditionally been met by the state (Sommerlad, *ibid.*).

What is Meant by Work Based Learning?

During the mid-1980s, Levy and colleagues investigated issues of work based learning in the vocational education and training area (arising from the Manpower Services Commission's 1981 New Training Initiative). They defined work based learning as *linking learning to the work role* and identified three inter-related components each of which provided an essential contribution to the learning, *viz.*: (i) structuring learning in the workplace; (ii) providing appropriate on-job training/learning opportunities; (iii) identifying and providing relevant off-job learning opportunities (Levy *et al.*, 1989, p4).

This simple phrase 'linking learning to the work role' can be viewed in many ways. For example, a recent project at the University of Leeds identified the following features of work based learning:

- performance or task related, particularly where circumstances are changing;
- problem-based, usually associated with tackling problems of production, design or management;
- autonomously managed, with learners expected to take a large measure of responsibility to ensure they learn from their work activities;
- team-based, in that tackling problems often requires effective co-operation between people with different roles and expertise;
- concerned with performance enhancement;
- innovation centred, which creates opportunities for learning and providing experience of managing change (University of Leeds, 1996).

As such, the Leeds project team clearly identified work based learning as being *derived from* the experience of undertaking work activities.

Another project team looked at a broader conception of *linking* learning to the requirements of people's jobs, and teased out three strands *viz.* learning *for* work; learning *at* work; learning *through* work (Seagraves *et al.*, 1996). For the project team, learning for work broadly encompassed 'anything which can be labelled vocational ' (delivered in school, college, from television *etc.*); learning at work related to training and development delivered in-company; and learning through work was integrated into the doing of the job. Learning through work includes the application of job-related learning (possibly acquired elsewhere) *and* the skills and knowledge acquired in the process of doing the job (*ibid.*, p6). The learning through work strand clearly overlaps with the University of Leeds conception, and can be seen to encompass Levy's first and second components, whilst the learning at work strand overlaps with Levy's third

component. The additional strand of learning for work does not seem to be covered in Levy's definition; Levy and her colleagues were, in any case, looking specifically at workplace learning, *i.e.* learning *closely bound* to the work role. Although not necessarily definitive, the learning for work, learning at work, learning through work distinctions are useful ways of investigating links between higher education and work based learning.

Although teaching and learning in higher education is about more than *learning for work*, such learning is an important part of the aims and objectives of particular programmes of study. Over half of all undergraduate work now relates to professional and vocational studies, many of which may be closely linked to professional formation requirements.

In higher education terms, learning *for* work may well include elements of learning *at* work and learning *through* work. For example, sandwich courses, which have been a feature of higher education in the UK since the 1950s, include a significant work placement element which many view as work based learning. Although the use of the term work based learning in higher education may be of fairly recent origin, the curriculum device known as the sandwich principle, whereby undergraduate programmes of study incorporate periods of industrial placement, was advocated over 40 years ago (for engineering and technology courses) (National Council for Technological Awards -NCTA, 1955). A few years later (in 1964) the National Council for Industry and Commerce characterised the sandwich principle as being founded upon "an interaction of academic study and practical applications such that each serves to illuminate and stimulate the other" (Crick Report, quoted in Nixon, 1990). Of course, as several commentators have noted (*e.g.* Dore, 1976), such sandwich courses were putting back into pre-career qualification the practical experience that in-work apprenticeship used to give.

By 1988, the Council for National Academic Awards' definition of a sandwich degree included reference to a period of supervised work experience, (*i.e.* applied learning in a work environment) which must have (inter alia) specified objectives, and assessment of students' performance during the period of supervised work experience (CNSAA, 1988). In writing about the assessment of experience-based learning (with particular reference to sandwich courses which drew on issues emerging from a series of CNSAA-funded projects in the area of experience-based learning undertaken in the late 1980s), Nixon seems to refer to supervised work experience and work based learning as one and the same thing (Nixon, 1990).

Some might argue that this is a partial view of work based learning (see, for example, Lyons, 1993) but it *is* the case that much funded development work undertaken under the banner of work based learning has been concerned with higher education courses which, for whatever purpose, include blocks of work placements.

Taking *learning at work* as relating to training and development delivered in-company, it is not obvious at first glance in what ways higher education might relate to this strand of work based learning. However, since the advent of credit accumulation schemes and the modularisation/unitisation of programmes of study in the early 1980s, higher education institutions have been involved in credit rating of in-company courses. It is difficult to estimate the extent of such credit rating activities, although a number of funded development projects have been undertaken in this area (see for example, Osborne *et al.*, 1993; The Skills Link 2, 1994). A recently completed feasibility study for the Higher Education Quality Council into credit rating for off-campus learning (defined as learning achieved whilst engaged in programmes of study not owned or validated by a university, and by people not registered as students of the university) noted that whilst some new universities and colleges had between 20 and 60 credit rating agreements, it was probable that the majority of higher education institutions had none (Foster, 1995). These agreements related to both in-company courses, and programmes offered by professional institutions.

At the heart of *learning through work* (as defined above) is the process of doing a job of work, undertaking a particular task or function. The learning derived from that experience, *provided it can be evidenced and assessed* is the basis for many work based learning developments within higher education. Such experiential learning, which may be combined with instruction led learning (either delivered via in-company courses, or through university courses), both for purposes of reinforcement and extension, provides the main vehicle for work based learning

programmes of study leading to higher education academic awards. Additionally, the process of assessing prior experiential learning derived from previous work and life experiences (possibly combined with the assessment of prior instruction led learning) can provide access to higher education and a starting point for diagnosing an individual's continuing educational and professional development needs which might realistically be met through a work based learning programme. The simple phrase 'provided it can be evidenced and assessed' hides a number of issues and problems to which we will turn in later chapters.

For some practitioners, work based learning is a dynamic and unfolding process which is more than a work placement or a period of structured work experience, both of which can be seen as a part of larger instruction led, campus delivered programmes of study. These different perceptions may arise from the extent to which the learning derived from the workplace is at the *heart* of the individual's overall programme of study and thus provides the *starting point* for its design, planning and implementation. They reflect the different balance that may be drawn between workplace requirements and the educational and professional needs of the individual. In this way, the learner is placed

at the interface of different cultures, exploring work-focused and work-related issues in the context of University knowledge, scholarship and values.

(University of Leeds, *ibid.*, p15).

Where work based learning is part of a primarily instruction led programme designed by the higher education institution (perhaps in collaboration with professional/regulatory body and/or particular employer), or where a campus delivered programme has been 'translated' into a form which can be delivered in the workplace, there may be no scope for individual negotiations about the *overall* design of the programme of study, and there may be only limited scope for negotiations about the intended learning outcomes of the work based learning element/s. Moreover, the programme's overarching parameters of knowledge, scholarship and values will be those of the university (and discipline). The status of the individual learner in the workplace (employee, student employed for a set period, student 'on practice') may also have implications for various aspects of implementing work based learning, in particular assessment.

However what is not at issue is the notion that learning can be derived from undertaking specific tasks or functions within a work environment. Moreover, the aspect that distinguishes work based learning from other processes of learning is the part that negotiation between individual, employer and higher education institution plays: negotiation between these three stakeholders in identifying achievable learning outcomes which are meaningful and challenging to the individual, are relevant to the employer and have academic credibility; establishing, through negotiation, appropriate methods of and criteria for, assessment acceptable to all parties; establishing and maintaining, through negotiation, a supportive learning environment (based primarily in the workplace). Key variables in current practice are the focus of the overall programme and the place of work based learning in the programme (is it at the *heart* of the overall programme or a *discrete, but integrated part* of the programme?). Both these variables will in practice affect the extent to which each of the stakeholders has a 'say' in the negotiation process. Scope for negotiation may also be affected by the status of the individual learner (whether primarily a full-time student or a full-time employee).

This review of work based learning in higher education is not limited to any *one* of the variables noted above, although such variables will have a bearing on the subsequent form and content of the work based learning: how it is realised in practice, how it is evidenced, how it is assessed for academic credit. More critically, the variables will affect the answer to the question of whose authority determines the validity of learning derived from the workplace.

It is acknowledged that learning in the workplace can be derived from a number of sources (including various instruction led activities, some of which may be recognised in higher education terms through credit rating activities). However, the main focus of this review is on the processes whereby *experience led* learning in the workplace, *i.e.* the skills and knowledge which people acquire while doing their jobs, is made 'public' and thus susceptible to assessment in academic terms.

Current Practices of Work Based Learning

Table 1 sets out in broad terms the various ways in which work based learning is currently incorporated into programmes leading to academic awards within higher education. These range from one extreme of short visits to industry, through placements, to employment-based learning programmes. The final two categories - immediately post-qualifying, and continuing professional development - will in many cases be concerned with professional recognition and may not strictly lead to academic credit towards a recognised higher education award, although in certain professions there are developments underway to move in this direction (*e.g.* core competences for senior house officers in the medical profession; credit framework for continuing professional development in the built environment area). Work based learning may also be taken into account in assessing an individual's prior experiential learning for access to higher education and in determining the appropriate stage or level of entry.

Key stakeholders in work based learning are the individual, their employer and the academic institution which is providing (amongst other things) public recognition in the form of academic credit. Their interests in work based learning will vary. For example, the individual may be seeking personal development, career advancement and portable qualifications. The employer may be seeking effective and affordable staff development opportunities, employee motivation, access to a wider knowledge base than exists within the organisation, which taken together may be seen as one way of increasing competitiveness. For the academic institution, work based learning may be seen as a way of maintaining and enhancing the quality of its teaching and learning functions, of fulfilling its social responsibilities, and of increasing its market share (particularly in the area of continuing vocational and professional education). Such varying interests are unlikely to overlap in every respect, and subsequent chapters will explore some of the areas of tension and dissonance.

These various types of work based learning can be linked to broader changes within higher education, to the changing relationships between higher education and society and between higher education and work, to developing notions of learning organisations in the context of flexible systems of manufacturing and production, to the concept of lifelong learning and notions of the 'learning society'. Writing about the meanings of mass higher education within these changing contexts, Scott notes that the powerful but poorly articulated values inherent in the normative power of the traditional honours degree system are now being challenged (Scott, 1995). Many current developments in higher education appear to question traditional academic assumptions (relating to structured and sequential learning), intellectual assumptions (relating to the organisation and nature of knowledge), social assumptions (relating to the need to initiate the learner into particular disciplinary and/or professional cultures) (*ibid.*, p157). Those involved in designing (and realising) work based learning within higher education have often, in their own different ways, had to challenge these 'inherent values' and seek to extend the boundaries of validity of knowledge, skills and understanding for which some form of public recognition (in the form of academic credit) can be awarded.

Whether the work based learning is at the heart of an individual's overall educational programme leading to the award of academic credit or is one part of an overall programme, the individualistic orientation of work based learning in higher education is well founded in both theory and practice and mirrors more general moves towards student centred learning. However, not all learning is individualistic. Writing about higher education and work based learning in the UK, Saunders suggests that the way occupational life itself produces knowledge (for example, implicit experiential knowledge which is somehow locked into everyday work practices and may be held by a group in the workplace) is not being captured in current developments (Saunders, 1995). Further, from their Europe-wide investigation into work based learning, Sommerlad and colleagues consider that any re-evaluation of what constitutes enterprise competitiveness and any conception of organisational life beyond corporate boundaries would require new social models of learning which place the *collective* rather than the *individual* at their heart (Sommerlad, 1996). In fact, the Universities of Lancaster and Nottingham are currently helping Ford Motor Company to devise processes that track

organisational learning derived from education and training (see Middlesex University Bulletin, 1996). Conflicting values, assumptions and aspirations underlie different conceptions of work based learning. For Sommerlad and her colleagues, work based learning "is part of a contested concept of industrial restructuring" (*ibid.*, p9).

This wider arena has also been brought into focus in recent comments about the role of higher education in a learning society. Whilst UK policies for continuing to develop a quality work force may be all well and good, some commentators suggest that what is lacking from Government is an overarching strategy "which dovetails policies for education, training and employment with policies for industrial development" (Coffield, 1995, p17).

Table 1: Spectrum of experience-led work based learning¹ (WBL)

ORGANISATIONAL FORM	WHO?	WHERE?	HOW LONG?	OBJECTIVES
Brief Encounter	Students of all subjects especially if within Enterprise in Higher Education	(a) Workplace visit (b) Series of "research" encounters	half day to 7 days	Awareness-raising or Career taster
Short Project	Students of all subjects, if general WBL module Creative Arts and Design	(a) Specific assignment in workplace (b) Live brief in studio.	1-7 weeks	Immersion in a real work responsibility under shelter conditions.
Sandwich Placement	Various - Physical and Biological sciences Computing sciences Engineering and Technology Built Environment Business and Administration Languages	A job or quasi job in a potential employment situation.	6-15 months	Introduction to professional responsibility and part-qualification.
Alternating Sequence of placement (Concurrent or Recurrent)	Teaching Nursing Social Work	Between 2 and 10 " novice professional" placements	Up to 50% of course time (e.g. 70 weeks out of 135 weeks)	Professional qualification as a licensed competent practitioner
Employment-Based Learning Programme	Professional employees (or aspiring professionals) in an employer moving to become a learning organisation.		In work most of time: up to 20% release for study	Professional upgrading and personal development linked to employer's needs
Immediately Post-Qualifying	Pre-registration professionals	front line practice under 'wing' of more experienced professionals (e.g. Senior House Officers in medical profession; trainee articulated lawyer)	1 - 2 years (or similar)	Developing professional acumen; problem solving; independent decision making necessary for sound professional judgement and action
Continuing Professional Development	All occupations with a supportive working and/or professional environment	In-company In-training centre In the field In the professional network At home	A sequence of CPD episodes which may continue throughout a career	Specific skill updating; specific knowledge extension and revaluation; critical reflection on technical practice issues; critical reflection on ethical issues; growth through contributing to others' development

¹ developed from Butters, S (1995) QSC Briefing Paper: *Organisational Forms of Work-Based Learning*. London: OU/QSC

The Scope of this Review

Some of these broad themes are examined further in Chapter Two, *Setting the Scene*, which sketches out something of the social and economic context within which work based learning in higher education has come to receive such growing attention. In Chapter Three, *Teaching and Learning in Higher Education*, we look at the educational context for work based learning within higher education institutions. Acceptance, or otherwise, of the validity of work based learning within the 'academy' should be viewed in the context of changing forms of knowledge, debates about the shape and content of the higher education curriculum and mechanisms for making the curriculum more explicit, and theories about the way people learn.

Together these chapters raise some profound issues and pose a fundamental strategic question for higher education institutions to ask: should they get involved in work based learning at all? In a future of increasing diversity of institutional missions, institutions will take different views about the extent and the form of any involvement in work based learning. But they should at least pause to consider what is at issue. Work based learning poses questions about forms of knowledge, the relationship between teacher and taught, methods of assessment and quality assurance, and about the focus of authority to determine these matters, which cannot be hermetically sealed from the rest of the institution. These questions pose challenges for academic culture and for academic structures and management. They deserve serious and widespread debate.

We then turn to more practical aspects of implementing work based learning. Chapter Four, *Establishing a Framework for Work Based Learning*, presents an analysis of different types of work based learning curriculum design, in terms of locus of control and authority. Chapter Five, *Designing and Realising Work Based Learning*, examines how work based learning is realised in practice through processes of assessing prior learning and negotiating learning contracts. Chapter Six, *Support for the Learner in the Workplace*, considers the need for a supportive learning environment: what Winter and Maisch term 'an educative workplace' (Winter and Maisch, 1996). Within that environment the roles of workplace mentors, academic tutors and other learners are discussed.

Chapter Seven, *Assessing and Accrediting Work Based Learning*, looks at various mechanisms for assessing the evidence that work based learning has taken place, discusses current thinking on assessment frameworks, considers 'who' is and should be doing the assessing, and discusses issues of credentialism and the perceived value of qualifications. Chapter Eight, *Planning, Implementing and Assuring the Quality of Work Based Learning*, raises policy issues for the various partners involved, including issues of differentiation (learner types, academic discipline types, mission of learning resource provider), barriers to implementation (including funding issues and cultural barriers), and questions of accountability and quality assurance. Chapter Nine, *Policy Messages*, summaries the progress which has been made and the problems which remain in the development of work based learning in higher education and considers the prospects for the future.

Summary

Learning doesn't only happen through formal education, it continues throughout life and particularly in the work place. Work based learning can be defined as linking learning to the work role, but this does not only mean preparing for a specific job. Three strands have been identified: learning for work, learning at work, and learning through work.

The focus in this book is on learning resulting from doing a job of work which could be recognised by higher education in terms of credit towards an academic award. Even this definition embraces a wide spectrum of forms of work based learning ranging from a brief encounter with the work place by students in higher education, to continuing professional development of full-time employees.

Chapter Two: Setting the Scene

Introduction

In this chapter, we examine in more detail some of the recent developments in higher education and their relationship to the rest of society which have a bearing on the role of work based learning.

First, the expansion and diversification of higher education has brought with it new functions for institutions and new forms of interface with the rest of the education system and with professional and vocational qualification structures. Second, the relationship between higher education and work has been evolving, both in relation to developments in the labour market and in higher education itself. Third, increasing attention has been given to the concept of a learning society and, although much of this attention may be rhetorical, it poses many questions for the relationship of higher education institutions to that society.

These are the issues which are explored in this chapter. One of the questions which they raise for proponents of work based learning in higher education is whether higher education's principal contribution to work based learning lies in its support and enhancement or in its certification.

Higher Education in the UK

In the last thirty-five years higher education in the UK has changed significantly both in terms of its absolute size (measured by numbers of student registrations) and in terms of its shape (characterised by the range of awards and programmes of study available and the routes into and through higher education).

Higher education in the 1960s comprised some 250,000 students (which represented just 6% of the 18-21 age group) and was primarily an elite system: entrants to higher education came more or less straight from school with two or more passes at A-level (or equivalent) and were drawn from the grammar and public schools (HEQC, 1995a). The subject range offered by the 26 universities was relatively limited, as were the modes of study available. By contrast, in 1995 there were 104 universities and colleges with the power to award first degrees and other taught awards (HEQC, *ibid.*). The student population had grown massively to over one and a half million, of which 61% were on full-time courses, 28% were studying part-time, almost 9% were following sandwich courses and a further 2% were following courses employing other modes of study (HESA, 1995). The age profile of entrants to higher education has also changed dramatically: 34% of first year undergraduates are now 21 years or over, and almost all first year part-time undergraduates (94%) are over 21 years of age. Although enrolments on first degree courses still predominate (representing 65% of the whole student population), student registrations for higher degrees and other postgraduate qualifications account for over 20% of the student population, with the remaining 14% being registered on other undergraduate qualifications (including DipHEs, HNDs, diplomas and certificates, *etc.*) (HESA, *ibid.*). The range of courses on offer has changed substantially, with degree courses having been developed in many subjects where they did not exist thirty years ago, especially professional and vocational studies which now account for 56% of all undergraduate work (Smithers and Robinson, 1995).

Routes into higher education are also changing. Much of the increase in higher education enrolments has come through the increase in the numbers of students taking A levels, to the

extent that by 1992 almost all those with two A-level passes or more were entering higher education (Smithers and Robinson, *ibid.*). However, other routes into higher education, based primarily on NVQs and GNVQs, are expected to become increasingly important in the future.

Alongside such dramatic changes in the size and shape of the higher education system itself must be set other developments which are changing higher education's relationship with the rest of education. Higher education in the UK used to have an enormous influence on the school system, through setting standards linked to school examinations. However, with the advent of a national curriculum, and revision of qualifications in post-compulsory education and training, other agencies outside of higher education are having an increasing influence in setting standards (Hodgkinson, 1996). Significant amongst these is the development of higher level vocational awards (N/SVQs) which are designed to accredit occupational competence, are defined solely in terms of evidence of competence and in consequence are not concerned with the process of teaching and learning (HEQC, 1995b). In contrast,

higher education awards aim to do more - and less - than attest to occupational competence.....Higher educational programmes set out to cultivate broader intellectual abilities (albeit often in a vocational context) that permit development within, and across, different occupations.

(*ibid.*, p6)

These and related changes in the structure of educational and professional qualifications pose many questions for higher education. The emphasis on the increase in demand for skills and knowledge and the Government's continuing interest in National Targets for Education and Training (operationalised as N/SVQs) might clearly have a knock-on effect on the work of higher education. For example, the strategic aim of the (then) Employment Department's Higher Level Skills Development programme - funded from 1991-1994 - was to bring TECs and higher education together

to promote jointly the formation and effective use of higher education skills for people already in work. Higher level skills were defined as those at, or equivalent to, NVQ Levels 4 and 5.

(Spilsbury and Simkin, 1995, p1)

Relatedly, the boundaries between higher education and further education are becoming increasingly blurred. A recent report on further and higher education partnerships noted three major trends in the development of F/HE partnerships, *viz.* their growing diversity, their increasing acceptance as part of mainstream higher education, the emergence of 'HE in FE' as a distinctive form of higher education (Bocock and Scott, 1995). Further education colleges' prime motive for developing such partnerships is to provide students with greater opportunities for academic progression in their studies. Bocock and Scott note that as well as the increasingly explicit articulation of the academic links between HNCs, HNDs, DipHEs, Access and 'Year 0' courses, the principle of progression is now applied throughout further education, most obviously through the NVQ framework. As more students progress from further to higher education they may well be looking for evidence of their subsequent progression to be recognised (in part) in terms of higher levels of NVQs.

Many higher education institutions have accreditation arrangements with professional bodies. Several commentators have noted that there are very real differences between vocational and professional qualifications (primarily in the pivotal role played by knowledge and breadth and depth of conceptual understanding in professional qualifications), and that the emergence of a coherent framework of vocational qualifications based on occupational standards and competences does not provide an immediate alternative to professional qualifications (see for example, Erout and Cole, 1993). Nevertheless, one clear response to the Government's consultation paper on higher level NVQs was the recognition that occupational standards have an important role in achieving improvements in workplace competence of personnel at all levels, including continuing professional development. Positive working partnerships between

employers, professional bodies and further and higher education were essential to realise these improvements (Frazer, 1995).

Relationships Between Higher Education and Work

Work based learning in higher education is but one aspect of complex and evolving relationships between higher education and work. Although the origins of university education in the United Kingdom, as elsewhere, lay in the professional preparation of the clergy and, later, of the other 'ancient' professions, ideologies of higher education have frequently been antipathetic to a close relationship between higher education and work. Whether following the research ideal of Humboldt or the liberal ideal of Newman, writers on higher education have emphasised that the value of higher education lay in something more than a preparation for working life. Yet the reality has always been that a majority of students has expected and indeed obtained often considerable employment benefits from the experience of higher education.

Attempts at analysis of the relationship between higher education and work have encountered terminological difficulties in describing the latter part of the relationship. Thus, terms such as labour market, employment, labour, occupations, professions, work and career are found in the literature and employed in everyday conversation in quite loose ways. In this report, we use the term 'work' in a comprehensive multi-dimensional way - similar to the German concept of 'Beruf'. Where specific aspects are concerned, e.g. work 'tasks', we shall refer to them as such.

Although the preparation for the professions provides a good historical antecedent for examining the relationship between higher education and work, it is an unhelpful one in the context of the diverse forms of relationship which exist today. Quite apart from the absence of clarity about what constitutes a profession (Eraut, 1994), around two-thirds of all graduates do not even enter fields which are related to their undergraduate studies (Pearson, 1995). Preparation for work within higher education must frequently be undertaken in the absence of reliable knowledge of the nature of the jobs which the graduates will ultimately obtain. Thus, achieving the much vaunted linkage between students' experiences in higher education and their experiences in the workplace becomes an ever more complex task for all concerned.

The relationships between higher education and work can be depicted in terms of three broad themes: dimensions of higher education relevant to work, dimensions of work relevant to higher education, linkages between higher education and work (Brennan *et al.*, 1995). These are described in Table 2.

Table 2: Relationship between Higher Education and Work

(Source: Brennan, Kogan and Teichler, 1995, p2)

<i>Dimensions of higher education relevant to work</i>	<i>Linkages between higher education and work</i>	<i>Dimensions of work relevant to higher education</i>
<ul style="list-style-type: none"> ● Quantitative and structural developments ● Curricula, training and socialisation ● Educational provisions and students' options 	<ul style="list-style-type: none"> ● Labour market, intermediary agencies and transition ● Regulatory system ● Life-long education and work 	<ul style="list-style-type: none"> ● Employment ● Career ● Work tasks and requirements ● Profession ● Quality of work and employment

In terms of the first of these sets of dimensions, relevant structural aspects of higher education are types of institution, types of qualification and fields of study. Curriculum aspects include both the content and organisation of the curriculum, approaches to teaching, learning and assessment, (of which forms of work based learning constitute an increasingly important part) plus the more general socialisation impact of higher education on students involving motivational, attitudinal and behavioural elements. However, it must always be remembered that the relevance of higher education to work is ultimately not achieved through the characteristics of educational provisions but through the uses which students make of these provisions.

Of dimensions of work relevant to higher education, employment (in quantitative and structural terms), career, work tasks and requirements, profession, quality of work and employment indicate a whole series of facets, frequently multi-dimensional, which have to be taken into account. Attempts to reduce the complexities of graduate employment to a single dimension of 'employability' serve only to obscure the nature of the considerations involved. Variations in the ways in which we conceptualise and contextualise work can send very different messages to higher education.

Finally, three different kinds of linkage between higher education and work can be noted. Direct linkages are the labour market, the effects of intermediary agencies (*e.g.* careers services) and transition processes (the period between obtaining a degree and starting 'permanent' employment). The regulatory system includes political developments and governmental policies in general. It also includes the policies of employers' agencies and professional bodies. The sequential pattern of study followed by work is increasingly blurred by relationships of lifelong education and work (Brennan *et al.*, *op. cit.*).

Trow has commented that "education is a process pretending to be an outcome" (Trow, 1995, p20). From this standpoint, the contribution of higher education to work can never be fully known.

The real and substantial effects of the experience of higher education extend over the whole lifetime of graduates and are inextricably entwined with other forces and experiences beyond our walls' reach.

(Trow, *op. cit.*, p21).

Moreover, we might note the growing tendency for the 'experience' of higher education to become, in fact, a set of experiences gained at various times in life and in various relationships to work experiences.

Accordingly, the relationship between higher education and work is marked by 'beliefs' and 'assertions' which defy test and which change over time. Periods of faith in the economic benefits of higher education oscillate with periods of scepticism and with concerns about graduate 'oversupply' and 'underdevelopment'. Beliefs about the knowledge and skills required to undertake specific work tasks change over time as do the beliefs about the capacities of different institutional and curricula forms to transmit them to their students. While the qualification requirements of jobs have undoubtedly risen over the last fifty years, some have seen this as representing a 'diploma disease', largely unwarranted by the nature of work (Dore, 1976).

Some things, however, are clear. Notwithstanding rumours and periodic panics to the contrary, there is virtually no long term graduate unemployment. What is also clear is that graduate employment ceased long ago to be concerned only with elite or high status jobs (Teichler, 1996). A high proportion of today's graduates obtain employment in areas for which possession of a degree has not traditionally been necessary. The employment destinations of graduates vary according to the type of course studied, the type of institution attended as well as according to student characteristics such as ethnicity, social class, age and gender (Brennan *et al.*, 1993). In the short term at least, graduates, even in vocational subjects, do not appear to find their studies especially useful in doing a job (Brennan and McGeevor, 1987, Teichler, 1988,

Boys *et al.*, 1988). But they frequently find them valuable in obtaining a job and they rate highly the benefits of higher education in terms of greater self-awareness, personal confidence, and general intellectual and critical growth and development (*ibid.*). Employers too appear to value the general intellectual benefits of higher education although this is sometimes accompanied by complaints about the absence of certain core skills (Roizen and Jepson, 1985, Stoddart, 1991). Furthermore, some recent studies of graduate utilisation in particular industries (*e.g.* engineering, banking) point to the possibility of first degree graduates being used to compensate for deficiencies in intermediate skills shortages (Jones, *et al.*, 1994, Mason, 1995, quoted in Keep and Mayhew, 1996).

Most of the literature on the relationship between higher education and work concentrates on higher education's contribution to pre-entry preparation for work. Elsewhere, one of us has drawn the distinction between 'regulatory' and 'training' aspects of the relationship (Brennan, 1985, Silver and Brennan, 1988). From this point of view, the currency of a higher education qualification in the labour market consists of (i) the power to regulate entry into a specific sphere of employment, and (ii) the extent of the occupational training which has been delegated to higher education by employers. Both sorts of currency may in fact be limited. A qualification may be considered essential, desirable or irrelevant for entry into a particular job. Occupational training may be considered to have been completed through higher education (but rarely), or partially completed through higher education. Additionally, higher education may be seen as a necessary educational base for further training, an optional base for further training or (again increasingly rarely) no explicit employment relevance claimed at all. As we shall see, the regulatory and training aspects also apply to work based learning with higher education's contribution particularly relevant to regulatory aspects.

The distinction between regulating entry and providing preparatory education and training mirrors the classic economic distinction between 'screening' and 'human capital' theories, the former seeing employers' valuation of a degree in terms of sorting and selecting potential employees, the latter representing a belief in 'added value' obtaining from the content and experience of studying in higher education. 'Screening' theories have tended to be popular at times of scepticism concerning the relationship between higher education and work, 'human capital' theories at times of optimism.

Such evidence as we have suggests that the regulatory value of a higher education qualification may not be strongly related to the usefulness of the occupational training provided. In our own work on the employment of university and polytechnic graduates, the former were more likely to have received clear benefits in obtaining entry to employment (getting better paid and more satisfying jobs than their polytechnic counterparts) while the latter felt better prepared by their higher education for the jobs they obtained (Brennan *et al.*, 1996).

Possession of a degree may increasingly be a pre-requisite for entry into large areas of the labour market (Teichler, 1996) but other factors determine the relative employability of different graduates. These factors divide between the social and the educational. As has already been noted, the social background of the student continues to play a vital role in determining employment prospects. But so too do educational factors such as type of institution attended and type of course studied. The social and the educational factors are frequently related to each other. Thus, the University of Oxford invariably tops the graduate employment lists (Universities' Statistical Record, 1995). Is this because of the educational experiences provided or the types of student recruited? More interestingly perhaps is the second place of Brunel University in the employment lists. Brunel provides sandwich courses for the majority of its graduates and their apparent employment success - along with the success of sandwich students from the former polytechnics - is some indication of the potential of educational curricula to compensate for the lack of social and cultural capital.

Many higher education institutions have in recent years attempted to modify their curricula in ways relevant to the employment needs of their graduates. This emphasis was always present in the former polytechnics but initiatives such as Enterprise in Higher Education and Education for Capability have spread it much more widely (Jones, 1996). Studies have indicated the

various ways in which higher education curricula can be modified to meet perceived employment needs in disciplines as diverse as history and engineering (Boys *et al.*, 1989). Thus,

The spectrum of skills that academics were concerned about promoting includes generic study skills, intellectual skills, experimental and technical skills, and general and specific work skills. Within this range, there was increasing interest in identifying and promoting transferable skills.

(Kogan and Brennan, 1993, p19)

Work based learning is frequently seen as having a part to play in such endeavours. But only a part. Strategies of interdisciplinarity, project work, modularity, team work and so on are increasingly used to make the curriculum more relevant to employment. There are large differences between institutions and between subjects. A major study conducted during the 1980s concluded that the greater the prestige and security of the academic department, the less would be its responsiveness to perceived employment needs and the stronger would be its commitment to disciplinary values and requirements (Boys *et al.*, *op. cit.*). Some would question how far such differences have survived into the 1990s.

Looking at the future of the relationship between higher education and work, a number of trends can be identified, not all of which point in the same direction. Teichler has recently pointed to three trends supportive of a closer relationship between higher education and work. First, there is the 'scientification' of employment and work, with a growing number of positions requiring high level skills (Teichler, 1996). The second is that, with its expansion, the importance of higher education in the training and education of those employed in middle level positions increases. Third, decline in funding levels for higher education accompanied by greater public accountability is increasing the pressure on higher education institutions to be responsive to 'extrinsic' social and economic needs. But Teichler also points to two potential counter-trends. One is the erosion of faith in the potential of external planning, including manpower planning, to steer the future shape of higher education. Second is the lack of political consensus about either goals or the measures necessary to achieve them.

Thus the desire to shape education according to economic and social demands has been more or less counterbalanced by scepticism as regards its necessity, implementation and impact.

(Teichler, 1996, p98).

The relationship between higher education and work is a product of the assumptions, values and behaviour of a wide set of actors: students and graduates; employers - managers, supervisors and recruiters; the staff of higher education institutions - academics, administrators and managers; politicians and civil servants; and a variety of intermediary agencies including careers services and quality assurance bodies. None of them is acting on anything like perfect information. Although much is known about the relationship between higher education and work, little is *widely* known. Assumptions and actions are based largely on value consensus achieved at particular places and particular times rather than on known causal relationships. Indeed, many of the initiatives in recent years to achieve closer links between higher education and work have been about spreading employment values into higher education, affecting both academic staff and students. Few parts of higher education can completely resist employment imperatives, however shaky their foundations might be.

The trends and counter-trends pointed to by Teichler have resulted, in many higher education institutions, in a tension between finding an appropriate response to growing external pressures for a higher education curriculum more relevant to employment needs and maintaining academic standards and values in rapidly changing circumstances (of which expanded intakes and reduced resources are but two of the most visible factors). Developments directed towards the achievement of the former are frequently perceived to run counter to the preservation of the latter. These tensions are felt by individual academics and groups of staff when considering the introduction of innovative forms of curricula and teaching, learning and assessment methods.

They are also experienced as conflict across institutions as developments initiated centrally or by externally-related liaison units run counter to the values and interests of 'mainstream' academics.

Nowhere are such tensions more visible than in attitudes towards work based learning in higher education. While probably a clear majority of academic staff would accept the potential value to students of a period of work experience, there would be far less consensus as to its *academic* value and its relationship to the achievements and standards required of students in order to obtain their degree or other qualification. Even on well-established sandwich courses, an entire year of work experience may not 'count' towards the achievement of an academic award. Frequently, work experience is regarded as an 'added optional extra', valuable in its own right to student and employer alike but separate and different from the 'main business' of academic study and the award to which it leads. Even when work experience is seen as a clearly essential part of a course of study, as in professional practice in medicine or teaching, it is generally regarded separately as the 'practice' element and, unlike the academic elements, is unlikely to be the basis of summative evaluation of the students' achievements, as in degree classifications and the award of 'distinctions'.

However, this duality of the 'academic' and the 'practical', of the nature and value of learning in the workplace and the nature and value of learning in the classroom or lecture theatre is being challenged by some of the more recent developments in work based learning. It is also being questioned more generally in some of the larger debates about the creation of a 'learning society' and the place in it of higher education institutions and other learning contexts.

Towards a Learning Society

The concept of the 'learning society' has been debated intensely during the 1990s. However, there is nothing particularly new in the idea. It was certainly foreshadowed in the 1970s in discussions of the characteristics of the 'post-industrial society' (Bell, 1970), and 'learning to be' (Faure, 1972).

It is now almost thirty years since a symposium on continuing education, held in Oxford in 1967, brought together UK educators who were concerned to take the idea of 'l'éducation permanente' seriously (Jessup, 1969), following an earlier (1965) meeting of UNESCO's International Committee for the Advancement of Adult Education, where a paper on 'Education Permanente' had been submitted. Thus, Cyril Houle (writing about continuing professional education) noted that pre-service training was only the first stage of the process of education occurring during the total life-span of professionals.

If you teach a person what to learn, you are preparing him (*sic*) for the past. If you teach him how to learn, you are preparing him for the future.

(Houle, in Jessup, 1969, p59)

The question of 'where' such continuing education might take place seemed to be limited to a consideration of institutions outside of the formal system of higher education (*e.g.* colleges, libraries, museums). For example, Jessup stated

we need a comprehensive (a 'holist') attitude not merely in one particular area, the organisation of secondary education, but throughout the whole range of institutions (*sic*) which exist in order that people may have opportunities to learn.

(Jessup, 1969, p30)

The recognition of the workplace as a place of learning was clearly to the fore when Knapper and Cropley developed a blueprint for the adoption of lifelong learning principles (Knapper and Cropley, 1985). They noted that a system of lifelong education would

- last the whole life of each individual;
- lead to the systematic acquisition, renewal, and upgrading of knowledge, skills and attitudes, as become necessary in response to the constantly changing conditions of modern life, with the ultimate goal of promoting self-fulfilment of each individual;
- be dependent on people's increasing ability and motivation to engage in self-directed learning activities;
- acknowledge the contribution of all available educational influences, including formal, non-formal and informal.

(Knapper and Cropley, 1985, p29)

The authors go on to assert that

The implementation of lifelong education would have sweeping implications for schools and universities.the *workplace* (emphasis added) would be seen as one of the major learning sub-systems of society, one in which a great deal is already learned and even more could be learned if its learning potential were adequately acknowledged and emphasised.

(*ibid.*, p37)

The idea of *acknowledging* and *emphasising* learning in the workplace is key to notions of work based learning in higher education.

Throughout the 1980s there was a burgeoning interest in experiential learning generally, and particularly (in the words of Norman Evans, then Director, Learning from Experience Trust)

Where, if at all, the assessment of experiential learning might fit into higher education and, if anywhere, how we could set about it.

(Evans, in Mulligan and Griffin, 1992, p11)

Assessment and accreditation of experiential learning (mirroring Knapper and Cropley's "emphasising" and "acknowledging" learning in the workplace) became a major feature of the move to "open up formal institutions of education to a wider population of learners" (Mulligan and Griffin, 1992, p20). The same authors note that

the process of assessment and accreditation has thrown up some highly significant issues about the ways in which knowledge and learning have been traditionally conceived in education.

(*ibid.*, p20)

In a similar fashion, work based learning in higher education also challenges notions of knowledge and learning in higher education more generally.

In the 1990s, the concept of the learning society has been adopted by policy makers, nationally and internationally, as a rallying cry for social and economic re-generation, benefiting individuals, firms and society alike. Growing competition from the economies of the Pacific rim, the heightened pace of technological change, and a growing awareness of the importance of skilled labour as a key economic resource are among the main factors cited for its importance in the 1990s.

The 1995 White Paper from the European Commission identified three "factors of upheaval" associated with the learning society: the "internationalisation of trade", the "dawning of the information society" and the "relentless march of science and technology" (EC, 1995, p5). The OECD has identified "fundamental changes in production, in global markets and in the rise of multinational companies" as the factors making lifelong learning a key government strategy in the 1990s (OECD, 1995, p42). The DfEE White Paper of 1995 refers to the need for individuals to invest in lifelong learning to "develop their personal competitiveness" and also promises the reward of "increased competitiveness" to employers who invest in "continuous learning for all their workers" (DfEE, 1995).

The key, and simple, idea of the learning society is that a person's initial education and training will be insufficient to meet the needs of working life. Most people will have several rather than single careers. The nature of jobs will change dramatically. Only by continuous learning throughout their working lives will individuals remain employable and societies competitive. And continuous learning requires two things: (i) capacity and motivation on the part of the individual to continue to learn, (ii) the provision of accessible learning opportunities within society.

On the whole, the arguments in favour of lifelong learning have been couched in terms of an "economic" rather than a "democratic imperative" which "requires social cohesion and political freedom as well as economic prosperity" (Coffield, 1995, p8). However, the democratic imperative is recognised at least by the European Commission which places considerable emphasis on policies to "combat exclusion". In order to "prevent a rift in society", the Commission proposes that

a special effort has to be made for the most vulnerable sections of the population, particularly in the urban areas hardest hit by unemployment. This effort depends on initial and continuing training, as well as measures to give young people leaving school with no qualifications a second chance.

(EC, 1995, p48)

The relevance of these concerns to the UK is evidenced by the recent study by Gordon and Forrest which describes the geographic distribution of the highly educated (people with degrees) in England in terms of the 366 local authorities with "three quarters of the top ranked 50 districts in London and the south east" (Gordon and Forrest, 1995, p69, quoted in Coffield, 1995). And the differences between districts are large. In the City of London, 29.9 per cent of adults have degrees. In Kensington and Chelsea, it is 25.1 per cent. Whereas in Barking and Dagenham the figure is 1.5 per cent, in Easington 1.7 per cent and Corby 1.8 per cent.

Thus, for many writers the contours of the learning society have a social and political dimension as well as an economic one. They are concerned with giving people a 'second chance', with discovering, rewarding and exploiting 'talent' wherever it is to be found. Related to higher education, therefore, the learning society implies a greater emphasis upon the 'extrinsic' functions of institutions, a concern with 'social engineering', with meeting the diverse needs of an ever-widening set of clients or customers rather than with the pursuit of knowledge for its own sake. As a consequence, the learning society may have a greater concern with the certification of learning than with learning itself.

The theme is taken up by Barnett in a discussion of the conception of learning in the learning society. He sees two dimensions: (i) learning as instrumental in character, having certain kinds of effects on the world, and (ii) learning as an attribute of individuals (Barnett, 1995, p72). He goes on to suggest a number of dimensions around which learning might be understood:

instrumental learning	v	learning for the life world
individualised learning	v	collective learning
specific knowledges	v	generalised knowledge and skills
knowledges which show themselves in <i>practice</i>	v	knowledges which are tested in theoretical domains
learning which is summoned	v	learning which is inner directed
learning which is made public (over which there is some kind of surveillance)	v	learning which is private
learning which is assessed	v	learning which is not assessed

(Barnett, 1995, p72)

Barnett argues that, with the one exception of specific knowledges, it is the characteristics of the left-hand column which are being given most attention in conceptions of learning in the learning society. He goes on to object to these biases, arguing that

Modern society is so complex and faces so many challenges on so many fronts that no form of learning should be excluded. *Space* should be made available to all voices, to all perspectives, to all discourses which carry a mission to learn. Any attempt to close our definitions of learning, our processes of learning, the ways in which we organise for learning should be resisted. We need co-operative learning, learning for life-enhancing ends, private learning and learning oriented towards theoretical frames as much as we need pragmatic skills, problem-solving, and powers of application. *In its own interests*, the learning society cannot afford to eschew any form of learning. The release of our human potentialities requires nothing less.

(Barnett, 1995, p72)

Where does this leave higher education within the learning society? Barnett's plea to exclude no forms of learning from the learning society does not necessarily imply that certain forms might not be excluded from the university or college. We can approach this question, first, from the perspective of the learning society and, second, from the perspective of British higher education as it is today.

It is interesting to note how little many conceptions of the learning society have to say about higher education. For example, the EC White Paper places its emphasis in two main areas: (i) reintroducing the merits of a broad base of knowledge, (ii) building up employability. It calls for actions in five main areas: (1) encourage the acquisition of new knowledge (including new ways of accrediting technical and vocational skills), (2) bringing school and the business sector closer together, (3) combat exclusion: offer a second chance through school, (4) proficiency in three Community languages, (5) treat material investment and investment in training on an equal basis.

Whilst these are measures which certainly do not exclude a role for higher education, none of them necessarily places higher education centre stage within the learning society. Indeed, when all organisations become 'learning organisations', any special claims for higher education institutions might become more difficult to sustain.

Looked at from the point of view of higher education today, we find that in many institutions traditional functions of initial education still predominate. In 1992, 84 per cent of students admitted to degree courses in 'old' universities were under 21. In the 'new' universities, under 21 year olds constituted 68.1 per cent of the new entrants (Coffield, 1995, p6). However, such students - full-time first degree students - today only account for 46 per cent of all higher education students (HESA, 1995). Part-time first degree students represent 10 per cent of the total and higher degree students (full-time and part-time) represent 14 per cent. Part-time students overall account for 28 per cent of the student population in the UK. Thus, around one third of all higher education students are engaged in something other than full-time initial higher education.

Such developments have provoked alternative visions of higher education from writers such as Duke (1992), "the learning university", and Robertson (1994), "choosing to change". Yet, in some institutions, it is also possible to see, with Coffield, a general absence of change, with universities largely by-passed by the learning society.

For all their rhetoric about a growing commitment to lifelong learning, the 'core business' of the traditional universities is likely to remain the initial education of young school leavers.

(Coffield, 1995, p6)

However, Coffield does not define what he considers to be 'traditional universities' and it is possible to conceive of such institutions, not only as marginal players in the learning society, but as representing an increasingly minority part of an ever-expanding and diversifying system of mass higher education.

If the place of higher education in the learning society is unresolved, the importance of learning in the workplace appears not to be in dispute. The National Targets for Education and Training call for 70 per cent of all organisations employing over 200 staff to be recognised as Investors in People (Coffield, 1995, p9). Employee development programmes report considerable success in terms of high participation rates (Comey, 1995). Studies of economically successful firms emphasise the importance of the continuous development of all staff (Wickens, 1995). Learning organisations, characterised by their ability to respond quickly to rapid changes in their business environment are claimed to need flexible and adaptable workforces able to respond accordingly. Although not conclusive, a study undertaken on behalf of the (then) Employment Department involving case studies of ten UK companies (covering both service and manufacturing sectors) which had introduced education and training initiatives not directly related to job functions, found that those companies believed their initiatives had played a major role in raising productivity, reducing costs and hence increasing profitability (Metcalf, 1992). Particular benefits identified included improvements in team working (with employees using their communication skills and new-found confidence to contribute fully); the creation of a learning culture (and employees' realisation that they *could* learn) and ability to adapt to change - rather than fear and resistance to change; improvement in product quality and skills levels. Perhaps one of the best known examples of a major company encouraging the continuing development of its workforce is the Ford Motor Company, which supports employee development through both self-selected programmes (not necessarily directly to Ford's own business) and through more focused programmes aimed at updating the company's technology edge. On the latter front, Ford has developed specifically focused programmes with a number of different UK universities. Perhaps more significantly, it is also currently developing a Ford Global Systems Engineering Masters degree (Middlesex University, 1996).

Yet, even assuming a commitment by employers to invest in the education and training of *their* staff, a feature of the modern economy is that a significant proportion of the workforce does not have a single long term employer. Many workers are 'marginal' to their employers in terms of being part-time or on short-term contracts or both and risk missing out on within-company training opportunities. Small and medium sized enterprises - who employ a growing proportion of the working population - may have less capability of providing training than larger enterprises. Moreover, mobility of labour calls for learning in the workplace to be certificated in order for it to be transportable. The EC White Paper puts it this way:

In the learning society the individual must be able to have his or her basic, technical skills validated, irrespective of whether or not the person concerned acquired them through training leading to a qualification

A number of skill accreditation and assessment systems developed for their own purposes by companies in Europe could also be adopted for general use subject to validation by experts. An accreditation system of this kind, on a voluntary basis, widely available in Europe and involving universities, chambers of commerce and specific

business sectors, would complement the formal qualifications systems and would in no way be a replacement.

(EC, 1995, p38)

As with the more general relationship between higher education and work, it is not easy to separate 'facts' from 'beliefs' in discussions of the learning society. Whereas there are sceptics (*e.g.* Hughes and Tight, 1995), it must be remembered that 'beliefs' can possess the power of 'facts' if they are widely enough held. Thus, although the evidence for the economic benefits of investment in higher education is relatively weak, there is little doubt that employers act as if it were strong. Accordingly, there is a strong imperative for students and employees to act in the same way.

Whether or not learning organisations are in fact more successful is not the focus of this review. Suffice it to say that it is the case that much time and effort is being devoted to promoting the notions of a learning society. Moreover, explicit focus within organisations on developing procedures and practices which characterise a learning organisation (for example, in the form of regular staff appraisal, identification of employee training and development needs, *etc.*) means that, increasingly, employers will be attuned to assessing people's experiences in the workplace and identifying their needs for further training and development through a variety of processes. Such processes could well be amenable for adaptation to serve the purposes of assessing learning in the workplace in relation to the purposes of higher education. Additionally employees themselves will be increasingly familiar with such procedures and prepared to use them in a positive way for their own development.

Learning, Certification and Jobs

A person's learning is recognised in a number of ways. In early life it is the basis for the acquisition of educational qualifications in schools and colleges. At work it is recognised by promotions and by success in external labour markets. For many, it is recognised by the acquisition of professional qualifications and, increasingly, by other forms of vocational certification (*e.g.* NVQs). For the individual, these are the essential ingredients of the 'curriculum vitae' and, as we all know, the CV gets longer as we get older.

Of course, much learning is not formally recognised by any certification. But it may be recognised informally by the individual in a growing self-confidence and by work colleagues in granting greater trust and responsibility. Indeed, within the work group, these informal recognitions of learning are likely to be more important than formal certification. But they are not easily transportable to other work groups.

As we shall see, the relationship between learning in higher education and work based learning is complex. For the young undergraduate, work based learning takes place in the firm context of the higher education curriculum. It is the filling, 'thick' or 'thin', in the sandwich. For the adult worker in the learning society, the situation is likely to be reversed. The strong context is that of work or profession. Any period of formal education - a short course or part-time course - is now the filling in the sandwich of work. (This is not to deny, of course, that many short and part-time courses are taken for intrinsic interests unrelated to work. But the point remains: the context is not primarily an educational one.)

CVs differ. Some people make up for a lack of qualifications with work based learning. But increasingly this is only possible to a limited extent. As Peter Scott has remarked, "being a graduate has become a semi-compulsory component of being middle-class" (Scott, 1995, quoted in Coffield, 1995) and hence of obtaining a middle-class job. Thus, the formal recognition of work based learning for purposes of educational certification becomes important for social equity in labour markets which are increasingly 'closed' to those without formal

qualifications. This implies the translation of work based learning from its employment context into the academic context of higher education.

Portwood has distinguished between 'transportation', 'translation' and 'transformation' in linking work based learning to academic qualifications (Portwood, 1993). Transportation refers to the "straightforward transportation of existing award bearing programmes into the workplace" (Portwood, 1993, p62), a "one way traffic" aiming to simply reproduce college-based learning in the workplace. Whatever the benefits of transportation approaches to the workplace, they pose minimal recognition problems to higher education institutions.

In Portwood's 'translation' approach, both parties (higher education and employers) supply learning "which the other could use once it had been translated into their own terms" (Portwood, 1993, p63). Reassurance to the academic community about the validity of the translation process has tended to come from a reliance on conventional assessment forms and a tendency to

ignore work based learning other than professional courses or company training programmes which can be matched directly with the content of higher education courses of modules.

(Portwood, *ibid.*, p64)

Finally, Portwood presents a 'transformation' approach which presents the possibility that work based learning

will not only link academic and vocational qualifications but will transform qualifications both in the workplace and in the campus.

(*ibid.*, p66)

Such transformation will be achieved through an emphasis on learning outcomes rather than place and processes of learning.

Portwood is an advocate of transformation. Yet transformation poses the largest challenges to higher education institutions. After all, if comparability between the learning achieved in different higher education subjects defeats the academic community, at least in terms of the workings of the external examiner system (Silver, Stennett and Williams, 1995), to what extent is it likely that learning achieved outside of higher education will be accorded comparable recognition?

To recognise that there are difficulties in comparing learning that takes place in higher education with learning that takes place elsewhere is not to devalue the latter. Indeed, for purposes within the workplace, learning which derives from the workplace may be superior to study within higher education. A classic study by Becker *et al.* of medical students in the US concluded that medical education on campus had relatively little to do with the requirements of medical practice. The latter would be learned primarily on the job (Becker *et al.*, 1961).

What studies such as Becker's suggest is that much learning is context specific. Thus, at university medical students will learn to be medical students. Only when they have commenced medical practice will they learn to be doctors. Even if such an extreme view is not tenable, it is probably true that the learning which takes place in higher education is intended to be long-term and individualistic whereas learning in the workplace tends to be context specific and frequently collective - 'this is how we do things here'. The problem then becomes two-fold: (i) how to organise work based learning so that long-term learning is enhanced; (ii) how to obtain recognition for such learning. The problem is only exacerbated by the increasing diversity to be found in both higher education and in employment. At a time when equivalence of standards *within* higher education is being disputed, the prospects of gaining equivalent recognition for learning undertaken elsewhere might not be good.

It is these prospects and the problems which are associated with them which are the focus of the rest of this review. Many of the issues raised are technical in nature and our discussion of the technical issues involved will draw heavily on the results of a large number of development projects funded by the (then) Employment Department. This governmental initiative had three inter-related objectives:

- (i) to help develop a higher education system flexible and responsive to changing labour market and working life demands;
- (ii) to assist higher education's responsiveness to an increasingly diverse range of learners seeking to develop their skills for employment;
- (iii) to encourage within higher education a sharper focus on learning and its assessment.

The Employment Department's specific interest arose from its aim "to support economic growth by promoting a competitive, efficient and flexible labour market" (Robert Jackson, then Parliamentary Under-Secretary of State, quoted in 1990 in *The Skills Link*).

The results of these and other development projects related to work based learning are described in an appendix to this review. However, if the review draws extensively on much of this government funded work, this is not to deny the existence of a much larger body of work undertaken by academic staff in a wide range of subjects and institutions and by employers in a similarly wide range of work types and employment sectors.

The scale and momentum of the interest and activity in work based learning in higher education should be borne in mind. Although technical problems undoubtedly exist, the acceptance of work based learning within higher education may ultimately have more to do with values and ideology. As more staff become involved in work based learning, so many of the developments described in this review will appear commonplace. Acceptability will have as much to do with familiarity as it will have to do with hard evidence about the achievements of work based learning and their contribution to economic success. As with the relationship between work and higher education more generally, the value of work based learning will be subject to a range of beliefs and theories that will be held in different places and at different times. This review, therefore, should be seen as a contribution to a continuing debate, both within higher education and between higher education and political and economic interest groups, about the socio-economic contributions of today's higher education institutions. Technical debate will not resolve questions of purpose, but it can inform questions of possibility.

Summary

There have been significant changes in the size and shape of higher education during the last few years. There is also now a much greater emphasis on vocational education and on links between higher education and the professions. The relationship between work and higher education is complex and is ever changing as a consequence of changing assumptions, values and expectations of students, graduates, employers, academics, politicians and civil servants. As a result of recent changes in higher education and the growing acceptance of the concept of a learning society, the pervasive idea that learning in the classroom is of greater value than learning in the workplace is now being challenged.

There has been much discussion, now with growing support from Government, employers and academia for the idea that learning does, and should, continue after formal education stops. A learning society means lifelong learning for everyone. It is recognised that the nature of jobs will continue to change, and that job mobility will increase. It is therefore suggested by the proponents of the learning society that only by continuous learning throughout their working lives will individuals remain employable and societies remain competitive. However, the place

of universities in a learning society is as yet unresolved. If all organisations became "learning organisations" it might become more difficult to claim a special role for universities.

Chapter Three: Teaching and Learning in Higher Education

Introduction

Higher education is experiencing a time of rapid change which, for some commentators, is verging on the revolutionary, for others, constitutes a crisis, and, for all, is giving rise to a questioning of taken-for-granted assumptions about what constitutes higher education. We have discussed some of the external contexts of these changes - the changing relationship between higher education and work, calls for a 'learning society' - in Chapter Two. In this chapter, we look at some of the questions posed for individual higher education institutions arising from these changes, questions concerned with what to teach and how to teach it.

Work based learning is of course but one form of off-campus learning recognised in higher education. The growth of open and distance learning, for example, is almost certainly the forerunner of an explosion in the use of new technologies that will transform the relationship between teacher and taught. Yet new technologies do not necessarily of themselves raise questions about the higher education curriculum. Innovation in methods of course delivery can go hand in hand with conservatism about course content.

Work based learning poses greater challenges because it raises questions about the authority of higher education, about the knowledge claims of academic institutions versus the claims of other sources of learning. The easy recognition of the claims of work based learning would, after all, threaten some fundamental premises at the heart of the higher education enterprise. In this, as in other aspects of current higher education debates, it is not always easy to distinguish analysis from advocacy. In reporting some of the major recent contributions to debates about teaching and learning in higher education, we have attempted to keep to the analytic but we would have to acknowledge that most contributions can also be placed within a normative frame of reference, explicitly or implicitly.

The chapter starts with a discussion of changing forms of knowledge and the assaults on scientific tradition - what Scott has called "the unravelling of epistemological security" (Scott, 1996, p5) - coming from post-structuralism and post-modernism and the claims of relevance and relativism. Perhaps the important point to note from this discussion is that the development of work based learning is taking place at a time when the authority of traditional forms of disciplinary and other propositional knowledge may be on the wane.

The second section looks at some of the aspects of the current debate about the higher education curriculum itself, the influences which shape it and, in particular, some of the more recent external attempts to shape it in directions relevant to the world of work. We might note, in this context, how the debate shifts subtly from questions of knowledge to questions of skill.

In the third section, we review some major theories of learning which are relevant to work based learning. Such theories question the knowledge/skills distinction and point to the important inter-relationship between context, content and methods of learning and the personal attributes of the individual learner. In a fourth section, we discuss some of the current debates (and controversies) concerning learning outcomes and competences. It is the application of these theories and debates to work based learning which lead us into the review of technical issues which forms the focus of the remaining chapters.

Changing Forms of Knowledge

Work based learning is integral to work. It is also commonplace. It is a feature of any job. Work based learning may be augmented for some occupations by university- or college-based learning. This is not so commonplace although it is becoming more so. University- or college-based learning is overwhelmingly pre-entry learning. It may be an essential pre-requisite for entry to a particular occupation, it may be a useful pre-requisite or it may be largely irrelevant to entry. Although the claims for continuing professional education are made increasingly loudly, it remains the case that in most countries higher education institutions have remarkably little stake in this area of learning. Higher education has been overwhelmingly about preparation for *entry* into the labour market, although as we noted in Chapter Two, proponents of the learning society would see a quite different emphasis in the future.

Work based learning then is normal, it is experienced by virtually everyone. University- or college-based learning is an experience restricted (still) to a minority in most countries, albeit a rapidly growing one. Looked at this way, it is not work based learning that is in need of investigation, but the 'special' learning that takes place in higher education. Indeed, what is so special about it? Does it have distinctive features which cannot be found in work based learning? Are such features intrinsic to the type of learning or are they more to do with the authority vested in higher education by societies to legitimise and certificate learning?

Although the origins of universities in most countries are to be found in occupational preparation, this was limited to a very small sub-set of occupations - the clergy, law and so on. Yet, as Eraut reminds us, the possession of a degree has become an essential pre-requisite for entry into many such occupations only recently. Thus, a degree only became a requirement for barristers in 1975 although 70 per cent of practising barristers were graduates even in 1875. Even today, solicitors do not need to have a degree although 90 per cent of the 1985 entry were graduates (Eraut, 1994, p9). If an undergraduate education may have a relevance to work, many occupations have until recently managed without it. And, from the point of view of higher education, occupational preparation has tended to be seen as a secondary, albeit important, objective of learning.

If there has been a 'traditional order' in undergraduate education in England (and Wales but only questionably in Scotland) in this century, it is that degree study is about two things: (i) induction into a discipline, leading to (ii) development of the mind (Henkel, 1988). Thus,

students learn to conceptualise, structure, analyse and synthesise particular dimensions of human experience; they learn general principles which they can develop through specialisation.

(Henkel, *ibid.*, 1988, p178)

However, this traditional order has been in retreat for some time, at least in the newer universities. Discipline-based degrees have been joined by large numbers of thematic or domain-based degrees which are frequently less concerned with what a student will 'know' at the end of a course than with how they will use what they know and with what they can do (Silver and Brennan, 1988). Such degrees may draw selectively from a number of disciplines, but disciplinary characteristics will be subsidiary to the 'integrating' concept of the theme or domain and this, in many cases, will be defined outside higher education. Thus, discussing the growth of business and management studies, Henkel notes

the principles and concepts are grounded in the activities of the business world, not in theories formulated in academe; and they are intended for the practical mastery by students of contextualised skills.

(Henkel, *ibid.*, 1988, p84)

Such courses - and many were developed during the 1970s and 1980s - exemplify the features of what Bernstein described as an integrated code, where an overarching ideology or theme takes precedence over contributing disciplines in shaping the student's educational experience (Bernstein, 1971). As we shall see later, the modularisation of higher education curricula threatens to undermine the rationale and operation of such courses.

Conceptions of knowledge in higher education frequently distinguish between the 'pure' and the 'applied', entailing two further kinds of distinction: between the pursuit of knowledge for its own sake and the utilisation of knowledge, and between the creation and advancement of theory and its application (Henkel, 1988). The first mentioned in each case are seen by many to be the driving force of disciplines. Writers such as Hirst regard disciplines as distinct forms of knowledge, each with its own key concepts, distinctive conceptual structure and criteria for truth or validity (Hirst, 1974). The driving force for the second are 'real world problems' and their study will draw upon all sorts of knowledge, disciplinary and other.

More recently, these kinds of distinctions have been re-worked in different ways. Scott and others have referred to mode 1 and mode 2 knowledge production (Gibbons *et al.*, 1994, Scott, 1995) and Eraut has distinguished between 'propositional' and 'process' knowledge (Eraut, 1994). We will examine each in turn.

According to Scott, mode 1 knowledge has four characteristics. It is (i) linear, causal and cumulative, (ii) regarded as a closed system ("only scientists counted"), (iii) rooted in disciplinary authority and therefore reductionist, (iv) publicly organised and funded (Scott, 1995, p142-3). The essence of mode 1 knowledge is captured by the following:

For many, mode 1 is identical to what is meant by science. Its cognitive and social norms determine what shall count as significant problems, who shall be allowed to practice science and what constitutes good science. Forms of practice which adhere to these rules are by definition scientific while those that violate them are not.

(Gibbons *et al.*, 1994, pp2-3)

The authority of the university over such knowledge is self-evident. As Scott points out, even the language of 'application' and 'transfer' reinforces this authority by implying that science is autonomous and is the prime mover in the production of knowledge.

Although it might help eventually to solve practical problems, scientific problems were initially defined within and by the scientific community.

(Scott, 1995, p142)

Mode 2 knowledge reveals, according to Scott, quite different characteristics. First, whereas mode 1 is linear and cumulative, mode 2 knowledge is 'multi-variant, unsystematic and even anti-coherent'. Its source is not only or even mainly to be found within the university but in the larger society, reflecting the dynamics of markets and the transformations of cultures. Second, mode 2 is an open system, users are 'creative agents' not 'passive beneficiaries'. User conceptions play a key role in determining scientific priorities, definitions of problems and the acceptability of solutions.

The third characteristic of mode 2 knowledge production is that it is synoptic. Individual disciplines are inadequate to its needs because "they are organised around internally generated affinities and self-referential norms" (*ibid.*, p145). The 'totality and interconnectedness' of knowledge requires the creation of 'multi-disciplinary' teams, the 'transcendence' and even 'deconstruction' of individual disciplines.

Fourth, mode 2 knowledge production takes place largely in the market or the wider social arena. Unlike mode 1 knowledge, mode 2 does not require a 'privileged' and 'protected' arena for its development. It is no longer only an 'input' into social and economic processes, it is also an important 'output' of such processes.

The distinctions between mode 1 and mode 2 knowledge should not, as Scott himself points out, be applied too rigidly. Nor are they especially new. At best they are recognisable ideal types of knowledge creation with one type being more or less dominant at different times and places.

At a glance, the distinction seems to map onto the work based learning versus college based learning dichotomy very well. Work based learning is surely about mode 2 knowledge. However, there are some difficulties. Scott *et al.* are referring primarily to the *production* of knowledge, not its transmission. And it is this distinction which may pose problems both for work based learning and for mode 2 knowledge. In mode 2 knowledge, the distinction between production and transmission seems to blur. In the absence of scientific 'authority' who is to determine what counts as 'valid' knowledge? From this point of view, work based learning is a knowledge production process, the results of which will be individual and local rather than collective and, potentially, universalistic. Even if a totally relativistic position does not ensue, this suggests that authority over work based learning must remain in the workplace. Validation of knowledge within a university-based scientific community seems illogical if work based learning is *only* about mode 2 knowledge.

Eraut has drawn a distinction between *propositional knowledge* and *process knowledge* which in some ways seems similar to Scott's distinction between mode 1 and mode 2 knowledge. However, whereas Scott is interested mainly in knowledge production, Eraut is writing in a context of professional education, concerned primarily with the formation of professional knowledge and competence. Eraut distinguishes three forms of propositional knowledge: (i) discipline-based theories and concepts, derived from bodies of coherent, systematic knowledge; (ii) generalisations and practical principles in the applied field of professional action; (iii) specific propositions about particular cases, decisions and actions (Eraut, 1994, p103).

Much propositional knowledge will be publicly available, codified knowledge. Much will be collectively shared within the profession. As such it would appear to be capable of transmission within college based educational courses.

Process knowledge, for Eraut, consists of "knowing how to conduct the various processes that contribute to professional action" (Eraut, 1994, p107). He goes on to discuss five such processes: acquiring information, skilled behaviour, deliberative processes (*e.g.* planning and decision-making), giving information; and metaprocesses for directing and controlling one's own behaviour (*ibid.*).

The two forms of knowledge are clearly inter-related. It is possible to derive some process knowledge from propositional knowledge. Some elements of process knowledge can be codified into propositional knowledge. But a 'practice' or 'action' gap remains. 'Knowing how', in Ryle's terms, cannot be reduced to 'knowing that' (Ryle, 1949). Thus, most types of professional education involve both the transmission of propositional knowledge in college settings and the acquisition of process knowledge by work based learning. Note however that whereas the latter is generally obligatory, the former may be achieved outside formal education. The aspirant lawyer or accountant studying alone at home late into the night for professional examinations is testimony to the fact that the acquisition of certificated professional knowledge does not necessarily require attendance at college or university.

How far can Eraut's distinctions made in the context of professional education be applied more generally in higher education? A partial answer can be gained through examining Eraut's conception of professional training and preparation. He identifies five modes of training and preparation as follows: (i) a period of pupillage or internships, during which students spend a significant amount of time (up to five years) learning their 'craft' from an expert; (ii) enrolment in a 'professional college' outside the higher education system; (iii) a qualifying examination, normally set by a qualifying association, for the occupation; (iv) a period of relevant study at a college or university leading to a recognised academic qualification; and (v) the collection of evidence of practical competence in the form of a logbook or portfolio (Eraut, 1994, p6). Professional training and preparation normally involves some combination of the above.

As Eraut points out, the extent of the involvement of universities in professional preparation in Britain is less, and has evolved at a much slower rate, than in many other countries. He cites the greater power of the professional organisations in Britain, the persistence of elite rather than mass higher education, and the later diversification of the higher education system as the main reasons. However, the first of these factors may point to the principal reason why professional education may be of limited value as a model for examining work based learning in higher education as a whole. It is that the professional body or organisation acts as a source of authority over what is learned that may be largely absent from other occupations. Like disciplines in mode 1 knowledge, professional bodies demarcate boundaries and have authority over what is to count as knowledge within them. As such, work based learning as part of the process knowledge of professional education exhibits the same elements of closure and subjection to a single authority as are characteristic of mode 1 knowledge as a whole.

At this point, the modularisation of the curriculum should be mentioned. This has been the largest and most widespread change in higher education in recent years and one which has major implications for the experiences of students and their teachers. One of its most important features for our purposes is that it entails a transfer of authority over the way knowledge is organised into academic curricula away from academic staff and towards students (Watson, 1989). This in principle limits the authority of both disciplines and professions, the former more so than the latter which have their ultimate authority outside of higher education. It is no less threatening to thematic or domain based curricula, denying the possibility of the central organising concept of 'problem' or 'ideology'. In Bernstein's terms, it represents a shift from the 'integrated' to the 'collection' code, but a collection code where subject disciplines play a smaller role in defining the boundaries of knowledge for the individual student. The 'framing' or educational knowledge is more firmly in the hands of the student (Bernstein, 1971).

So far a number of conceptual distinctions have been drawn concerning types of knowledge and their organisation into educational curricula. If we look at the realities of teaching and learning in higher education, many of these distinctions become difficult to apply. Drawing on two major empirical studies conducted during the 1980s, it is possible to argue that many of these distinctions become blurred.

A study of history, physics, economics, English, engineering and business studies in six English higher education institutions demonstrated that relevance to the economy and to preparation for work was becoming more important for *all* subjects (Boys *et al.*, 1988). Although these subjects differ strongly in their epistemologies, social organisation and history, and in the extent to which their concerns are defined within disciplinary paradigms or by 'real world' problems or ideology, the researchers found a widespread concern with the teaching of skills and the redrawing of subject boundaries in order to meet perceived student needs. For example, a university physics course had introduced a programme of job-seeking and work-related skills. A college of higher education had introduced an institution-wide programme of work orientation. There was a general awareness of the need for the literate scientist, the numerate arts student, the socially aware engineer, for computer literacy and for communications and social skills. There was a shared concern that higher education should be, *inter alia*, 'work related' even if this concern took different forms and resulted in different practices in different subjects.

Courses in engineering and business studies were the subject of a separate study which sought to describe a 'liberal vocationalism' characterised by the following features and present to a greater or lesser extent in all of the subjects studied: (i) curricula selected from several disciplines, (ii) curricula related to 'real world' problems; (iii) an emphasis on breadth of courses and of outcomes; (iv) a concern with long-term employment needs; (v) a concern to produce questioning and critical graduates; (vi) an openness to external - 'industrial' - influences (Silver and Brennan, 1988).

To a greater or lesser extent, therefore, all higher education courses are influenced by disciplinary knowledge *and* by 'real world' problems, including the need to prepare for employment. To which should be added what has been described by Gellert and others as the

distinguishing emphasis of British higher education: a concern with the personal development of the individual. Indeed all of these concerns are recognised in the criteria used by the Higher Education Funding Council for England in its assessment of teaching quality. Under a general heading of Teaching, Learning and Assessment, the Council distinguishes the following 'key features': opportunities to develop knowledge; to develop understanding; to develop subject skills; to develop generic/transferable skills (HEFCE, 1995).

It is worth observing that there has been much debate about the criteria to be applied in the quality assessment of teaching in higher education. The formal positions of the Higher Education Funding Council for England and the Higher Education Quality Council are that objectives should be institutionally set and criteria for quality assessment derived from them - the "fitness for purpose" argument. In practice, this essentially relativistic position is less than convincing. It seems at least probable that academic peers, in their guise as funding council assessors, draw on more universalistic academic norms and values as well as upon disciplinary conventions in making their judgements about higher education quality. And the Quality Council, through its Graduate Standards programme, is raising publicly questions of comparability, both between institutions and between disciplines.

And yet, as Scott has noted, mass higher education is "chronically open" (Scott, 1995, p7). And the implications of this openness are that many of the traditional boundaries around which higher education has been organised have become blurred. Boundaries between universities and other educational institutions, between disciplines, between educational institutional settings and other forms of learning setting have become increasingly fuzzy. And academics have come to cede more and more control over these boundaries to other groups: to administrators, to students, to corporate customers and suchlike. In Scott's words,

there are no longer unified subjects, autonomous domains, protected from the transgressions of the market and of politics.

(Scott, *ibid.*, p7)

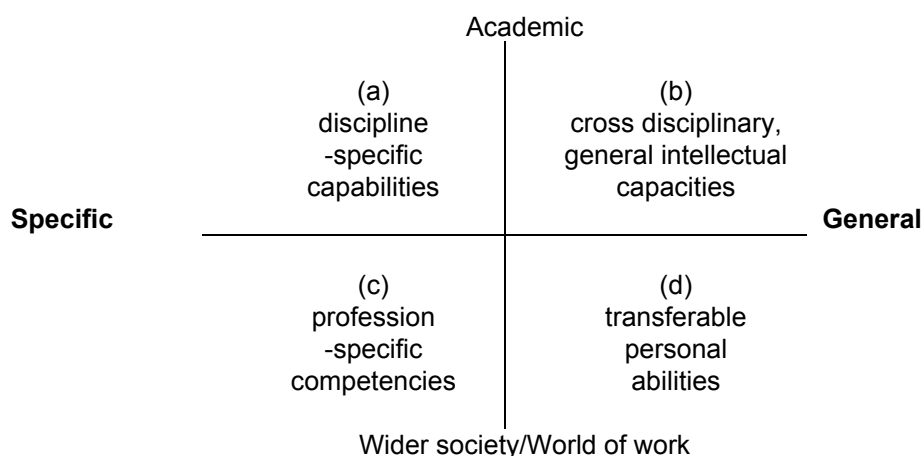
Of course, such a position is contended to a greater or lesser extent in all higher education institutions. Innovation does not come easily in many parts of the academic community, particularly if long-held conventions and beliefs are being challenged. But challenged they are and innovation and change proceed apace. Thus, current changes in higher education - and the crisis of authority which they represent - provide an opening for the wider development and recognition of work based learning in higher education than has existed hitherto. When, drawing again on Peter Scott, "knowledge is no longer seen as being predominantly generated within homogeneous communities of academic peers" but is "produced within heterogeneous networks where producers, users, intermediaries, popularisers co-mingle" (Scott, 1995, p5), the opportunity - indeed the need - to grant much greater recognition to learning achieved outside of conventional academic contexts becomes overwhelming and urgent.

The Higher Education Curriculum

Debates about the nature of the higher education curriculum are not new and the significant increases in the size and diversity of higher education over the past twenty five years, and more especially during the 1990s, have brought into sharp focus questions about the nature of UK degree courses.

Drawing together a number of contemporary features of curriculum change in higher education, Barnett (1992, 1994) depicts the modern university curriculum in terms of two superimposed axes: one axis is formed according to whether curricula derive from the internal agendas of the academic community or the external agendas of groupings in the wider society. The other axis is formed at one end by curricula specific to definite epistemic interests and at the other, by general aims transcending discipline-specific concerns. The resulting grid is shown in figure 1.

Figure 1: Shaping the Higher Education Curriculum
(adapted from Barnett, 1992)



Writing in 1992, Barnett noted that in contemporary society, higher education curricula are liable to spread out in one or several directions indicated by the quadrants of the grid as curriculum designers respond to the diverse influences on them. The dominant influence had in the past been the academic community, although, of course, the curriculum for certain areas, *e.g.* medicine, nursing, architecture, engineering, was constituted primarily in the professional practices of the same name. However, Barnett noted various influences (*e.g.* Enterprise in Higher Education initiative, Higher Education for Capability; institutions themselves looking to embed personal transferable skills into their programmes of study) which were tending to move curricula in the direction of (d), transferable personal abilities.

In writing of the current emphasis on 'skills' in higher education curricula (and interestingly replacing the descriptors 'capabilities', 'capacities', 'competencies' and 'abilities' in (a) - (d) by the single word 'skills'), Barnett again noted the dominant movement from quadrant (a) to quadrant (d), as curricula are influenced increasingly by an interest in promoting transferable skills with a value in the labour market (Barnett, 1994). However, an emphasis on general intellectual capacities (quadrant (b)) seemed to be lacking in the early 1990s although the work currently being undertaken by the Higher Education Quality Council through its Graduate Standards Programme - particularly their activities directed towards exploring what standards are denoted by the award of the UK first degree - may be re-focusing attention on such general intellectual capacities (HEQC, 1996).

Academic practitioners involved in developing ways of helping individuals to learn from their work experiences, of assessing that learning and gaining (public) recognition for that learning in higher education terms have been grappling with notions of gradueness over several years. Indeed, we might question whether Barnett is grappling primarily with the contemporary rhetoric of national agencies rather than the everyday reality of teachers in higher education. After all, the general educational principles which the Council for National Academic Awards (CNAA) espoused during its 28 years in existence included general intellectual capacities such as the students' intellectual and imaginative powers; their understanding and judgement; their problem solving skills; ... their ability to see relationships within what they have learned.... The CNAA required that each programme "...should stimulate an enquiring, analytical and creative approach and encouraging independent judgement and critical self-awareness" (CNAA, 1992).

These educational principles provided a fairly uncontentious backcloth to teaching and course design in the polytechnics and colleges for more than a quarter of a century. As such, they

represent an explicit statement of educational values that have underpinned all higher education in this country.

More recently, there have been a variety of external initiatives to influence the higher education curriculum. The government sponsored Enterprise in Higher Education (EHE) initiative, launched in December 1987, aimed to improve the quality of preparation of students for working life in association with employer partners. It aimed to develop enterprising employees able to create and use opportunities, work effectively with others and learn throughout their lives (Corrigan, Hayes & Joyce, 1995). Ultimately, it involved over 60 higher education institutions over a five-year period, 1988-1992. It represented a major programme of planned curricular development in UK higher education. Writing about the place of EHE in recent changes in British higher education, Wright considers that it was a reflection of political, socio-cultural and environmental shifts that were already taking place in general attitudes towards higher education, rather than as the "monolithic manifestation of some particular philosophy, set of values, political position, or interest" (Wright, 1995, p42).

Institutions interpreted the notion of 'enterprise' differently and devised a wide range of curricular activities to realise their interpretations. In fact, from the beginning, institutions bidding for EHE monies were expected to demonstrate a broad understanding of what 'enterprise in higher education' would mean, although some broad definitions were suggested by the government, as follows:

- entrepreneurship: the qualities and skills which enable people to succeed in business enterprises;
- personal effectiveness: the qualities and skills possessed by the resourceful individual;
- transferable skills: the generic capabilities which allow people to succeed in a wide range of different tasks and jobs.

(Training Agency, 1990)

However, as Wright notes, certain common processes arose from EHE including:

- (a) the need for higher education institutions to be more explicit about their purposes and how to achieve them (*e.g.* who are the relevant stakeholders; what should be appropriate graduate outcomes; how are these best achieved).
- (b) institutions' planned use of collaboration with employers to improve the design, content and assessment of programmes of study and to provide new opportunities for enriching students' learning experiences - there being an implicit assumption that both institutions and employers could benefit from the experience of the other and the insights thus gained would help each to build on its own strengths and gain more from collaboration.

(Wright, *ibid.*)

For some, the most important contribution of EHE to the development of higher education was that it shifted the emphasis away from a concern with the formal delivery of academic content towards the needs of the student as learner and methods of effective learning that would equip students for their working lives and their continuing learning (see for example Brown, in Gray 1995).

At the same time as the EHE initiative, a Higher Education for Capability initiative was launched, deriving from an earlier Royal Society of Arts Education for Capability campaign, which asserted the need for greater emphasis within the UK education system on preparation for life in the outside world. The central focus of the Higher Education for Capability initiative was on self- and group-managed learning. It was argued that comprehension, cultivation, creativity and abilities to co-operate, to cope and to continue learning in a rapidly changing world would be more effectively developed if students (individually and in association with others) were made

more responsible and accountable for their learning within a rigorous and interactive environment (Weil, 1992).

These various national initiatives had much in common in their intentions to stimulate debate within the academic community about the purpose of higher education. Some commentators have pointed out that whereas values, personal responsibility, collective endeavour and the 'life-world' were vital elements of the Capability initiative, such notions of personal accountability were absent from the EHE initiative, where the criterion of employment-related success (in a wide range of tasks and jobs) was all important (see for example, Barnett, 1994, p95).

Related to several of these curriculum initiatives has been a concern about the development of transferable personal skills in graduates. The interest within higher education in promoting personal skills which are the basis for effective performance across a range of settings and which are transferable between them can be seen as part of the bigger picture of current reforms in the UK's post-compulsory education system. As Harrison notes, the development of an individual's personal skills can be viewed as a common strand linking their learning experiences through school and beyond, as they move to and fro between education and the world of work (Harrison, 1996).

However, across the various systems of education and training there now seems to be a confusing array of definitions and classifications of personal skills emanating from agencies particularly interested in vocational purposes, (e.g. NCVQ's core skills; BTEC's common skills; Confederation of British Industry's common learning outcomes; former Employment Department's transferable personal skills). Against this list of skills, amongst which there is some degree of overlap, one can set attempts within higher education itself to identify what general attributes might be denoted by the award of a degree, which might be termed 'transferable intellectual and personal skills' (to quote a phrase used in a joint statement issued by the National Advisory Board and the University Grants Committee (NAB/UGC) over 10 years ago (NAB/UGC, 1984). (See earlier reference to HEQC's work on 'Graduateness'.)

Although the term 'skills' can seem to some in higher education to denote routine activities and a degree of repetitiveness in performing tasks (and thus related to narrow vocational education and training) the 'transferable intellectual and personal *skills*' envisaged by NAB/UGC were clearly of a broader nature, requiring a high level of analytical capabilities. In contrast, the idea of *transferable* skills raises a whole series of questions which focus on the nature and processes of learning. As Harrison notes

the notion of skill transfer..... raises questions *about* the relationship between learning as it occurs in thelecture theatre and laboratory, and learning as it is applied in the contexts of workplace and community; about the relationship between theory and practice, and about the processes which occur when existing skills, knowledge and understanding are adopted and manipulated to meet the demands of different situations.

(Harrison, *ibid.*, p266)

Moreover, in discussing skills in higher education, Bridges makes a distinction between *transferable* skills, *i.e.* skills which can be deployed in a variety of settings, in contrast to skills which are context dependent (e.g. negotiating skills which require a specific approach in a particular setting), and *transferring* skills, *i.e.* meta-skills (second order skills) which enable an individual with some knowledge, learning, understanding or skill gained in one cognitive domain and/or social context to adapt, modify or extend it in such a way as to be able to apply it in another (Bridges, 1993, p50). Even with this distinction, there are still difficulties with the idea of transferability. Oates has suggested that the term 'transferable skills' reproduces a very static notion of skills - "you learn them and then 'redeploy' them in new settings" (Oates, 1992, p23). Furthermore, Harrison notes that research studies of skill transfer (by for example Wolf, 1991; Blagg, 1992) indicate that it cannot be assumed that skills learned in one setting can simply be transplanted and applied with equal success in another. Contextual factors alter the nature of the skill required (Harrison, *ibid.*).

Thus, debates on the meaning of 'transfer' seem to revolve around the extent to which adaptation (of existing skills and constructs into new settings) has to occur which requires the use of simple or sophisticated cognitive processes. Perkins and Soloman (1988) draw a distinction between what they have termed 'low road' transfer (involving automatic transfer between two situations which have much in common), and 'high road' transfer (involving conscious intervention of cognitive processes which enable the individual to abstract characteristics from one context and apply them appropriately in another). The 'high road' transfer seems to have analogies with Bridges' transferring skills.

For Harrison, the emphasis on 'skills of transfer' moves the debate on personal transferable skills beyond description, categorisation and level definition for a particular set of skills and focuses attention on personal and intellectual capabilities which individuals can use to cope with new and challenging situations, and to deal intelligently with change.

The personal capabilities for dealing intelligently with change and challenging situations were recently explored through research commissioned by the Association of Graduate Recruiters (AGR) to examine the qualities needed by UK university graduates in the 21st century. Through discussions with a wide range of stakeholders (*e.g.* employers, graduates, higher education institutions and employer organisations), on expected changes to graduate careers, the researchers predicted that key skills for a 'self-reliant graduate' will encompass both career management skills and effective learning skills (Hawkins and Winter, 1995). As far as the report is concerned, a self-reliant graduate is one aware of the changing world of work, takes responsibility for his or her own career and personal development, and is able to manage the relationship with work and with learning throughout all stages of life (*ibid.*, p19).

Although several of these career management skills might seem to reinforce the notions of individual autonomy espoused by the political right (in McNair's phrase "individuals stand on their own feet interacting in an endless series of market transactions" - McNair, 1996, p232), the emphasis on effective learning skills (*e.g.* self-awareness, development focus, transfer skills) clearly chimes with those personal and intellectual capabilities referred to by Harrison. And here again emphasis is placed on the fact that in any model of effective learning, recognising the transferability of a skill and being able to apply it to a new context is a higher level capability in itself (Hawkins and Winter, *ibid.*, p46).

Returning to Barnett's depiction of the changing structure of curriculum objectives, one can see that the bottom quadrant, (d) transferable personal abilities, might in fact have more overlaps with its top counterpart, (b) general intellectual capacities, (particularly if you take 'transferable' to mean 'skills of transfer') than Barnett seems to think.

One might of course question the extent to which these debates have intruded upon the consciousness of academics, faced with the demands and interests of real students and relating to disciplinary and professional contexts which, while themselves changing, have for the most part clear and widely understood norms and standards. As ever, we need to be alert to the possibility of a gap between the rhetoric and reality of higher education.

Theories of Learning

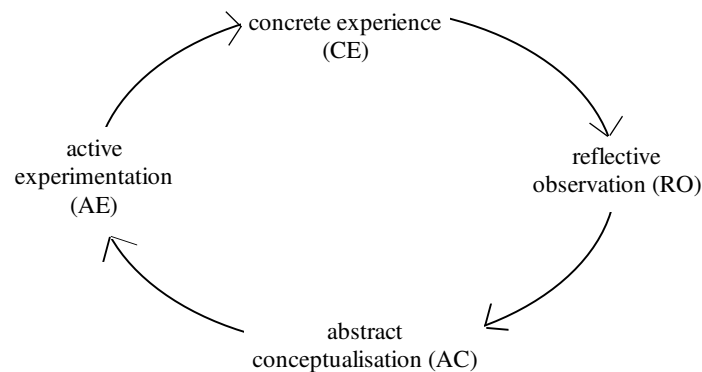
Theories of how people learn abound but can be grouped into three main schools of thought: the behavioural perspective, the cognitive perspective, and perspectives which stress the emotional condition and commitment of the learner. In this section, we shall review some of the main theories relevant to learning from experience, theories based on reflection, theories of personal growth, the possibility of a separate theory of adult learning, and attempt to set out some key aspects of learning from experience. As we shall see in later chapters, many of these theories inform how the design, delivery/realisation and assessment of work based learning is put into practice.

(i) *Theories of learning from experience*

One of the most popular theories of learning from experience has been developed by Kolb. In their writing on personal growth and career development, Wolf and Kolb (1984) contend that experiential learning theory provides a model of learning and adaptation processes that reflect the stages of human growth and development and are consistent with the structure of human cognition.

The simple diagram below shows the basic steps in what has become known as the Kolb learning cycle:

Figure 2: The Kolb learning cycle



According to this theory, an individual learns from concrete experiences (CE) by reflecting on those experiences from different perspectives (RO), (re-)forming his or her learning on the basis of that reflection (AC), then testing out and applying that learning in discussion and solving problems (Kolb and Fry, 1975). Although Kolb's primary concern was the process of learning, not the outcome, such distinctions are not easily separated and the end point of active experimentation (AE) becomes a new starting point for concrete experience (CE). Thus, learning becomes 'helical' rather than cyclical (Brown, 1995).

For effective learning to take place, it is argued that all four stages of the learning cycle must be completed. However, it is recognised that any one individual may not feel comfortable with the four different modes of learning implied by the stages (CE, RO, AC, AE). In their discussion of why and how people develop learning styles that emphasise some learning modes over others, Wolf and Kolb suggested that an individual would tend towards one of the following learning styles (reflecting their own dominant learning modes):

- converger, whose strength lies in practical application of ideas (dominant ability - abstract conceptualisation and active experimentation: AC/AE);
- diverger, whose strength lies in imaginative ability and generation of ideas (dominant ability - concrete experience and reflective observation: CE/RO);
- assimilator, whose strength lies in creating theoretical models and assimilating and integrating disparate observations (dominant ability - abstract conceptualisation and reflective observation: AC/RO);
- accommodator, whose strength lies in carrying out plans and experiments that involve them in new experiences (dominant ability - concrete experience and active experimentation: CE/AE).

(Wolf and Kolb, 1984)

Set against the above, others have pointed out the deficiencies which mirror the respective strengths of the converger, diverger, assimilator, accommodator (see for example, Packham, Roberts and Bawden, 1989).

In writing about learner managed or self directed learning, Long points out that the role of facilitators of learning (be they academic tutors, workplace mentors, *etc.*) should be to help individuals understand the way in which they best learn and assist them in obtaining learning experiences that are compatible with this learning style (Long, 1990, p88). However, overlaying this emphasis on compatibility of experiences with preferred learning styles, there must surely be the need for an individual to go through the full learning cycle, not just one part of it. Evidence from research suggests that the people who cope most effectively and gain from the greatest variety of learning opportunities are those who can operate to some extent in all styles, but who are clear when facing a problem which is the most effective style for them (Thompson, 1996).

Of course, the dominant learning abilities of an individual may be reinforced by the particular disciplinary framework in which their learning is taking place. In his discussion of academic disciplines, their natural groupings and their dominant cultures, Becher draws on the work of both Biglan (1973) and Kolb (1981). He notes that in seeking to categorise and characterise knowledge forms, Biglan derived his classification from questionnaire data from academics. Kolb, on the other hand, adopted a contrasting approach, deriving data from students' learning strategies in particular disciplines, and involving the application of a psychometric test (Kolb's Learning Style Inventory). However, as Becher notes, Kolb's findings were quite closely consistent with those of Biglan (Becher, 1989, p12). The resultant Biglan-Kolb classification of academic knowledge can be depicted in Figure 3.

Thus, the potential for an individual's dominant (preferred?) learning style to be reinforced by a particular disciplinary framework may be great. Those facilitating learning from experience need to be alert to such potential reinforcement and try to put in place mechanisms that will ensure that effective learning does indeed take place (*i.e.* the full cycle of experiential learning is completed).

Figure 3: The Biglan-Kolb classification of academic knowledge

(AC/RO)	<u>abstract reflective</u> natural sciences mathematics (hard pure)	<u>concrete reflective</u>	(CE/RO)
	(hard applied) science-based professions, engineering	(soft applied) social professions, education, social work, law	
(AC/AE)	<u>abstract active</u>	<u>concrete active</u>	(CE/AE)

What is perhaps striking about the above mapping of disciplinary territories against dominant learning styles is the emphasis on reflection in the upper half (natural sciences, humanities) and the emphasis on action in the lower half (science-based and social professions). This is particularly noteworthy given the prevailing views on promoting reflection in learning generally (*e.g.* Boud *et al.*, 1985) and the development of reflective practitioners (*e.g.* Schön, 1983).

(ii) *Theories based on reflection*

In the words of Boud, Keogh and Walker

Reflection is a form of response of the learner to experienceexperience consists of the total response of a person to a situation or event: what he or she thinks, feels, does and concludes at the time and immediately thereafter. ...Reflection is an important human activity in which people recapture their experience, think about it, mull it over and evaluate it. ...Reflection in the context of learning is a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations.

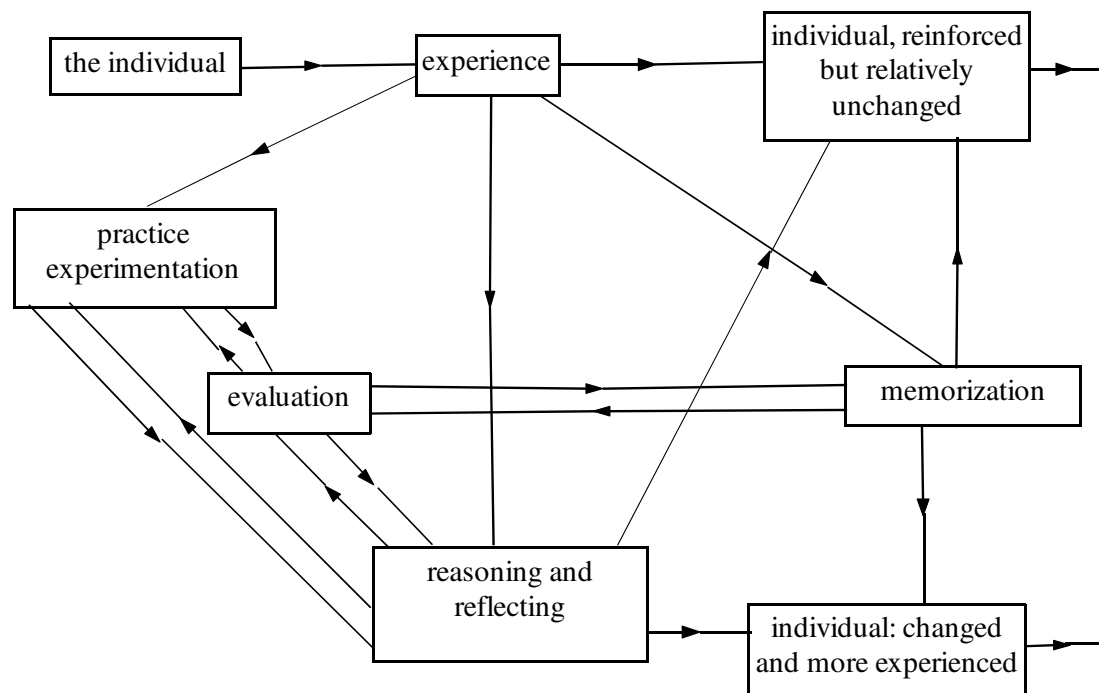
(adapted from Boud, Keogh and Walker, 1985)

Boud *et al.* particularly emphasise the affective aspects of learning, the opportunities these provide for enhancing reflection and the barriers which these may pose to it.

Schön's notions of reflection-in-action and the reflective practitioner arose from another direction: that of the emerging view that the model of technical rationality as the dominant model of professional knowledge was no longer adequate and failed to account for professional competence in divergent situations (Schön, 1983). As Schön pointed out, from the perspective of technical rationality (with its positivist origins) professional practice was about problem *solving*, with scant attention given to the actual process of problem setting in real-world practice, *i.e.* the decisions to be made, the ends to be achieved, the means which may be chosen, which may not be that explicit and clear-cut. Such circumstances involving complexity, uncertainty, uniqueness and value-conflict just did not fit the model of technical rationality. Rather, Schön argued that reflection-in-action was central to the way in which practitioners coped with troublesome 'divergent' situations of practice. Practitioners' reflection served to make explicit and to criticise tacit understandings that may have resulted from repetitive experiences of highly specialised practices. Moreover, they may also reflect on practice whilst in the middle of it. The practitioner may re-approach a unique situation by reviewing his or her initial conception of the phenomenon, constructing a new description of it and testing out this new description on-the-spot; or, confronted with seemingly incompatible or inconsistent demands, he or she may reflect on the appreciations which others have brought to the situation, and may find a way of choosing among the values at stake in the situation (Schön, 1983).

Further work on theories of adult learning and its complexities, particularly taking into account the social context of learning, have led some to challenge the Kolb 4-stage cycle of experiential learning which seems to emphasise symbolic or abstract modes of experiencing and subject specialisation at the expense of alternative modes of experiencing, (see for example, Warner Weil and McGill, 1989). For example, Jarvis' learning cycle depicts a variety of processes arising from experience and purports to show that while all learning begins with experience, there are a number of different routes through the cycle (one is purely practical, whilst others are cognitive).

Figure 4: Jarvis' Learning Cycle
(adapted from Jarvis, 1987 & 1994)



In his work on adult learning, based on adult learners' accounts of their own learning processes, Jarvis has classified an individual's response to experience into three fundamentally different categories (Jarvis, 1994), as follows:

- non-learning - including situations where the individual does not respond to a potential learning experience, or may reject the possibility of learning from it;
- non-reflective learning - including simple skills learning acquired through imitation and memorisation (either from an authority figure or from results of past successful acts which then form the basis of planning future action);
- reflective learning - including contemplation (thinking about an experience and reaching a conclusion without reference to the wider social reality); reflective skills (as discussed particularly by Schön in his work on professionals in practice, who produce new skills as they respond to the uniqueness of a situation and learn about the knowledge underpinning their practice); experimental learning (where theory is tried out in practice and the result is a new form of knowledge, creative thinking that relates fully to social reality).

Jarvis notes that whereas non-reflective learning tends to reproduce the structures of society (and is thus culturally reproductive), this is not true of reflective learning where the outcome can be conformity, criticality or creativity (*ibid.*). As will be seen in later chapters, many of the 'supports' developed to help individuals provide evidence of their work based learning involve approaches specifically designed to encourage an individual's reflection on experience and powers of critical thinking.

Jarvis' second two categories of learning, *i.e.* non-reflective and reflective learning, have affinities with the notions of surface/deep learning originally developed by Marton and Saljo (1984) and subsequently developed by Gibbs (1992). Gibbs contends that the quality of learning outcomes is crucially affected by the way in which individuals approach their learning. Surface approaches are characterised by the rote learning of facts and their regurgitation (frequently under formal examination conditions). This parallels, to some extent, Jarvis'

memorisation within non-reflective learning. Deep approaches involve individuals attempting to understand underlying principles, ideas and concepts and to interpret these in personally meaningful ways. Gibbs emphasises that the two approaches are not mutually exclusive and are not linked to intelligence. In fact, what determines whether a learner adopts a surface/deep approach is primarily a mix of prior educational experience and the nature/structure of the particular task in hand. For Gibbs, strategies aimed at promoting a deep approach to learning (and hence improving the quality of learning) include

- encouraging independent learning (involving greater control over subject matter choice, learning methods, the pace of study and the assessment of learning outcomes);
- supporting personal development (involving the encouragement of learner motivation, recognising that individuals learn through feelings as well as through intellect);
- presenting problems (with learning being focused upon the tackling of relevant 'real world' problems, leading to appropriate action and involving the synthesis of relevant knowledge from different subject sources);
- encouraging reflection (methods promoting reflection on learning include: learning diaries; reflective journals; participant observation; use of videos);
- learning by doing (emphasising the learners' active involvement through such stratagems as role-play, simulations, use of games, workplace visits.);
- working in groups (involving interactive project-based work, peer tutoring and assessment of performance);
- developing learning skills (providing students with a sense of purpose and an awareness of task demands and feasibility). Above all, study skills need to be developed in an integrated and holistic way, through relevant and motivating learning tasks and activities;
- setting projects (involving the application of knowledge to new situations). These can be highly engaging and motivating.

(Gibbs, 1992)

All these strategies are drawn upon, in different combinations, in work based learning and certain strategies are explicitly used in documentary supports for promoting and realising work based learning.

As noted above, certain writers see reflection as one of the key steps in moving from experience to learning from experience. However, in reviewing their own experiences of barriers to reflection, Boud and Walker concluded that learning from experience can be prompted by systematic reflection, but it can also be powerfully prompted by discrepancies or dilemmas which people are forced to confront (Boud and Walker, 1993). This idea of "prompted by discrepancies or dilemmas" has obvious parallels with Jarvis' model of a potential learning situation occurring when there is some form of 'disjunctive' between an individual's knowledge and/or their self-concept and the context in which experience occurs are at odds in some way (Jarvis, 1987).

(iii) *Theories of personal growth*

Advocates of personal growth theories (which arose from the psychotherapy movement and from gestalt psychology) stress the importance of autonomy, trust, consultation and negotiation in developing individuals. Workers in this field are interested in feelings and notions of self, and self-esteem, and stress the importance of giving learners responsibility for their own learning. However, drawing on the work of others, Brown points out that whilst there is evidence that freedom in learning is essential for intellectual development, there is also evidence that too much freedom too early can bring about acute anxiety and distress, rather than actually helping

a person to learn. Personal growth and freedom have to be provided gradually within a structured framework (Brown, 1995, p96).

As noted above, Gibbs identifies 'encouraging independent learning' as one strategy aimed at promoting a deep approach to learning. But to what extent is autonomous learning the same goal as learner centredness or learner control? Whilst autonomy and self direction may be central ideas underlying experiential learning, Boud distinguishes between three separate notions of autonomy (which are often confounded in practice), *viz.*

- autonomy as a goal - the development of autonomous persons who will reach their own understandings and decisions without being unduly influenced by others;
- autonomy as an approach to teaching and learning - wherein students engage in self directed learning or some other teaching/learning strategy;
- autonomy as a necessary element in learning - wherein students become autonomous with respect to a given body of knowledge and skills, *i.e.* they are able to make their own judgements about facts and opinions and can appreciate/apply criteria for assessment of what is/not appropriate in the given area (Boud, 1989).

As Boud notes, autonomy *per se*

does not necessarily develop through the application of autonomous methods ... students may be given considerable freedom in designing and planning their own programmes, but they may still suffer from debilitating dependencies on others in so far as they can understand and use the knowledge they are working with.

(ibid., p44)

Furthermore, approaches to the development of autonomy are subject-dependent. Although learners need to engage with their learning in meaningful ways, these meaningful ways might vary greatly depending on the kind of knowledge being pursued (*ibid.*, p44). Those practitioners concerned with making the values and aims of human development the unifying purpose or idea for higher education stress the relevance of learning from experience approaches and philosophies to developing people who cannot just cope with change but can challenge and question the status quo and thereby initiate change (Chickering, quoted in Warner Weil and McGill, 1989). In consequence, learner control is emphasised which then plays a significant part in decisions about what to learn, how and where to learn it, and about the criteria for assessing the learning.

Although the ultimate goal may be to develop people who can challenge and question the status quo, it is as well to recall the work of Perry and others on the stages of intellectual and ethical development through which learners typically progress, as follows:

- (i) learner seeks and expects right answers for everything;
- (ii) learner perceives diversity as distraction;
- (iii) learner accepts diversity as temporary;
- (iv) diversity accepted but therefore 'everyone has a right to know';
- (v) learner perceives all knowledge as contextual and relative;
- (vi) learner perceives necessity of making a personal judgement as opposed to simple belief;
- (vii) learner makes such a judgement and personal commitment;
- (viii) learner explores implications of commitment;

(ix) learner experiences issues of personal identity in undertaking commitment.

(adapted from Perry, 1970)

Clearly, in determining appropriate work based learning strategies, facilitators of work based learning need to bear in mind the prior experiences of the learner *as a learner*. Approaches that might suit a mature experienced adult learner might not be equally appropriate for a developing adult learner (or adult returning to learning) who might need to achieve some basic competence and confidence (in themselves as learners) before launching into the realms of reflecting on experience, active student involvement and elements of personal development. For example, investigations into the experiences of part-time students at one university that had, through its Enterprise in Higher Education Initiative, placed increased emphasis on skills development and active teaching and learning, found that many such students viewed 'gaining knowledge' as the most valuable aspect of their course (to the exclusion of any skills development) (McDowell, 1993, p190). The students described learning as "the transfer of the knowledge, facts, techniques ... from the lecturer to the students" (*ibid.*, p191). Such concepts of learning (which may be at odds with those of the programme designers) may be explained through the students' motivations for studying. Using the model of orientations to study described by Gibbs *et al.* (1984), McDowell notes that those students with an extrinsic vocational orientation wish to achieve the *qualification per se* (for career reasons); whereas those with an intrinsic vocational orientation will wish to *learn* from the programme of study and there will be an expectation that what is learned should be capable of application by them. Considering the links between part-time courses and the world of work, McDowell goes on to comment that for some students, difficulties in linking learning on the course to their own professional practice and situation at work had an unfortunate impact on their motivations to study. Those courses for part-time students which included explicit activities intended to link the work context and academic learning (*e.g.* assignments based on research/analysis of students' work context; use of work journal) and some attention given to career planning and development, seemed to be more successful in making the link between academic knowledge, professional knowledge and professional practice (McDowell, *op cit.*).

It would be tempting to surmise from the foregoing that if those same individuals had been aiming for a higher education qualification through an individually negotiated work based learning programme, then their motivations to study would have been *intrinsically* oriented, and they would have been developing knowledge and skills and improving their own understanding and ability to construct knowledge for themselves, rather than merely accumulating it from the lecturer.

There may also be gender issues relating to self-directed learning. Research into gender differences and learning has proposed five categories of epistemological development for women (Belenky *et al.*, 1986). Taylor and Burgess note that the first two categories *viz.* 'silence/subject to whims of external authority' and 'received knowledge, but not capable of creating knowledge', seem to be the antithesis of self-directed learning. Consequently any orientation towards self-directed learning must recognise the potential relevance of differences in gender (Taylor and Burgess, 1995).

Writing about learner autonomy in a changing world, McNair (1996) notes that the idea that education exists to develop individual autonomy is very old. Traditional arguments rest on an appeal to fundamental rights whereas more recent arguments are based on economic and social reasons, although, as McNair notes, in the late twentieth century interest in autonomy and its relationship to social and economic change create "strange bedfellows". The political right sees autonomy as reducing the individual's dependence on state and employer, whereas the left sees autonomy as continuing the tradition of empowerment (either of individuals or groups), wherein autonomy concerns redistribution of power and a more equal society. Within teaching and learning programmes, autonomy may be as much about attitude and motivation as about circumstances. McNair considers programmes supporting notions of autonomy would

seek to emphasis progression in terms of increasing control over knowledge and skill, and ability to make sound and independent decisions. ...incorporate an ability to reflect on one's own interests and those of others and to relate these where appropriate.

(*ibid.*, p238).

(iv) *A separate theory of adult learning?*

For some theorists, the notion of self directed learning has, in recent years, emerged as a primary distinction between adult education and conventional (compulsory?) schooling. Self-directed learning is defined as

the process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing learning strategies, and evaluating learning outcomes.

(adapted Knowles, 1975)

Thus, in self directed learning the needs and activities of the learner take precedence over those of the teacher (whose role thus becomes one of a facilitator of learning) and the techniques and strategies related to self-directed learning are said to constitute a distinctive practice of andragogy (as opposed to pedagogy which is said to characterise the more teacher-directed approaches of conventional schooling). The major proponents of andragogy as a separate adult learning theory (*e.g.* Knowles) view self-direction as that point at which people arrive at a self-concept of being responsible for themselves. Thus, self-direction becomes the main distinguishing feature of what it means to be an adult and is thus fundamental to the learning in which adults engage. However, critics of a distinctive separate adult learning theory point out that the theory meets difficulties when wider issues of knowledge, power and control are addressed. For example, constraints on actual learning settings may actually foreclose aspects of self-directness. As Hanson points out, higher education curricula tend to be socially constructed prescribed areas of knowledge and skill external to the learner, and their role in reproducing the dominant culture and acting as a form of social control have been well documented (*e.g.* Freire, 1970). Also, the increasing dominance of unitised programmes of study, pre-packaged in numbers of credits and predetermined levels of achievement, may severely curtail the possibility of exercising completely autonomous self-direction (Hanson, 1996). Others have pointed out how the ideas underpinning self-directed learning have then been readily translated (by their proponents) into techniques, which seem to set out,

in formulaic terms, how it (*i.e.* self-directed learning) has to be done; directed self-directed learning... managing a pedagogic technique, usually in the form of a learning contract with a student client.

(Collins, 1996, p111)

Others have noted that Knowles' andragogy is predicated upon an individualistic model of achievement which is largely gender (and class) specific (see for example, Fraser, 1995). In reconsidering Oakley's text 'Subject Women', and in particular her discussion of the attributes of 'good female and male students' (*i.e.* characteristics which received teachers' and society's approbation), Fraser notes that the majority of adjectives for 'good female students' were approbations of *self in relation to others* whereas those for 'good male students' were related to *doing and acting*. Although the listed attributes are now thirty years old, Fraser believes they remain 'painfully relevant' to many women today. Woman is still given major responsibility for interaction with others, whereas society privileges masculine self-actualisation and equates masculine attributes with adulthood. Thus women's predefined 'caring and sharing' role is at variance with strivings for autonomy (Fraser, *ibid.*).

A further key dimension of adult learning is the theory of perspective transformation, as developed by Mezirow (1978, 1981) wherein meaning perspectives are important for adult learning as they help to develop in the learner a critical awareness based on past experiences

in a current context. In Mezirow's terms, perspective transformation involves becoming critically reflective (not just 'aware') on the cultural assumptions which govern the way adults think, feel and act. Thus, perspective transformation becomes a guiding principle for the practitioner working with adult learners.

However, Hanson suggests that this theory may be of less relevance than may be apparent and may be based on untested assumptions, particularly those relating to attitudes to learning (see, for example, earlier references to McDowell). And whilst self-reflection and critical thinking may be reputed to be universal 'goods', one needs to be aware of the assumption of culture and power that may underlie them. For Hanson, the search for a separate theory of adult learning is grounded in an abstract notion of the individual rather than the social context of learning: such all-embracing theories deflect attention from developing an understanding of, and differing strategies necessary

to enable diverse adults to learn different things in different settings in different ways. There are differences ... of context, culture and power.

(Hanson, 1996, p107)

(v) *Key aspects of learning from experience*

Drawing together several themes running through theories relating to learning from experience, Boud, Cohen & Walker (1993) set out the following propositions which they consider bring together significant points underlying learning from experience, viz:

- *experience is the foundation of, and the stimulus for, learning*

Every experience is potentially an opportunity for learning. The initiation of learning is the act of framing some aspect of experience as something from which we can learn: there needs to be active engagement with experience. Reflection plays a key role in drawing meaning from experience: through entering into a dialogue with our experiences we can turn experiential knowledge (which may not be readily accessible to us), into propositional knowledge (which can be shared and interrogated). Reflection is not just an individual activity; engaging in the process with others can change the meaning we draw from experience.

- *learners actively construct their experience*

Each experience is influenced by the unique past of the learner. What learners bring to an event - their expectations, knowledge, attitudes and emotions - will influence their interpretation of it and their own construction of what they experience. The construction of experience by learners needs to be taken into account in judging the worth of an activity.

- *learning is a holistic process*

Although learning is often written about as if it existed in different domains (*viz.* cognitive, concerned with thinking; affective, concerned with values and feelings; psychomotor, concerned with action and doing), learning is in fact normally experienced as a seamless whole. No one domain is discrete and independent of the others and thus no one aspect should generally be privileged over the rest. In contemporary English speaking society, and within higher education institutions particularly, the systematic bias towards the intellect and to the analytical is most pronounced, leading to a lack of emphasis on the 'whole person' and on problems which are taken out of context.

- *learning is socially and culturally constructed*

While learners construct their own experience, they do so in the context of a particular social setting and a range of cultural norms and values. It is difficult to escape from external norms and values as they are embedded in the language we use and the concepts we have developed to make meaning of experience. Critical reflection is needed to examine the influences of our values and culture, to move outside of taken-for-granted assumptions and see the conceptual baggage which we carry with us (for example, the pervasive influence of social class, gender and ethnic background on our own learning from an early age). The most powerful influence of the social and cultural context on our learning is that which occurs through language: and whereas we have a well-developed set of concepts for technical and scientific phenomena, our language for personal and emotional experience has hardly changed in modern times. Mulligan (1993) offers a way of categorising internal processes and actions required to learn effectively from experience. He argues that helping learners to discriminate between the different processes (of reasoning, feeling, sensing, intuiting, remembering, imagining and willing) will make them more accessible to intentional use, and by placing greater emphasis on the awareness of such internal learning processes (rather than content), learners could become more autonomous.

- *learning is influenced by the socio-emotional context in which it occurs*

Emotions and feelings are neglected in our society, but they are key pointers to both possibilities for, and barriers to, learning. One of the most powerful issues which influences learning from experience is that of confidence and self-esteem; unless learners believe themselves capable, they will be continually handicapped in what they do. Engagement with learning tasks is related to belief in success. Further, the extent to which we can change is often a function of the supportiveness of the environment we can create for ourselves. Thus, learners need appropriate support, trust and challenge from others: emotional support, practical support and political support (to challenge the assumption of others, and to be challenged). A person's belief in their ability to act and learn is a prerequisite for learning; without this they are passive participants in the constructs of others (Boud, Cohen and Walker, 1993 pp1-17).

Key aspects which emerge from nearly all of the theories of learning discussed above are those concerning reflection, autonomy, learning to learn, the language of learning, and support for learning. Some or all of these are cornerstones of the 'vehicles' used for 'designing and realising' work based learning which will be discussed in the chapters which follow.

Learning Outcomes and Competences

Calls for greater public accountability in higher education, changes in the relationship between higher education and the wider society, moves from an elite to a mass system of higher education have in their different ways led to increased attention being placed on teaching and learning processes within higher education. Particularly, the spotlight has shifted from an emphasis on course aims and objectives (as determined by an HEI and professional body, where appropriate) towards a focus on what a learner knows and is able to do - either as a consequence of completing a programme of study; or as a result of learning acquired in the workplace or through prior experiential learning.

Such a focus on 'what a learner can do', as described in learning outcomes, is reflected in modes of assessment which seek to assess what the learner can do and imply that such assessment will be made against explicit criteria, rather than being assessed against a notional standard of their current cohort of learners. (Such moves towards greater explicitness of

courses in terms of general learning outcomes, and consequently criterion-referenced assessment related to explicit learning outcomes, have already been taking place elsewhere in the British education system; for example, the public examination system for 16 years old (Wright, PWG 1992).

In their work on learning outcomes in higher education, the Unit for the Development of Adult Continuing Education (UDACE) research and development group drew a distinction between three different forms of learning outcomes, *viz.* core learning outcomes; subject specific learning outcomes; general or vocational learning outcomes. These might be combined in particular programmes of study (Otter, 1992). In no way can these learning outcomes be seen as forming some sort of 'national standards' since higher education exists to meet the needs of a wide variety of client groups and range of social, economic and scientific needs, and embodies a range of different cultures and value systems (Otter, 1992, Atkins *et al.*, 1993, Jones, 1994). However, the UDACE project demonstrated that there was no reason why learning outcomes should be associated with narrow work related tasks; for example, within the project, sets of learning outcomes for english and social science were included, as well as outcomes for design, engineering and environmental science. Moreover, a number of potential advantages for higher education were identified, including

- *accessibility and flexibility* - since describing the outcomes of the process (rather than the process itself, or its inputs) makes it easier to consider alternative ways of achieving an outcome, recognising that people learn in different ways, places and times, and at different paces. Outcomes described in this way are also accessible to a wider audience - not merely subject specialists;
- *quality* - a clearer specification of outcomes might make it easier to ensure that quality is protected (by ensuring that comparable outcomes are achieved), whatever changes may be happening to structures and processes within higher education;
- *motivation* - more public statements of what is to be achieved enables learners to make more informed choices of programmes/units of study and enables them to concentrate on demonstration of achievement rather than attendance on a course.

Also, where the learning outcomes relate to the development of cognitive skills, the actual practice of involving learners in negotiating their proposed learning outcomes (*e.g.* during the process of establishing a learning contract) may help them to clarify and develop their cognitive skills right from the outset. (See for example, Bryan and Assiter, 1995.)

The foregoing might seem to point to the conclusion that the moves towards the clearer specification of learning objectives through statements of intended learning outcomes are seen as a universal 'good' in higher education. This is not necessarily the case. Critics note that such an approach does not alter the basic question of who decides what learning outcomes are worthwhile. They also note that the apparent precision in learning outcomes may hide arbitrary discussions about what constitutes 'good' or acceptable learning and that the apparently prescriptive nature may not be helpful in reflecting incremental developmental learning processes. Some of the verbs used in learning outcomes are difficult to define with precision (*e.g.* to understand, to know) and consequently learning outcomes including these key cognitive skills may be difficult to assess. There could thus be a temptation either to remove reference to such key cognitive categories and thereby undermine learning (or take the more radical approach, which some see as the 'NCVQ line' and suggest such skills underpin performance rather than constitute one type of performance) (Bryan and Assiter, *op.cit.* p30).

At a more philosophical level, a learning outcomes approach to higher education has been criticised as a "hopelessly limited way of construing higher education" and the development of the mind (Barnett, 1994, p81). For Barnett, learning outcomes represent a form of closure and are part of a language of prejudging, imposition and inevitable narrowness, predetermining the required characteristics learners should end up with. Such notions typify instrumental rationality. But instrumental reasons and purposes gain their validity through being based upon

a discursive way of life in continuing processes of open discussion and reflection. For Barnett the widespread use of learning outcomes (and the language of competences) seeks to marginalise other forms of interaction and reason (*e.g.* interpersonal, critical and aesthetic) which should also be emphasised within higher education (Barnett, *ibid.*). It is interesting to note that whereas Barnett views learning outcomes as representing a form of 'closure' within higher education, proponents of the use of learning outcomes see them as representing a form of openness and accessibility to and within higher education.

The debate on learning outcomes can also be related to debates on competences and capability. Competence denotes the ability to do something and is strongly context dependent. As Scott notes, competence implies that relevant knowledge can be sufficiently complete to be operationalised into identifiable skills. This position is difficult to reconcile with the view that the knowledge to which learners aspire within higher education and the skills they acquire are necessarily provisional, half-formed, indeterminate, and therefore problematical (Scott, 1995, p162).

Within higher education there seem to be two contrasting versions of competence: an internal or academic form of competence (based on a sense of the learner's mastery of a discipline), and an operational idea of competence (linked to ideas of performance to set standards). In Table 3, Barnett contrasts these two versions in a deliberately stark way.

Table 3: Operational and Academic Competence
(from Barnett, *ibid.*, p160)

<i>epistemology</i>	<i>operational competence</i> <i>know how</i>	<i>academic competence</i> <i>know that</i>
situations	defined pragmatically	defined by intellectual field
focus	outcomes	propositions
transferability	metaoperations	metacognition
learning	experiential	propositional
communication	strategic	disciplinary
evaluation	economic	truthfulness
value orientation	economic survival	disciplinary strength
boundary conditions	organisational norms	norms of intellectual field
critique	for better personal effectiveness: understanding of operations, professionals' knowledge-in-use	for better cognitive understanding of concepts, ideas, evidence theories

But as noted in Table 3, the aims and objectives of any *one* programme of study within higher education may seek to develop a combination of subject specific and core learning outcomes (Barnett's *academic* competence?) and general or vocational learning outcomes (Barnett's *operational* competence).

As Jones notes, competence at the higher education level draws on a significant body of knowledge (which has its own internal coherence and conceptual apparatus); it draws on complex cognitive processes and it places great emphasis on personal development. At this level, competence based standards of performance need to emphasise capacity to manage contingencies and variance (as well competence in a particular task); they should cover the type of moral judgements that professionals have to make and they need to be capable of expressing personal attributes (*e.g.* creativity, critical thinking, personal integrity, commitment to continuing intellectual development), (Jones, *ibid.*, p14). Attempts to avoid an emphasis on performance have resulted in developments which seek to identify personal effectiveness as a

key element in a broad definition of competence and thus to focus on core, personal or transferable skills that underpin performance in a range of occupations.

Discussions about competence at the higher education level often make comparisons with occupational competence (especially in the context of vocational qualifications). However, several commentators have noted that there are very real differences between vocational and professional qualifications (primarily in the pivotal role played by knowledge and breadth and depth of conceptual understanding in professional qualifications) and the emergence of a coherent framework of vocational qualifications based on occupational standards and competences does not provide an immediate alternative to professional qualifications (e.g. Eraut and Cole, 1993). Professional qualifications may often precede practice or provide an entitlement to practice under supervision, whereas a vocational qualification may be acquired during practice. Thus, a professional qualification provides an *inference of future competence i.e. of capability*, rather than competence. Whilst a focus on professional performance might provide evidence that an individual was able to demonstrate his or her capacity to perform key tasks and functions safely and at an acceptable level, evidence of capability could serve a number of additional functions. Eraut and Cole have argued that such evidence can: supplement performance evidence; assess the quality of a candidate's cognitive processes (e.g. ability to understand clients, analyse problems and situations, evaluate professional practice they observe, etc.); indicate that the candidate has a knowledge base that will serve as foundation for future practice (e.g. critical understanding of concepts, theories and principles underpinning current practice so they can understand significance of innovations and properly evaluate their work); demonstrate an understanding of the profession's role in society (Eraut and Cole, 1993).

Theory or Practice?

The debates which have been the subject of this chapter are not peculiar to work based learning. They are being addressed almost daily, if not always explicitly, by academic staff in higher education. There is little consensus to be identified from these debates and undoubtedly the questions which they raise are addressed differently in different subjects and institutions. And it must always be remembered that institutional practice almost inevitably entails compromises with some of the starker choices posed by some of the theorists discussed above. The nature of these compromises depends much on local circumstances, institutional mission and subject values. The resulting curricular and pedagogic practices are one aspect of the growing diversity of higher education in the UK.

It is perhaps also worth remembering that practice in higher education is based on custom and convention more than it is based on theories of knowledge and learning. This is one of the characteristics which makes change often so difficult to achieve. The literature discussed above and elsewhere in this review contains much theory and much advocacy. Its relationship to practice - in work based learning or in anything else in higher education - is far from clear. Such empirical studies of current practice as exist reveal, as we have already noted, a considerably 'messier' picture than is implied by some of the distinctions and conceptualisations discussed above.

What is also clear, however, is that the issues which have been the focus of this chapter are being addressed in most higher education institutions in a wide range of different contexts. And increasingly they are having to be addressed explicitly and publicly in order to meet the requirements of external accountability. In addressing these issues, higher education institutions must confront questions of purpose and of value, indeed questions of the very nature of higher education at the end of the twentieth century. But they must also confront a host of more practical and technical questions concerned with curriculum organisation, teaching and assessment methods, examination boards and the like. It is the more technical and practical questions raised by work based learning in higher education to which we now turn.

Summary

The nature of knowledge - at least "university knowledge" - is changing. Mono-disciplinary degrees, in which knowledge is valued in its own right and the emphasis is on conceptualisation, analysis and synthesis to develop the mind, are being replaced by thematic based degrees with more emphasis on using knowledge and developing skills. Other related classifications of knowledge are: (a) mode 1 and mode 2 and (b) propositional and process. In reality, these distinctions between types of knowledge are becoming blurred, partly as a result of curriculum modularisation. There is an increasing emphasis within higher education of the importance of developing personal and transferable skills. These are precisely the skills which might be developed just as well at work.

Initiatives such as Enterprise in Higher Education and Education for Capability have affected the curriculum, and although there is still no consensus about the meaning of personal transferable skills (and related terms) there is no doubt that the curriculum has moved in the direction of developing students' abilities to take responsibility for learning and to use knowledge and skills gained in a variety of settings.

There are many schools of thought on how people learn: e.g. (a) learning from experience (Kolb learning cycle); (b) learning by reflection (Jarvis); (c) learning through motivation and autonomy. However, in essentials these different theories have much in common; and each help to inform ideas on how it is that adults can learn through work experience. Common threads in these theories are that the individual learner: is made to think deliberately about the experience in order to learn, must learn how to learn in preparation for future experiences, and needs support from others.

One of the recent changes in higher education has been defining what the learner is expected to know and be able to do as a consequence of study (including work experience) by defining learning outcomes. These can also be written as the competences which a person is expected to possess. Although much used, and superficially attractive, this approach is not without critics who claim that higher education, as opposed to vocational education, should not limit what might be learnt.

Part Two Practice

Chapter Four: Establishing a Framework for Work Based Learning

Introduction

The whole thrust of developments within the area of experiential learning (and within that, work based learning) has been to acknowledge that learning at an appropriate level, *wherever it occurs and providing it can be evidenced and assessed*, may attract some form of academic credit towards a higher education award. The key to recognising work based learning is to find a way of providing 'the evidence' and showing that the learning is as valid as learning acquired through other means.

Whilst accepting some of the thrust of the arguments outlined in the previous chapter about the potentially limiting nature of learning outcomes and competence statements, it is nevertheless the case that without some way of making transparent and explicit what are the intended learning outcomes of any teaching and learning process, it would be extremely difficult to find any way of making academic judgements about the validity of learning that had been derived from a process which had not involved studying a particular course (already 'approved' by some validating authority) other than asking the learner to 'sit' the relevant assessments.

This chapter aims to analyse the main types of curriculum frameworks currently in use to facilitate the planning and realisation of experience-led work based learning. The careful design of overarching curriculum frameworks for work based learning is a major plank in assuring the quality of work based learning and ensuring its acceptance within higher education terms. However, such 'designs' need to be viewed in the context of ongoing debates about curriculum design within higher education concerning the use of learning outcomes and competence statements; about the 'measures' of academic credit (both volume and level); about the nature of professional education, *etc.*

The Acceptance of Work Based Learning in Academic Terms

The value of work based learning within academic programmes has long been acknowledged. In his synthesis study of experience based learning within the curriculum undertaken in the late 1980s, Davies recalls that a Council for National Academic Awards' study of almost 400 first degree courses which included supervised work experience (published in 1984) concluded that

there was a high level of perception that the benefits of SWE (*i.e.* supervised work experience) are unique, identifiable and not achievable by other means. ... Course leaders, asked what they considered to be the *academic* (emphasis added) value of SWE, and given no prompting, produced a wide variety of positive responses: practical applications of knowledge and the development of general work and operational skills; general personal development maturity, professional attitude and communicating ability; intellectual development - greater self awareness by the student, sharpened analytical and critical powers, and others; and specific skills development.

(Davies, 1990, pp 25 - 26)

Although such benefits may well have been apparent to course leaders in the public sector of higher education in the mid 1980s, investigations into institutional quality assurance mechanisms undertaken by the Higher Education Quality Council during the period 1991-1994

(through audit visits to 69 mainly 'old' pre-1992 universities) highlighted the following findings relating to placements and curriculum issues:

In some instances, the audit teams observed that students' placements were not integrated with the overall objectives of the programme being studied. For example, it was found in some departments that the academic point of the exercise was unclear; no task or aim was defined; supervision was minimal and the object and status of any end-of-placement report was unclear; and that the benefits of the placement did not seem to be recognised or valued in the assessment.

For students studying on placements, whether abroad or in employment, the academic rationale of a placement, its supervision and monitoring are often inadequate.

(HEQC, 1994, pp xvi and 20)

The tone of these findings seems to indicate that HEQC would have expected institutions to be approaching the use of placements within higher education curricula in a more rigorous manner, and placing more emphasis on the academic value of work based learning derived through placements.

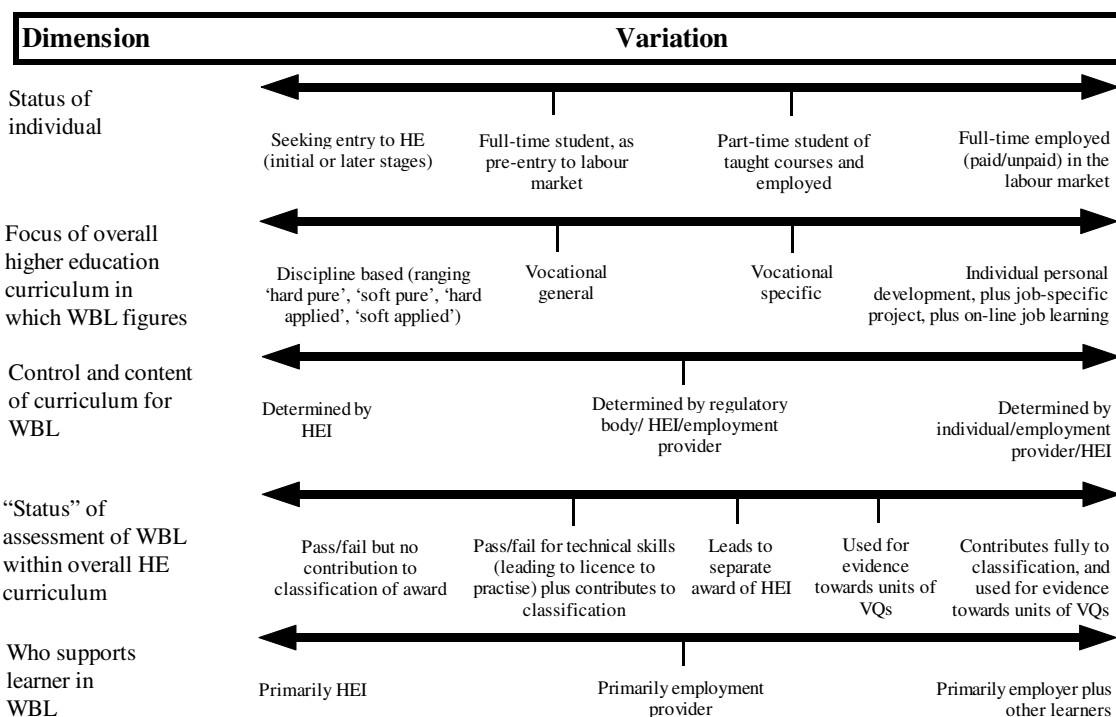
The above quotes relate primarily to the sandwich placement form of work based learning. However, we saw in Chapter One that the organisational forms of work based learning within higher education are many and varied.

Any work based learning which is going to be explicitly recognised through the award of academic credit needs to set within some kind of framework which will assist the process of making explicit and articulating the knowledge and skills being consolidated and developed by the learner in the workplace. Although the framework may well be designed in consultation with the various partners involved in work based learning, overall control of the framework will rest with the academic institution to whose awards the academic credit might lead.

As can be seen from Table 4, the characteristics of work based learning in higher education vary considerably across a number of different dimensions. The most significant dimensions in terms of curriculum frameworks are those relating to focus and control of the overall curriculum in which work based learning figures.

However, within the overarching framework the scope for negotiation about the extent and direction of the work based learning curriculum and thus the relative positions of power in determining the boundaries of validity of knowledge, skills and understanding being developed through experience-led work based learning will vary, depending on two key dimensions. First of these is the focus of the overall programme of which work based learning is a part. Focus will fall broadly into one of the following: discipline specific; discipline specific plus meeting professional/regulatory body requirements; general vocational; discipline and employer specific; individually negotiated. The second key dimension is the 'place' of the work based learning element. Is it the 'core' alongside which other elements are built to form a whole programme or is it a part of a larger programme?

Table 4: Dimensions of experience led work based learning in higher education



For example, where the focus of the overall curriculum falls within a specific disciplinary area, there will presumably be well established norms against which the knowledge and skills developed through work based learning can be 'mapped'. This is not to say necessarily that the work based learning will be replicating (and thus replacing) certain aspects of the curriculum that were previously delivered through a campus, instruction-led programme. As noted in our introductory chapters, higher education curricula do not exist in isolation from the wider society, and forms of knowledge are indeed changing. The knowledge and skills derived from an individual learner's work based learning may well be different but equally valid in the context of a particular discipline. In this case, the individual learner may well have some scope to negotiate which learning outcomes s/he will seek to achieve through work based learning, within an array of intended learning outcomes identified by the higher education institution (in consultation with employers) as complementing and extending other indicative outcomes identified for the programme overall.

As another example, where the overall focus of the curriculum is vocationally specific and thus the whole curriculum may be designed on the basis of frequent interplay of practice based learning and underpinning knowledge and skills, control of such an integrated curriculum may well involve regulatory/professional bodies in addition to the higher education institution (if the programme leads concurrently to a licence to practise as well as an academic award). In such examples, scope for individual negotiation of learning outcomes may well be curtailed, particularly in respect of core practical competences.

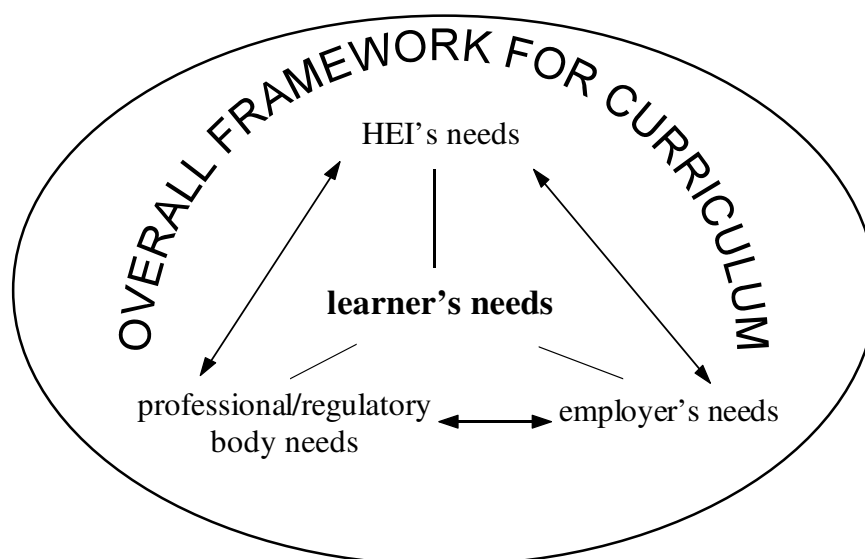
At the other extreme, an individual employee seeking to map out a series of intended learning outcomes based on learning opportunities available primarily in their workplace, will design an 'individual curriculum' which represents an exploration of work focused and work related issues in the context of higher education knowledge, scholarship and values. The individual will need to negotiate the intended curriculum with both the higher education institution, to ensure that it meets the higher education institution's criteria for academic awards, and with their employer, to ensure that it meets in some respects the employing organisation's needs. In practice, such

'individualised' programmes tend to comprise a significant proportion of work based learning, complemented by some taught course units.

A further factor influencing the extent of negotiation will be the focus of the work based learning itself. For example, is it a vehicle for developing primarily high level generic skills, or is it intended to be a vehicle for developing subject based knowledge, skills and understanding as well?

The figure below attempts to show in diagrammatic form the various influences that might affect the individual learner's work based learning curriculum. Although the individual learner's needs are placed centre-stage, such needs are inevitably tempered by the needs of the higher education institution; the employer, and (where appropriate) the relevant professional/regulatory body.

Figure 5: Factors influencing the work based learning curriculum



Through the discussion of work based learning frameworks that follows, we will attempt to draw out the various issues that arise, in particular those relating to questions of control and power in the essentially three-way partnership between higher education institution, employer and individual learner. For the sake of this analysis we have grouped various forms of work based learning into a number of separate types. From our reading of the literature it seems that most work based learning in higher education falls into one of four broad categories reflecting the control and design of the curriculum and the status of the learner.

- Type A:* curriculum framework controlled by HEI, content designed with employers - learner primarily a full-time student;
- Type B:* curriculum framework controlled by HEI and professional body, and content designed with employers - learner primarily a full-time student;
- Type C:* curriculum framework controlled by HEI, content designed with employer - learner primarily full-time employee;
- Type D:* curriculum framework controlled by HEI, focus and content designed primarily by learner - learner primarily full-time employee.

We recognise that there could well be a large number of variations and permutations based on the key variables identified above, but for the purposes of our analysis we have chosen to look at the above groupings as broadly representative of the shapes and forms of work based

learning currently in operation in higher education. Our discussion and examples are drawn primarily from recent development project reports (since such literature is readily available in the public domain). However, we recognise that most curriculum framework and design discussions are not made publicly available: rather any record of such discussion and debate lies within minutes of course planning team meetings, and monitoring and evaluation groups internal to the higher education institution which is validating the overall programme as leading to one of its academic awards. Thus a reliable guide to current actual practice across the whole of higher education is not available.

Discussion of Curricular Frameworks

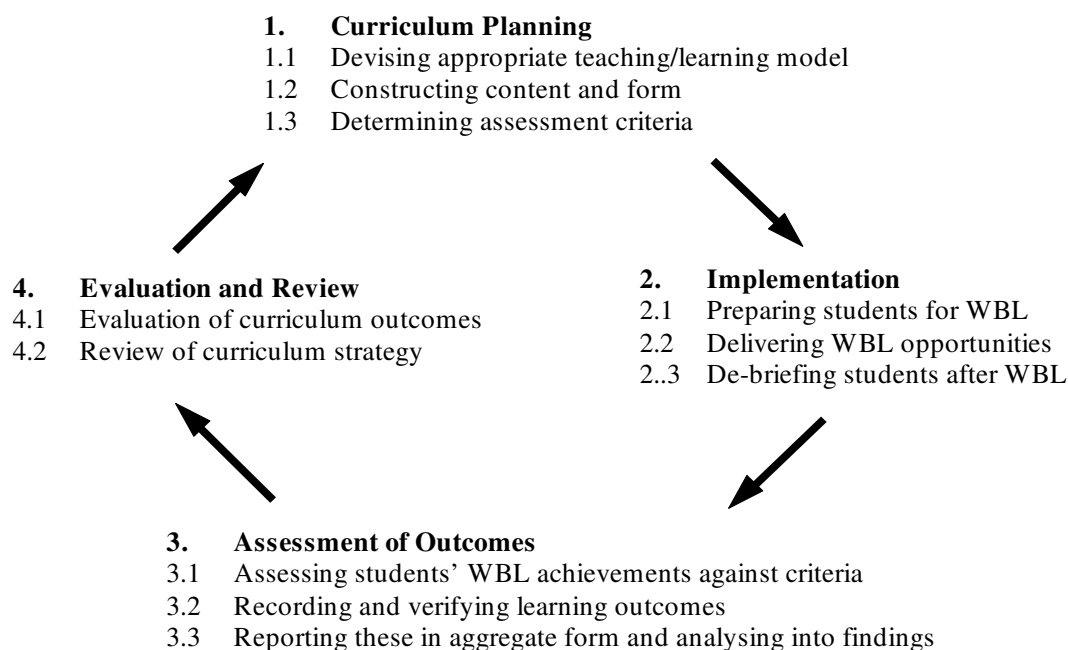
Type A curriculum framework controlled by higher education institution, content designed with employers - learner primarily a full-time student;

The most prevalent form of this type of work based learning is the traditional placement element of sandwich degrees, or those programmes which involve one or more shorter periods of block placement, *e.g.* a general work based learning module within an institution-wide modular programme.

In drawing together findings from a number of case studies primarily involving this type of provision, QSC's Guidelines set out a framework for the effective management of curriculum design. This is described, with amendment, in Figure 6. The framework goes on to identify a series of steps within each of the above stages, noting that in reality the steps will not be neatly compartmentalised (QSC, 1995). Neither, in reality are the individual 'steps' themselves necessarily without their own inherent problems. Curriculum designers and planners seeking to recognise learning derived in and from the workplace in the form of academic credit need to ensure that work based components are properly contextualised and integrated into the overall programme of study, and that a *real* partnership is established with employers in planning, using and exploiting the placement as a learning opportunity, not just an experience. As noted earlier, in practice it is not necessarily the case that universities have seriously considered the integration of the 'placement' element with the overall objectives of the programme of study in question. (See for example, findings from HEQC Learning from Audit report quoted above.)

Where serious consideration *is* given to questions of integration and contextualisation, of particular concern is the extent to which the learner can acquire *both* cognitive and affective/interpersonal skills in a workplace setting. The development of core skills within higher education generally is currently generating much interest, and work based elements of programmes of study may well provide opportunities for particular personal transferable skills (*e.g.* interpersonal skills; communication skills; goal-setting/self-management skills; team work skills, *etc.*) to be developed further. However, although listings of generic competences might be the 'accepted wisdom', there remain some doubts about the extent to which academic staff are prepared to take the opportunity to re-think from first principles the 'placement experience'. (See for example, Allan *et al.*, in Assiter, 1995.) At best, the profiling of generic skills developed during work based learning involves learners working with their line manager to select learning activities, review resultant experiences (and, where appropriate, select evidence relevant to a portfolio for assessment). In this way, competences identified as relevant to a particular programme area are grounded in the needs of the learner and relate to local factors. At worst, learners rely on a set list of competences, selecting (after the event) relevant experiences to associate with each competence on the list.

Figure 6: Curriculum design, delivery and review sequence
 (Source: developed from QSC, 1995)



The question of developing and acquiring cognitive skills in a workplace setting brings with it a number of additional issues, relating to both agreed definitions of cognitive skills, and identification of the range of subject specific skills that might realistically be developed and consolidated in the workplace.

Although academic staff will be very familiar with learning outcomes written in the form of '....a learner will be able toanalyse.....understand....critically reflect on , *etc.*', for some working on development projects aiming to provide evidence that learners developed *cognitive skills* in a variety of work placements, the task of finding a framework for exposing cognitive skills processes "proved an interesting and somewhat problematic task" (Bryan and Assiter, 1995, p5). Through their work on developing and trialling a framework for defining cognitive skills at the University of North London, Bryan and Assiter found that academic staff were not always aware of the key cognitive skills they set out to develop in students (*ibid.*).

Bryan and Assiter's resultant framework (developed from Bloom's taxonomy of cognitive educational objectives) divided cognitive skills into six main categories of description of facts/theories; interpretation of facts/theories; application; analysis (recognising patterns); synthesis (making connections); evaluation. Such a framework was intended to assist in the process of making explicit and articulating six 'thinking skills' which could be identified, developed and assessed for academic credit. In contrast with other frameworks developed for work based learning (see for example, University of Portsmouth, University of Leeds) the University of North London project team did not attempt to evaluate the *level* of skills (in terms of standard CATS levels) since they saw such an exercise as needing detailed research which was beyond the scope of their project. As we shall see later (Chapter Seven), the issue of linking cognitive skills to educational level continues to arouse much debate.

However, Bryan and Assiter found that specific terminology used in the framework was interpreted differently by staff in different subject areas and there was some initial hostility to the notion of separating cognitive skills from other desirable skills (although, having taken part in sessions designed to 'unpack' differing perceptions of commonly used terms, staff seemed more inclined to accept the need for a framework). There were also evident differences between students from different subject areas in the ease with which they were able to

differentiate between specific categories of skill listed in the framework. In response, the project team suggested that the user pack developed during the project be customised for particular disciplines, so that nuances of definition and types of examples given could be discipline specific.

These findings point, perhaps not surprisingly, both to the need for prior preparation and to staff development issues. Preparing students for work based learning is a frequent recommendation arising from project reports. Specific forms of student preparation advocated include practice in identification of learning outcomes and their articulation (University of Northumbria at Newcastle, 1994); practice in articulating cognitive language and concepts to other people (to gain familiarity); and in relating cognitive concepts to everyday and work settings to provide relevant anchoring ideas (Bryan and Assiter, *ibid.*). The need for staff themselves to engage in discussions geared to sharing differing understandings of various categories of cognitive skills prior to assisting students in their own preparation for placements was also highlighted.

Notwithstanding problems of consistent interpretation of terminology, there is now ample evidence that both cognitive and affective skills can be acquired and developed in the workplace, and can be assessed for academic credit, through a variety of mechanisms (see Chapter Seven). Concerns about variations that exist between work placements and employment situations are sometimes cited as reasons for *not explicitly* recognising the individual's learning from his or her work placement experience in the form of additional academic credit (see for example, Roberts and Myock, 1995). However, those practitioners involved in work based learning contend that the crucial issue is the quality of the work placement experience and the learning opportunities that can be derived from it. Equivalent learning opportunities are important, rather than equivalent experiences. The identification of core and optional intended learning outcomes appropriate to work placements within an overall programme of study can assist the process of trying to ensure equivalence of quality of work experience in terms of learning opportunities available and/or sought.

Although much is made about the three-way partnership between learner, higher education institution and employing organisation, all partners need to be clear about the nature of that partnership. Are the employing organisations providers of the 'raw materials and resources' for work based learning or are they stakeholders in the control and management of the programme? To what extent are learners able to negotiate their own set of intended learning outcomes?

An example that seems to meet these separate concerns is that of the University of Huddersfield's School of Computing and Mathematics. During the late 1980s the School developed sets of personal/social objectives and technical objectives applicable to all computing placements. Both sets were based on analysis of a wide range of data, including employers' appraisal forms, interviews with students and employers, and students' placement reports (Nixon, 1990). The resultant sets of objectives have since been refined into competence areas linked to performance criteria (*viz.* 'observed'; 'participated in'; 'undertaken'; 'feel competent'), and are kept under review to ensure continuing relevance and coverage of job roles that students may undertake during their placement. [Extracts from Huddersfield's Supervised Work Experience Periodic Record and Analysis document showing detail of competence areas are attached as Appendix I]. Depending on the job role being undertaken, various mixes of technical experiences (and thus opportunities for developing/consolidating technical competences) will be available to individual students. Students negotiate with their work supervisor and their university tutor a mixture of experiences which is applicable to their particular job role (and are subsequently assessed against relevant competence areas). *All* suitable computing placements are expected to provide opportunities for developing some level of competence in each of the personal/social competence areas identified by the School (Downs and Mohtashemi, 1996). Such an approach is not without its difficulties. In seeking to work closely with employers, and in particular a number of large employers with their own well-developed systems of competency profiles and appraisal forms, the School has attempted to refine its own approach to formulating the workplace 'curriculum' in terms of technical, and personal/social competence areas. However, too 'close' a match between the School's

approach and those being developed by particular companies (e.g. in the extent to which particular competences are broken down into further categorisations) would create problems for reproducing that approach *across* the range of job roles and range of companies with which the university works (Downs and Mohtashemi, *ibid.*).

A similar (though less specific) approach to defining the workplace curriculum for computing placement students has been adopted by Brunel University's Department of Computer Science. Brunel identifies four competence areas, each of equal importance, for the work placement, *viz.* technical, professional, personal and context of activity. For each area, a small number of performance indicators are identified (see Appendix II for detail). Negotiation of individual objectives is expected. Students discuss with their work supervisor opportunities for developing a range of professional competences. As for personal competences, students are expected to evaluate, in advance of their placement, present strengths and weaknesses and identify areas for consolidation and improvement during the work placement.

Although not as extensive as the Huddersfield listing, there are many points of similarity between competences identified within Huddersfield's personal/social competences and those identified under Brunel's separate personal, professional, and context of activity areas. Brunel's technical area is much less specific, the Department seeing this as dealt with through the work programme agreed with the employer, (although some overall technical objectives are identified under the Professional Development objectives).

Both the examples described above relate to subject specific sandwich courses which include significant period/s of work placement. The final example in this Type A relates to a short block placement arrangement, available as possibly an option within an institution-wide modular scheme: a general work based learning module. An example of a module description is included as Appendix III to this chapter. By its very nature, this particular module description *per se* provides ample scope for the student to negotiate the precise details and content of his or her 'workplace curriculum', which in all cases is based around undertaking and managing a specific project located with an employer organisation. However, a team of tutors will have initially negotiated potential projects with employers. And whilst the project may have some reference to the student's main course of study, emphasis is placed on the development of transferable skills in an academic context. On the other hand, the general learning outcomes developed for short block placements by Chester College of HE, University of Liverpool and Liverpool John Moores University in the course of their 'Work Based Learning for Academic Credit' project included a mix of learning outcomes relating to knowledge and understanding of organisational context; ability to evaluate experiential learning in the light of prior and newly acquired subject knowledge and skills; development of personal and work-based skills (LET, 1993). The intended general learning outcomes were "approved as the central concerns of any placement" (*ibid.*, p5), but needed to be defined with specific reference to particular placements and followed negotiation between student, academic tutor and employer. In addition, specific learning outcomes relating directly to any particular placement could be negotiated.

Type B: curriculum framework controlled by a higher education institution and professional body, and content designed with employers - learner primarily a full-time student

The most common occurrence of work based learning involving all three points of tension (more positively viewed as partners in negotiation) is within those programmes which seek to meet requirements for an academic award and, at the same time, to meet professional body requirements. As noted in the previous chapter, much has been written about the formation of professional knowledge and competence and the distinctions between propositional knowledge and process knowledge (e.g. Eraut, 1994). Most types of professional education involve both the transmission of propositional knowledge in college settings and the acquisition of process knowledge by work based learning.

Examples can be drawn from a wide range of professional areas, particularly those in the general area of 'the caring professions' (e.g. teaching; social work; nursing) wherein the educational process is based around a partnership between the individual learner, the employment context and the higher education institution. However, such partnerships need to be set within the overall national framework for such programmes. Recent policy directives have seen the balance of power within some of these partnerships shifting: for example, whilst nursing education has been moving into the academic institutions' sphere of influence, the government has recently initiated schemes whereby the design and control of a small proportion of initial teacher training will be more firmly located in the employment context, *i.e.* schools. In the case of social work, criticisms about the inadequacies of social work education and training led to the increasing influence of the employment sector in the delivery of the Diplomas in Social Work since 1989 (University of Central Lancashire, 1994). Other examples, which do not necessarily meet full 'licence to practise' requirements (e.g. those programmes of study in which successful completion of the work based learning element/s exempts the student from particular professional body training requirements) are also fairly common. Work placements within quantity surveying sandwich courses meeting Royal Institution of Chartered Surveyors (RICS) requirements are just one example.

The few examples described above indicate some of the shifting arenas and balances of power with which certain academic programmes of study, designed to lead to both an academic award and to gain professional/regulatory body recognition (including as appropriate state registration/licence to practise requirements), have to contend. Although such programmes have traditionally involved work based learning, there could well be a question mark over the extent to which individual learners are indeed able to negotiate elements of the work based learning curriculum. Clearly where licence to practise requirements include demonstrable competence in particular technical, practice-based skills then there will no scope for negotiation. Moreover, although work based learning may be well-established in such professional areas this does not, in any way, mean that potential areas of disagreement have been resolved. Far from it, to quote from just one project report

the experience (of developing further work based learning within social work) has ..provided an awareness of the complex, and sometimes conflicting, interaction between the interests of the professional body, of agencies, of academic institutions and of students.

(University of Northumbria at Newcastle, 1994, p144)

Some of these conflicts may well revolve around the extent to which professional competences (process knowledge, in Eraut's terminology) are seen as drawing on discipline-based theories and concepts (the first of Eraut's three forms of propositional knowledge). For example, in developing work based learning in psychology and social policy for social work, the University of Central Lancashire project team were only too aware of debates within the general area of social work about the extent to which the social sciences should contribute to social work (University of Central Lancashire, 1994).

Another area of potential conflict within professional education is the extent to which propositional knowledge can be acquired through work based learning. We have noted in Chapter Three that whereas the acquisition of process knowledge by work based learning is generally obligatory, propositional knowledge may be achieved outside formal education and without attending college or university. However, such achievement is usually through instruction-led learning: for example, studying distance learning course materials prepared by the university or the professional institute itself. What some of the work based learning development projects have been investigating is the extent to which such propositional knowledge can in fact be derived through work based learning, in a way that can be integrated into academic programmes (see, for example, University of Central Lancashire, 1995; University College London, 1995; University of Northumbria at Newcastle, 1994; Sheffield Hallam University, 1996). For some, such moves are seen as a threat to overall standards and a threat to more traditional taught university based methods. Moreover, experience to date seems to indicate that professional bodies themselves are wary of such developments and, as

noted in Chapter Three, it is these very professional bodies or organisations that act as a powerful source of authority over what is learned (and how it is learned) within professional education and training. In such circumstances it seems that individual learners may well have very little scope to negotiate their work based learning curriculum within a professional education arena.

Type C: curriculum framework controlled by higher education institution, content designed with employer - learner primarily full-time employee

These curriculum types seem to arise from different starting points. One is where an existing discipline-based university programme is 'translated' into a form which can be delivered through the workplace. In some instances these are tailored to the needs of a particular employer, e.g. University of Portsmouth/IBM integrated Computer Science degree scheme; University of Kent at Canterbury/Dover Harbour Board Diploma in Management Studies; University of East London/Ford Partnership scheme in Manufacturing Systems and in Personnel Development. In others, although development has initially been done working with just one or two subject specific cases, this is intended to lead to an institution-wide framework which will accommodate similar developments in other subject areas, e.g. University of Luton's recently validated Work Based Learning Degree Programme (University of Luton, 1996).

The curriculum framework for such programmes is determined in part by the disciplinary framework which exists for the university-based programme which has been translated into a work based delivery mode. For example, the University of Luton framework includes scope for the accreditation of prior learning (amounting to up to half of the overall credit points needed for the award of the degree); bridging programmes, involving project work negotiated between the student, the employer and the academic tutor; and finally a suite of eight subject specific modules to meet final year degree requirements. Negotiation relating to these subject specific modules is primarily limited to teaching and learning strategies (to recognise how the workplace supports the student's learning in terms of knowledge and skills defined in the original module's learning outcomes); and certain elements of assessment which will reflect the individual student's work environment (University of Luton, *ibid.*, Annex3).

Although many such programmes have scope for granting individual credit for prior learning, some have whole programmes (*i.e.* from year 1 through to final year) designed on the basis of a mix of taught units and work based learning units (which represents in some ways an 'accelerated route'), the work based learning units being written in terms of specific learning outcomes reflecting practical skills and knowledge based outcomes. An example of the latter is University of Northumbria at Newcastle part-time BSc(Hons) Biomedical Sciences degree, which was also designed specifically to meet state registration requirements for training Medical Laboratory Scientific Officers (University of Northumbria at Newcastle, 1994, Volume Two).

The alternative starting point (based more on a process which *starts* with the learning derived from work role experiences) is where the learning inherent in the job of work itself is 'audited' and mapped, where possible against existing university programmes or modules, the resultant programme being either discipline focused or a more individualised programme reflecting continuing personal development needs. Once again, some of these developments have been undertaken with one particular employer, either in the public sector (e.g. Anglia Polytechnic University/Essex County Council Social Services Department Social Work Programme) or in the private sector (e.g. University of Teesside/Cummins Engine Co. Ltd Diploma in Management Studies). Other developments have involved working with a number of different employers, both public and private sector (e.g. Middlesex University).

Several different methods have been used to 'tease out' the learning which people achieve at work. For example, the Ford ASSET project (ASSET - Accreditation and Support for Specified Expertise and Training) undertaken by Anglia Polytechnic University and the Ford Motor Company aimed to develop a work based honours degree in automotive engineering for practising engineers, most of whom were already qualified to HNC/D level and were operating at a higher level. The initial design was based on the model of a post qualifying work based

honours degree in social work developed through an earlier project (the ASSET - Accreditation of Social Services Expertise and Training - project). The project team initially undertook functional analysis work with groups of engineers at Ford's Research and Engineering Centre, honed the outcomes through discussions with engineering and other managers to take in the wider perspective, and then analysed the resulting data to form a map of engineering competences. Definitions of these competences were agreed with engineers, managers and academics. However, such competences were not the 'whole' story; they did not adequately describe the complexity of the Ford engineers' work:

the competences revealed what they *did*, but not what they *knew*. ...the body of knowledge that they applied *through* their competences.

(Ford - ASSET Project Conference Papers 1994, 1995, p9)

Thus the second dimension of the work based curriculum, *viz.* the underpinning professional knowledge which must be clearly demonstrated with evidence of competence was devised (by linking specific areas of engineering subject content detailed in the university's instruction led engineering modules to relevant competence statements).

The third and final dimension to this particular curriculum framework was the core professional criteria (derived from earlier development in the social work area which established 'core assessment criteria'). These criteria were originally derived from a general theoretical model of professional practice (*i.e.* developmental reflection through professional experience), and an analysis of criteria used to identify degree level work. For the project teams involved in both the ASSET programmes this third dimension (which is seen as a necessary dimension of the competence-based format) has been found to be particularly helpful in articulating the relationship between employment based competences, and higher education conceptions of intellectual level.

An alternative approach to the 'audit and map' process for describing and analysing learning derived from designated work roles has been described in some detail by reports and guidelines arising from developments undertaken by Middlesex University (see, for example, Taubman and Naish, 1994; Naish, 1995). In essence, the process which was developed and refined during the life of the development project involves using a variety of techniques to focus on

the knowledge, skills and competence which could be held by any jobholder of ... particular (designated work) role.

(Naish, *ibid.*, p27)

The techniques, which were influenced by functional analysis approaches but sought to move beyond them (to focus particularly on knowledge and learning, not skills), include organisation familiarisation; analysing documentation, particularly job descriptions; interviews with managers; job shadowing of an occupant in a designated work role; critical incident diaries; meeting with employer partners/managers and university staff to discuss, amend and verify the analysis. Once all partners are satisfied that the audit process for the particular designated work role in question is complete, the learning from the work role is then described as a series of learning outcomes, and mapped against existing modules within the university's institution wide common academic framework to establish appropriate amounts of credit (in terms of level and volume) for that work role. In this way, Middlesex accredited the work role *per se*. Individual occupants of these accredited work roles could then set about the process of demonstrating that their own learning met the (accredited) learning outcomes, and hence be awarded the credit rating of their work role.

The actual process of 'mapping' against existing modules has since been described in some detail (see Critten, 1995). Whilst the Middlesex approach to mapping is able to draw on the extensive range of credit rated modules available across the University's provision, difficulties can arise where no clear 'match' can be found. For example, Sheffield Hallam University recently completed a development project which sought (amongst other things) to match part-

time engineering students' proposed work (which would take them into new learning areas in order to gain academic credit) against existing taught units within the university's Engineering Programme. The students were carrying out a wide range of roles in varied engineering contexts. The project team found that there was

rarely a close enough correlation to enable matching of the outcomes of the students' work to the learning outcomes of the taught units (within the existing engineering programme).

(Sheffield Hallam University, 1996, p26)

Consequently, in this instance the University resorted to using an already existing framework for independent work based study within the Engineering Programme ('Shell Units' allowing up to 20 credits at each level of an undergraduate programme). Such a framework was able to accommodate individually negotiated learning agreements for each engineering student.

Type D: curriculum framework controlled by higher education institution, focus and content determined primarily by learner who is based primarily in employment

Such types of work based learning in higher education are, for some, the purest form. At the heart of the curriculum is the learning that can be derived from the individual's experiences in their work role. This 'heart' is then placed within wider contexts which, in the words of one project team

take the student beyond the immediate concerns of the work-based learning activity ... give a deeper understanding of what is being studied, including its limitations, relevance ... help students to locate their work in relation to adjacent fields of study ... provide a basis for making intelligent and informed comments on their progress ... enable students to establish communion with others working in the same field at the same level.

(University of Leeds, 1996, p15)

The learner has a leading role in negotiating the content, level and scope of his or her intended 'programme' with the academic institution and the employer. The programme itself aims to provide a framework or vehicle for the individual's educational and professional development whilst at the same time meeting specific needs in the workplace, *e.g.* work based projects which might lead to significant commercial or organisational use for the employer.

By their very nature such programmes are neither necessarily 'bound' to any one discipline area; nor, by their individualised nature, meeting an individual's continuing development needs, are they necessarily pre-structured to map onto externally derived 'norms'. Consequently, such programmes can be seen as challenging many of the traditional academic, intellectual and social assumptions which can be seen as constituting the 'building blocks' of teaching and learning within higher education. As the Leeds University project team note

work based learning at Leeds isabout fundamental shifts in our view of the 'valid' curriculum, the nature of teaching and learning and the locus of control.

(*ibid.*, p19)

So what sort of overarching frameworks have been agreed upon which *will* accommodate such programmes as evidencing learning which can be given public recognition in the form of academic credit within a higher education context ? Two examples will be given.

The first example is from the University of Portsmouth Partnership Programme, where three sets of 'tools' were developed (out of practice) which would cope with the problems of planning, managing and measuring learning derived by individual learners on the programme. The separate tools were: a means of establishing appropriate generic learning outcomes and levels (for both cognitive and transferable skills); a means by which volume of credit could be standardised; a set of criteria by which evidence of learning could be graded (Lyons and Bement, forthcoming). The first of these tools, generic learning outcomes and levels, is reproduced as appendix IV.

There are two matrices. The cognitive attainment by level of study matrix follows Bloom's taxonomy of cognitive educational objectives. The study, transferable and professional skills by level of study matrix is grouped into skills of reflection and appraisal; learning and process management; techniques and tools; and application.

For the University of Leeds, its generic work based learning programme was viewed as matching the problem-centred nature of most work based learning. Students would address the inter-related problems of managing their own educational and professional development and specific problems related to their work. Thus the overarching framework developed by Leeds to accommodate such programmes was based on the University's general level criteria mapped onto a number of fields reflecting this problem-based focus, *viz.* formulating problems; devising problems; implementing solutions; evaluating outcomes; presenting findings and information (see appendix V for details). In this way, the University sought to ensure comparability of standards with its other academic assessments. However, in constructing the criteria, the university re-emphasised that they were derived from professional practice, and would acquire their full meaning through subsequent integration with actual practice in real professional circumstances (University of Leeds, *ibid.*, p8).

Whilst the Portsmouth approach separates out the cognitive skills from other personal skills, the Leeds' matrices of level variables and fields (relating to the processes involved in problem solving) attempt to integrate both cognitive and affective skills. Both, in their separate and different ways, represent overarching curriculum frameworks which seek to 'capture' alternative learning routes to *different, but equally valid knowledge* in higher education terms. A number of other universities are currently planning to implement similar schemes, *e.g.* University of Glamorgan; University of East London.

The foregoing sections of this chapter have considered different types of curricular frameworks which have been devised to accommodate and recognise work based learning. Overarching frameworks have been analysed, primarily in terms of issues relating to authority and control.

Institutions have adopted a variety of approaches to describe and make explicit learning derived from the workplace, in a way that comparisons about the validity of this learning (in academic terms) can be made with learning derived from other sources, *e.g.* assignments undertaken on completion of a taught course. The approaches adopted vary considerably, primarily reflecting whether the institution/department is setting out to devise a curriculum framework which accommodates alternative learning routes to the 'same' knowledge; or providing the opportunity for individual learners to seek alternative routes to different, but equally valid knowledge. Clearly the latter is the more difficult challenge since practitioners are then seeking to extend the boundaries of what constitutes valid knowledge and skills in a higher education context.

The extent of negotiation available to individual learners also depends on certain key variables, primarily the place of work based learning within the overall programme of study, and the focus of the overall programme. Is it discipline-based? Is it domain-based? Is it within a professional education context?

What is evident is that in constructing various frameworks for work based learning curricula, individual teams have had to move beyond the theories and rhetoric which currently surround much curriculum development work in higher education. Theoretical debates about the potentially limiting effect of learning outcomes and competence based approaches to higher

education may have their place. But when you are faced with the task of making explicit and open to wider scrutiny the learning that is being derived in the workplace (such that that learning *can* be recognised as having academic validity) you need to move beyond the realms of theory and actually try to put into practice different approaches and see if they work. Only in this way can discussion about such approaches move forward beyond the rhetoric, and future debates be informed by reflecting on actual practice and experiences. When all said and done, central to work based learning is the firmly held belief that people can learn by reflecting critically on their experiences, and by discussing those experiences with others.

Practitioners involved in work based learning would not claim to have resolved all the issues. The actual programme design that eventually becomes consolidated within an institution may well emerge from the power relations of the various partners involved in any particular scheme (and the contexts in which they are working) and be some way removed from its initial design, derived from theoretical best practice. There are still debates about whether a whole degree can be achieved solely through work based learning. For example, to what extent does opportunity for breadth and freedom of approach need to be 'built in' to work based learning programmes? To what extent is 'new learning' being evidenced through work based learning, as opposed to existing competence? In practice, for those schemes geared to people already in employment, the overall curriculum tends to comprise a combination of credit for prior learning, credit for taught course units, and credit for work based learning. Questions about the extent to which the individual's needs and the employer's needs can *both* be accommodated within work based learning programmes need to be addressed at design stage. But practitioners have grasped the nettle/s. Through devising mechanisms for (say) identifying levels and volumes of credit in ways that can be adjudged against more traditional (and often implicit) conceptions and values inherent in much of higher education, they have sought to show that 'learning, wherever it occurs and provided it can be evidenced and assessed' can be awarded academic credit.

Summary

Learning acquired at work is as valid as learning acquired by any other means. The key to recognising work based learning is to find ways of providing evidence so that it can be assessed and awarded academic credit. There needs to be a process of placing work based learning within a curriculum framework.

There are several dimensions of work based learning; the two most important of which are the curriculum focus (from discipline based, through vocational, to personal development) and the control and content of the curriculum. Factors influencing the work based learning curriculum are the needs of the higher education institution, the employer, a professional/regulatory body (in some instances) and above all the learner.

Using this analysis, four main categories of work based learning are identified as - Types A, B, C, and D. The learner is primarily a full-time student in A and B, and primarily a full time employee in C and D. The curriculum framework is controlled by the higher education institution exclusively in A, C and D; and jointly with a professional body in B. In D the learner has probably greater input into designing the content than in the other three. A is the traditional placement element of a sandwich degree or work based learning units with full-time programmes. Examples of B are the professional experience parts of courses for teachers, nurses and social workers. In C either an existing higher education programme is "translated" into a form that can be delivered in the workplace, or learning inherent in a job is "mapped" against an existing higher education curriculum. D is concerned with the learner recognising that generic (transferable, life) skills and values have been developed by work experience. However, the development of generic skills and values does not belong exclusively to D, and such development is recognised as a vital contribution made by all types of work experience.

Chapter Five: Designing and Realising Work Based Learning

Introduction

Having established an overarching curriculum framework for work based learning, how is the individual's learning experience then designed and realised in practice? We use the phrase 'designed and realised' deliberately to try and get away from the terminology of 'design and deliver' which might more usually be associated with discussions of teaching and learning in higher education. The phrase 'design and deliver' can bring with it connotations of a programme/course unit designed by a group of academic staff and then delivered to learners by way of lectures, tutorials, seminars, laboratory/studio activities, *etc.* Elsewhere in this review we have made the distinction between instruction led learning and experience led learning. The essence of experience led work based learning is the fact that the learner is supported (through a variety of ways) through a process of identifying, consolidating and extending learning derived from their work based experiences. Thus, the learning *per se* is not delivered *to* them in the workplace: rather, their learning is made explicit (*i.e.* realised) through a range of processes of which critical reflection, testing out and re-applying learning through discussion and in new situations, confronting discrepancies, and understanding socio-emotional contexts that might hinder/facilitate learning are central.

Fulton *et al.* write of designing work based learning programmes around three clearly defined phases: diagnostic, supplementary, and completion (Fulton *et al.*, 1996). The diagnostic phase is used to assess the needs and current capabilities of potential learners. The supplementary phase is used by several programmes to bring learners' knowledge and skills up to a predetermined level. The completion phase usually consists of learning at a higher level than the preceding supplementary phase (*ibid.*). In this chapter, we consider the 'diagnostic' phase separately from the subsequent phases, the latter may in fact be brought together into the process of negotiating individual learning contracts (which we cover later in the chapter).

Diagnostic Phase of Design

For those forms of work based learning adopting the curricular frameworks identified as types A and B (in Chapter Four), the diagnostic phase may not in fact appear as an explicit phase in designing the work based learning element/s. Rather, the design and planning of work based elements will have been part of the overall programme design. Subsequent diagnosis of individual student needs should form part of the student preparation prior to undertaking work based learning elements. However, as QSC Guidelines note

case study evidence shows that many students embark on placements without a clear understanding of their objectives and methods, and in the hope that they will learn practical skills as they go along. More detailed preparation would help them.....For programme or placement scheme leaders there is often a dilemma between providing more 'curriculum product' (in the form of knowledge) or more 'curriculum process' capabilities (in the form of communication, planning and negotiating skills). The process approach is attractive, but brings its own demands for resources to support tutorial group work, pre-placement role rehearsal, personal and career development mapping and arrangements for strong link tutoring.

(QSC, 1995, p28)

Whilst pre-preparation should clearly form a part of diagnosing needs, some also contend that an explicit debriefing stage following work based learning elements, comprising personal reflection; group reflection; experience exchange and the formulation of a critique in the 'cool light of day' is vital for effective learning, and diagnosing future learning needs (see, for example, Gillham, 1992).

For those curricular frameworks established to accommodate work based learning programmes geared to the needs of full-time employees (types C and D, in Chapter Four) whereby work based learning is at the heart of the overall programme, the starting point for discussions with prospective learners about their intended work based curriculum is the assessment of their prior learning. Such learning may already be evidenced through formal certification mechanisms. Additionally or alternatively the prospective student may possess uncertificated learning derived from a number of sources. The assessment of such prior learning is the process of determining at what 'stage' the learner may gain access to higher education (*e.g.* start of undergraduate level, final stages of undergraduate level, post experience/postgraduate level), and what the aims and objectives of his/her future negotiated work based learning curriculum might reasonably be. In keeping with our focus on experience led work based learning, we will concentrate in this discussion of the diagnostic phase (for curricular framework types C and D) on the assessment of prior *experiential* learning. However it is recognised that assessment of the individual's learning will take into account both certificated learning (which may in fact include in-house training courses which have previously been credit rated by an academic institution) and 'uncertificated' learning such as that derived from various experiences. The assessment of ongoing experience led work based learning is covered in Chapter Seven.

Assessment of Prior Experiential Learning (APEL)

Discussions in the mid to late 1980s about experiential learning led Warner Weil and McGill to identify four 'villages' each characterised by different meanings and purposes for experiential learning. Whilst recognising that such broad brush categorisations did not do justice to differences within any village, at least the concept of such groupings alerted people to the fact that although the term was being widely used, the different meanings being attached to the term were often overlooked.

The four villages were basically as follows:

village one - concerned with assessing and accrediting learning outcomes resulting from life and work experiences as the basis for creating new routes into higher education, employment and learning opportunities, and achieving professional status. The processes associated with the assessment of prior experiential learning (*e.g.* systematic reflection; identification of significant learning; synthesis of evidence) were seen less as an end and valuable in themselves and more as a means to an end.

village two - concerned with change in higher and continuing education. Prime concerns were twofold, *viz.* that the prior experience of learners was valued and used as a resource for further learning; that subsequent learning was active, meaningful and relevant to 'real life' agendas. The emphasis was on individual development and the pursuit of personal and educational goals.

village three - concerned with using learning from experience as the basis for group consciousness raising, community action and social change. Reflection on prior learning was seen as a means to personal and collective empowerment. Perception, language and development and application of knowledge cannot be divorced from its social context. As such it would be anathema to have such learning assessed and accredited by a formal institution since such learning from new perspectives cannot be embodied in dominant values, structures and institutions of societies.

village four - concerned with emphasising personal and interpersonal experiences as the basis for personal growth and development. As such, it was strongly influenced by ideas drawn from humanistic psychology and theories of psychotherapy.

(Warner Weil and McGill, 1989)

It is probably fair to say that current practices of assessing prior experiential learning broadly reflect village one concerns, although there is increasingly an emphasis on the *actual* processes that individuals go through to provide evidence of their prior experiential learning (through say compiling a portfolio), as well as the end product. However, there may be some confusion about what lies at the end of the APEL process. For example, the team who recently completed an evaluation of a small number of work based learning development projects noted certain institutions used the evidence of prior learning (from experience or from other sources) "to establish the acceptability of learners rather than award extra credit" (Fulton, McHugh, and Saunders, 1996, p63) and went on to note that this distinction between 'acceptability' and 'extra credit' had not always been appreciated by either the learners or their managers. These findings seem to be mirrored elsewhere. For example, drawing on her experiences with particular groups involved in the Workers' Educational Association and its 'Making Experience Count' programme, Fraser concludes that the assessment of prior experiential learning is not always *primarily* about identifying learning gained from experience and proving its applicability in another context (usually that of formal education systems). For Fraser, APEL is more importantly about recognising the intellectual rigour and commitment which is required in undergoing the process and regarding that as proof of academic ability (Fraser, 1995).

But for Fraser, there is an essential contradiction in *how* that proof of academic ability is to be evidenced:

only as a piece of written work which, in turn will be assessed for its structure, its analysis and synthesis...in other words its ability to objectify the learning gained....so accreditation or assessment in the public realm...will invariably mean incorporation of the process, or at least its outcome, within the discourse to which the process is applied.

(*ibid.*, p151)

Such 'objectiveness' is central to Usher's summary of APEL. For Usher, APEL involves systematising learning (gained through life and work experience)

in terms of specific knowledge and skills. A process that ...require/s reflection. In effect the raw material of subjective experience is transformed into 'objective' statements of learning outcomes.

(Usher, in Fulton, 1989, p65)

Fraser suggests that APEL's declared concern with a student-centred, problem solving process clashes with traditional phenomenology of knowledge and education because it addresses the issue of what it means to be 'qualified' for higher education, and challenges the very concepts of excellence and exclusivity upon which higher education has traditionally rested.

(Fraser, *ibid.*, p136)

In considering the difficulty of adopting a facilitative approach to translating individuals' experiential learning into a very specific public realm (in this case, access to higher education), Fraser highlights the real danger of ignoring aspects of an individual's experience because they are considered irrelevant to higher education, particularly where those prospective students may be in transition personally and professionally and feeling vulnerable. Whilst not everything that has been learned may be relevant to the ability to

write a clear narrative, to synthesise from many sources, to apply and evaluate different theories.....it is often crucial to know how an individual acquired certain skills...there is a danger of relevant material being lost in standardisation and arbitrary limitation.

(*ibid.*, p158)

The potential for 'losing' relevant material and hence possibly undervaluing experiential learning was reiterated in case studies reported by Glasgow Caledonian University. The project teams noted that if the APEL exercise was focused too narrowly on specific university modules then the work based learning could be undervalued in credit terms (Osborne *et al.*, 1993).

Given the foregoing concerns, just how have institutions gone about the process of assessing prior experiential (possibly work based) learning as part of the process of negotiating work based learning programmes? An evaluation of the 1994-1996 round of work based learning development projects funded by the (then) Employment Department noted the two different approaches to APEL being adopted by the institutions concerned. These were the 'credit exchange' model, wherein the prior experiential learning evidenced (through say a profile or a portfolio) is matched against formal learning criteria or learning outcomes of a specific course; and the 'developmental model' in which not only the knowledge and skills are acquired through experience, but also a description of how that learning informs current work practices is taken into account in awarding credit for prior learning (Butterworth, quoted in Fulton *et al.*, 1996).

Many institutions may well have 'signed up' to the idea of recognising non-formal learning, whatever its source. However, turning the rhetoric into well-founded and transparent processes which are acceptable to the academic community may be another matter. The individual seeking some measure of academic credit for his or her prior experiential learning is set the task of providing evidence of that learning, and the evidence is then compared against existing measures of learning used by the university. The measures often take the form of sets of learning outcomes grouped by module/course unit.

The use of portfolios as a vehicle for bringing together into one location various elements of evidence of learning and/or skills is increasingly being used within higher education for a variety of purposes, *e.g.* portfolios for assessment of core skills developed/consolidated through a programme of study. Principles and guidelines for putting together portfolios of evidence of prior learning are being developed by institutions in the form of workshops and/or specific modules on planning, constructing and presenting portfolios for assessment and accreditation. Such group activities tend to prove more effective than individual counselling, both for applicants and in terms of cost (Lyons, 1993). Key areas of support centre around helping prospective students to re-think radically their work and experience: how to transform their experiences into measurable terms of knowledge and skills (both cognitive and other more process oriented transferable skills). 'Trigger points' are used to prompt such re-thinking and to structure the subsequent description of learning experiences.

For example, the University of East Anglia uses the following:

What I had to do;
What was especially problematic about doing it;
What was at stake;
Why I found this challenging;
What were the 'learning outcomes' that I gained;
How have these 'learning outcomes' proved beneficial in my subsequent professional career'.

(University of East Anglia, 1996, p40)

To enable the prospective student to understand the content of existing degree modules, the University of Luton provides students with booklets detailing module descriptions and the intended learning outcomes. Middlesex University, on other hand, requires prospective students to present their evidence within particular 'areas of learning' which they themselves have identified (with the help of an adviser), but which may or may not provide any sort of match with existing taught modules. There seems to have been little systematic evaluation of these different practices. On the fact of it, we might surmise that the 'tighter matching' implied by the former example might lead to under-valuing as noted by Osborne *et al.* (*op. cit.*).

As with any other forms of assessment, validity and reliability are key principles to be taken into account. Given prospective students are putting forward their own 'evidence of learning' generated from a number of sources, as opposed to responding to specific questions designed from the outset by academic staff to assess their learning in a particular area, other features of the evidence need to be borne in mind, *viz.* authenticity, currency, and sufficiency (academic staff who are involved in assessing performance and evidence for national vocational qualifications will be familiar with such notions). In some areas of work, authenticity may create some problems. For example, traditions of authorship within public sector organisations mean that very often reports and other documents produced are often not 'named'. Also, where applicants have moved jobs, and/or departments in previous work organisations have been disbanded, it might prove difficult to verify authenticity. For others, currency might be a crucial issue (depending on the nature of the credit sought). A 'shelf-life' of five years seems to be a general rule of thumb, but supplementary evidence is sometimes sought to ensure up-to-datedness (*e.g.* with legislation or with relevant technology).

Sufficiency of evidence is needed to enable a sound assessment to be made. Often more evidence might be asked for, although this might prove difficult for those whose work environment is constantly changing. Establishing 'measures' of level and volume of credit is not an exact science, and many institutions are still striving to create frameworks for definitions and descriptions of level of credit which do not depend on time-ordered comparisons with 'standard three year honours degree'; rather they tend to be based on hierarchical descriptions of cognitive skills, and of transferable skills. See, for example, earlier examples for University of Portsmouth and for University of Leeds (and the later chapter on Assessment and Accreditation). Nor is the 'measuring' necessarily carried out in a discrete fashion: rather initial 'measures' form only a part of an iterative process of assessing prior experiential learning. The very detailed guidance produced by Middlesex University (Critten, 1995) sets out the various steps in such an iterative process as follows:

Step One - establish matching where possible, and identify issues to be checked further - either with the prospective student or with other subject specialists;

Step Two - allocate level/s according to existing level descriptors used by institution - identify aspects to be checked further;

Step Three - allocate volume of credit according to the match with existing modules and/or nominal time needed to acquire the level of knowledge/skills as demonstrated by evidence. Record decisions and justifications for same, prior to meeting of university Accreditation Board (internal and external assessors) where opinions on difficult cases are pooled (and case law built up);

Step Four - holistic review of evidence analysed - checking out potential overlaps and/or areas where further analysis might result in further differentiation of skills/levels. Identify issues requiring possible further exploration with prospective student;

Step Five - quality control of evidence - checking for validity, reliability, authenticity, currency, sufficiency;

Step Six - checking out evidence in context, plus establishing why applicant wants accreditation in the first place (could raise issues of general versus specific credit depending on what programme is to be built onto this credit). Assessor interviews or has dialogue with the applicant in the context of the work situation (where possible), recognising that the context in which learning derived is as important as the content of the evidence itself. Dialogue may well provide evidence of developments in an applicant's learning (not captured by evidence initially presented in portfolio);

Step Seven - final recommendation on credit for APEL made to particular Accreditation Board/Panel (depending whether claim is for general, or specific credit)

Step Eight - further discussion with potential student on planning his/her 'next steps' (in terms of future learning intentions).

An overview of the current use of the accreditation of prior learning (APL) within UK higher education institutions, both as providing evidence for initial entry to higher education and for entry with credit or advanced standing has recently been produced for the Universities and Colleges Admissions Services (UCAS, forthcoming).

As noted above, many institutions run workshops or separate modules on portfolio preparation and presentation. For learners, confidence building and guidance on preparing evidence are invaluable components of these activities, as well as providing experience in writing, in analysing the outcomes of past and current experiences and in synthesising and integrating the learning identified as a result (see for example, University of Luton, 1996; Osborne *et al.*, 1993). Explicit recognition by the prospective students of the cognitive skills being utilised in preparing portfolios has parallels with the benefits identified for the University of North London's ALE (Accreditation of Learning through Employment) User Pack in terms of clarifying participants' understanding of the complex processes of thinking.

Although such benefits might well arise from the process of putting together a portfolio, not all prospective learners are necessarily 'content' with the ultimate result, *i.e.* with the credit awarded. Fulton *et al.* noted instances of individual disappointments and disputes, although some of these related specifically to credit for prior certificated learning (Fulton *et al.*, *ibid.*). Some of the difficulties might arise from misunderstandings about the processes involved. Distinctions between specific and general credit (both for prior certificated and prior experiential learning) might well be understood by those *within* the academic institution but are unlikely to be familiar notions to prospective students and their employers. Further it needs to be well understood at the outset whether the institution's system for assessing and accrediting prior learning is geared towards a simple 'credit exchange' model, or whether it takes into account the *additional* learning that the prospective student gains through the reflective process of describing how what they have learned informs their current work practices. For example, the University of East Anglia's Guidelines for APEL indicate that applicants need to include descriptions of key learning experiences from their working life which have made a significant contribution to their overall professional development (University of East Anglia, 1996).

Although the Higher Education Quality Council's Credit Rating guidelines might well provide a useful starting point or benchmark against which institutions can compare their own procedures for APEL, clearly institutions need to build up their own body of custom and practice and case law arising from following their own processes for APEL to gain confidence in this area. At least one institution has recently commented on the 'steep learning curve' encountered by staff when introducing APEL workshops (University of Luton, 1996, p11).

Guidance on both the processes involved and the indications of 'time', both in terms of time and effort needed by prospective students (attending workshops, drawing together evidence and preparing a portfolio) and the time needed for the APEL process to run through the institution's system, all need to be made clear to both prospective students and their employers. As one project team noted

.....it does take time for portfolios to be processed through the appropriate systems of universities; such procedures are the students' principal guarantee of quality and academic respectability and cannot be by-passed.

(Osborne *et al.*, 1993, p25)

And what is the net outcome of the diagnostic phase? For learners who are primarily full-time students on a campus-delivered programme they should have a clearer perception of what their learning particular objectives for the work based learning element/s, built around the general framework that has already been established, might realistically entail. Such perceptions should provide a firm basis on which to move into the process of negotiating the detail of their work based learning.

Where work based learning is at the heart of the individual's overall programme, the net result of the diagnostic phase (as exemplified by the process of assessing the individual's prior learning) is not only an indication of the level/s and volume of academic credit that might be awarded for their prior learning: the process of putting together a portfolio of evidence to support claims for academic credit itself provides an opportunity for potential students to reflect on their educational needs and to explore with tutors their intended programme, and identify likely gaps in necessary prerequisite knowledge that might hinder their ability to benefit from and contribute to their nominated study area (see for example, Lyons, 1993). Thus, the diagnostic phase cannot necessarily be seen as a distinct phase in the work based learning process. Rather it is a starting point for the process, and runs into the supplementary and completion phases. Within many work based learning schemes which have a specific discipline/subject area focus and are geared towards particular types or groups of employees, there is an assumption that prospective students will be able to gain a significant number of credit points (usually ranging from 120 - 180) via the APEL process, and the overall scheme is designed on this premise. However, in practice such assumptions have not always proved to be realistic (see for example, University of East Anglia, 1996).

Having completed the 'diagnostic' phase through a process of assessing the individual's prior learning, the next stage is to develop a work based learning programme which builds on (where appropriate) this prior learning to meet the educational and professional development needs of the learner. For this phase, most practitioners have developed the notion of learning contracts as a way of setting out just what the intended work based learning programme aims to achieve, in what time scale, using what resources, *etc.*

Supplementary and Completion Phases effected through Learning Contracts

During the mid to late 1980s and early 1990s there was a spate of projects funded by the Employment Department which explored the issue of using learning contracts as a vehicle for identifying, describing and assessing learning derived from the workplace. Although the term 'contract' persists to this date, it was noted early on in such development work that the contract was used to describe an *individually negotiated learning agreement* between an employee/learner, the employer and an academic, but had no legal implications (see, for example, Evans 1989; Stephenson and Laycock, 1993). More recently completed development work seems to indicate that the legal implications of learning contracts are being re-visited, possibly reflecting more general moves towards student charters and learner entitlements (see, for example, University of Luton, 1996).

Although the use of learning contracts may seem commonplace in some areas of higher education, it may be useful to recall what factors might have provided the impetus for such rapid development from early beginnings in 1986 with project work involving four employers (*viz.*, Jaguar Cars Ltd, JBS Computer Services, the Training Agency itself, and Wimpy International Ltd) together with their four (then) polytechnic partners (Coventry, Wolverhampton, Sheffield City and Oxford) and managed by the Learning from Experience Trust (LET) through to relatively common usage ten years later.

In the mid-1980s, there was increasing UK interest in various aspects of experiential learning and its assessment; at the same time the Council for National Academic Awards was in the process of establishing a credit accumulation and transfer scheme based on the fundamental principle that 'learning, wherever it occurs and provided it can be assessed might be given credit towards an academic award'. Furthermore, the Manpower Services Commission (later to become the Training Agency) was seeking to effect greater linkages between formal education and training and the world of work. Added to the foregoing were developments in higher education teaching and learning models which sought to shift the balance from the dominant

pedagogical model (where the lecturer takes the primary role in ownership and control of the learning process and thus responsibility for that process) towards what was termed an 'andragogical' model which sought to encourage experiential and autonomous learning and empowerment of the learner through a more co-operative and critically open learning process. As noted in Chapter Three, the andragogical model was advocated by Knowles *et al.*. They considered that when people take responsibility to learn something on their own authority, what they learn may be learned more deeply and retained for longer than what they learn by being taught.

Other initiatives, for example the Royal Society of Arts Higher Education for Capability and the Employment Department's Enterprise in Higher Education Initiative, were also stimulating curriculum innovations in the general area of student autonomy in learning, and effective partnerships with employers.

The original LET managed project (completed in 1988) was quickly followed by a number of funded projects which focused specifically on the implementation of learning contracts, most involving employees from local organisations and one involving the use of learning contracts for sandwich placement students (see for example, Marshall and Mill, 1992). Oxford Brookes University subsequently extended its original development work to include administrative and technical employees in the institution itself, partly as a way of encouraging "the University towards becoming a learning organisation" (Robertson and Priest, 1995, p10).

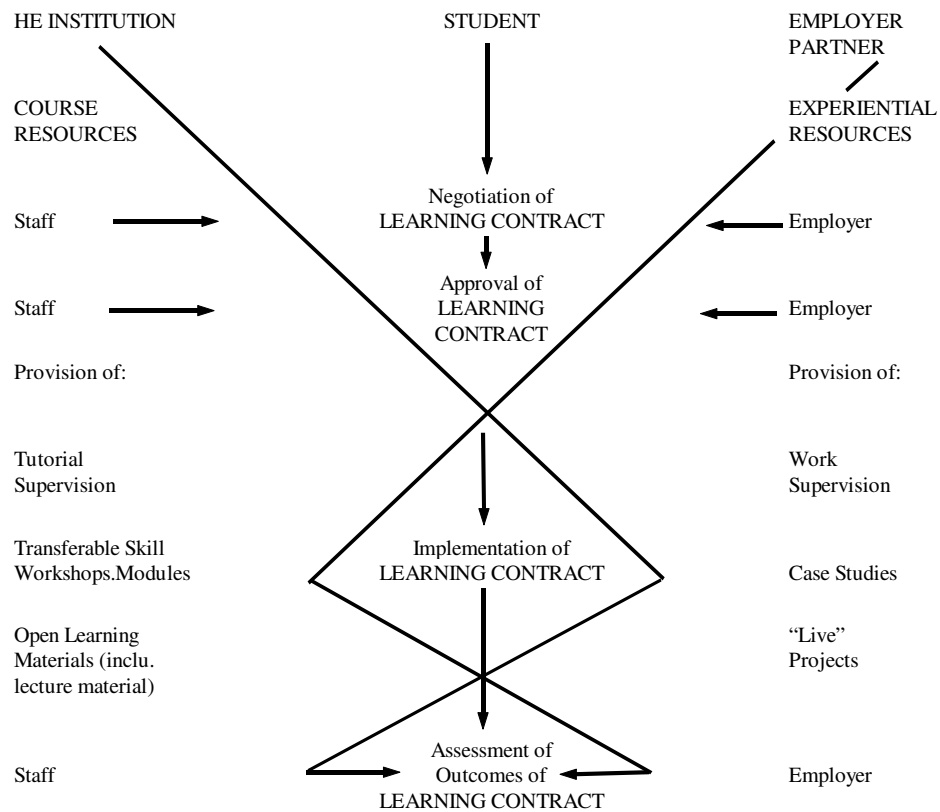
Work based learning contracts are a means by which the individual work based learner, the higher education institution and the employer can negotiate, approve and assess the outcomes of a learning process with both the higher education institution and the employer acting as a resource for learning. Negotiation is central to the process of establishing a learning contract, so that the learning process described within the contract meets the needs and concerns of all three main stakeholders in the process. Negotiation is needed at every stage: negotiating the intended learning outcomes; negotiating what evidence of learning will be provided to meet assessment criteria; negotiating the criteria for assessment. These stages can be set out as follows:

- diagnosis of the *needs* of the individual and the employer
- identification of objectives described as *learning outcomes*
- identification of *resources* to be provided by the higher education institution and by the employer
- agreement of a *timetable*
- agreement of the *evidence* of achievement of learning outcomes
- agreement of the *method(s)* of *assessment* to be used and *criteria* to be used in assessment

(adapted from Robertson and Priest, *ibid.*, p2)

Figure 7, adapted from Stephenson and Laycock (1993) shows the interactions between learner, institution and employer from the point at which a learning contract is initially negotiated, through to completion of the learning process.

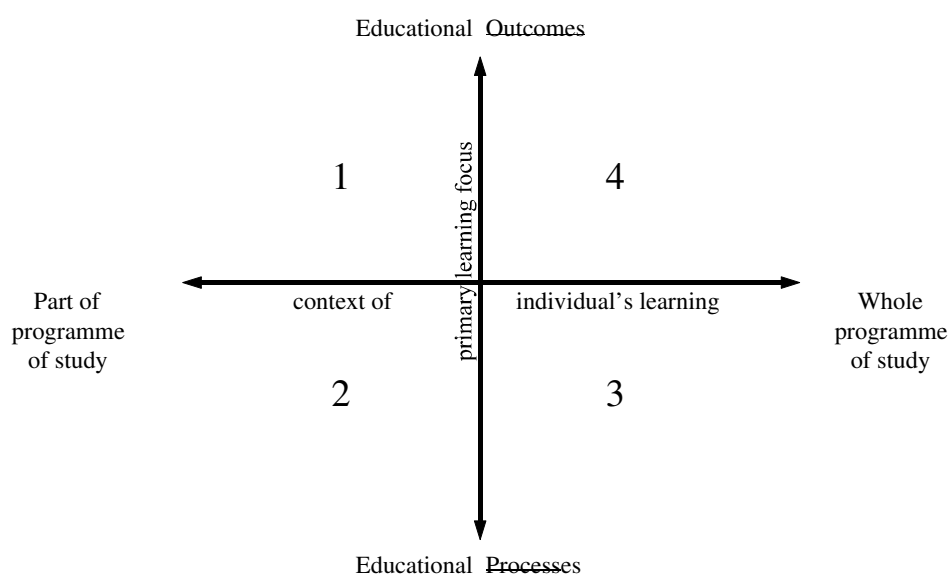
Figure 7: Negotiation of a Learning Contract
 (Source: Stephenson and Laycock, 1993)



In their brief review of using learning contracts in higher education, Stephenson and Laycock characterise the variety of current practice along two intersecting axes relating to the primary learning focus and context within the overall programme of studies, as shown in Figure 8.

In quadrant 1, the primary focus is on using learning contracts oriented to learning outcomes in gaining credit towards part of an overall programme of studies. In quadrant 2, the focus is on using learning contracts to support educational process issues for a part of an academic programme. In quadrant 3, the distinction between processes and outcomes is less distinct where learning contracts are used for whole educational programmes. And in quadrant 4, where learning contracts are intimately associated with the accredited learning outcomes of whole educational programmes, practitioners seem to concentrate more on identifying the institutional procedures governing the approval of learning contracts and the assessment of their outcomes (adapted from Stephenson and Laycock, *ibid.*, p161).

Figure 8: Using Learning Contracts
 (Source: Stephenson and Laycock, 1993)



In practice, the learning contract once agreed may well be renegotiated as work progresses or circumstances change and further negotiations may follow. Given this, and the avowed use of learning contracts to enhance students' development towards becoming autonomous learners, it would seem surprising if the educational *process per se* was *not* always one focus, albeit complementing the educational outcomes focus, of using such devices.

A number of the work based learning programmes explicitly recognise this educational process element of using learning contracts by awarding academic credit for its successful completion. For example, within the Portsmouth Partnership programme the successful planning, management and self assessment of a learning contract leads to the award of ten credit points per level of study (see Lyons, 1993, pp11 and 17 for detail).

Although the use of learning contracts is now a common feature in programmes involving work based learning, not all project teams considered their use necessarily appropriate. In developing an institutional framework for counting work based learning towards a qualification, Sheffield Hallam University originally considered they would adopt a model of negotiated learning contracts and portfolios. However, further deliberations concerning the relationship between the learner's stage of development and educational practice in relation to work based learning led the team to conclude that

whilst negotiated learning contracts would be appropriate for the mature, experienced adult learner (particularly one involved in continuing professional development), the developing adult learner would benefit from different approaches at different stages of his/her education. Thus, very early on in a student's professional development ... s/he would benefit from observing work practice, over time s/he might become a participant ... Later, as they had achieved some basic competence, learning would increasingly come through personal experience and reflection.

(Sheffield Hallam University, 1995, p6).

In consequence, the Sheffield project team considered that, rather than use negotiated learning contracts, written and agreed learning plans, giving information of what was to be learned, how it would be learned and how and when that learning would be assessed, would be used (*ibid.*, p8). However, when the above notion of an agreed learning plan is taken together with the roles and responsibilities of the student identified by Sheffield Hallam, there seems to be much

similarity between agreed learning plans and negotiated learning contracts, although it may be that the scope for negotiation is more limited in the former instance.

Limits of Learning Contracts?

Other limitations to learning contracts as vehicles for negotiated learning have been identified. Writing about the use of self-assessment schedules in negotiated learning (whereby learners create a comprehensive and analytical summary of their learning), Boud considers that learning contracts are basically limited by their need to identify goals and programme design of learning activities and assessment methods and criteria *before* much substantive learning has taken place (Boud, 1992). In such a process, the learner may be limited by his or her initial ideas of what constitutes worthwhile learning. Within the more rigid forms of contracts, learners may become channelled into following lines of enquiry that no longer fit their needs and interests (or they complete contracts merely to fulfil assessment requirements).

Where negotiated learning contracts are used, issues of learner and staff development abound. Learners need support in the initial stages of using learning contracts, particularly where they are unfamiliar with the idea of negotiating and managing their *own* learning (as opposed to teacher-centred strategies for teaching and learning that might have prevailed when the learner was last exposed to a formal teaching/learning situation). Anderson *et al.* highlight not only issues relating to motivation and learner preparedness, but also cultural and social barriers which may, in reality, limit the use of learning contracts (Anderson, Boud and Sampson, 1996). A number of work based learning projects also found learners needed help in identifying, to an appropriate degree of specificity, general and subject specific learning outcomes to be presented within a learning contract. At the same time, tutors experienced difficulty in determining whether learning outcomes proposed within contracts had the potential to be achieved at the appropriate academic level. Consultation between tutors helped in coming to a common understanding. For particular subject areas (*e.g.* social work) agreement on what evidence can be presented to demonstrate achievement of particular learning outcomes may also raise issues of confidentiality. These have to be resolved early on in the process of negotiating individual learning plans.

Even where there is a clearly expounded view about the parameters of negotiation acceptable for any particular programme of study, some commentators suggest academic staff need opportunities to explore issues relating to self awareness and ownership and control of knowledge so that the process of negotiating learning contracts can be approached in a neutral way. A further area of personal development, for all parties involved in the negotiation process (learner, employer and academic tutor) could well be the development of competences required for successful negotiation *viz.*:

- establishing the bargaining area
- establishing the negotiating range
- valuing the other person(s) involved
- identifying the objectives
- listening more than you talk
- being neutral and factual
- actively seeking mutual acceptability
- knowing the concessions that you can make
- identifying and using a colleague to discuss the issues with (*e.g.* a mentor)

(see, for example, McCarthy in Stephenson and Laycock, 1993).

From the institutional and academic staff point of view, the process of negotiating individualised learning contracts may create problems in a system wherein overall course objectives, content, timing and location tend to be predetermined by the institution (and thus not susceptible to negotiation).

Limits of Negotiation?

Where individually negotiated programmes of study include institution taught modules (to provide, for example, a broader context for work based learning) practical constraints of timing and location may well be overcome through provision of modules through different media (*e.g.* text based open learning materials). However, whilst some work based learners may gain benefits from following specific university modules, for others such study may prove unsatisfactory and unproductive (see, for example, University of Leeds, 1996, p15). Clearly at the heart of discussions about the individual's intended programme must lie issues concerned with his or her educational and professional needs. Some course modules, especially those designed for students enrolled on highly-structured subject based programmes, may not relate sufficiently to work based learning students' needs and existing experience and knowledge.

From the individual learner's point of view, scope for negotiation may vary according to position within the workplace. An individual who is able to work in a fairly autonomous manner could well have scope to (re-)negotiate aspects of work focused projects such that specific learning opportunities will be available. Alternatively, he or she may be able to manage work so as to be free to attend taught modules delivered on-campus at pre-set times. For some employers, this individual responsibility for organising work based learning to fit with the pressures of work is considered valuable professional development in its own right (see for example, University of Luton, 1996, p10). However, where the organisation and management of an individual's work role is tightly controlled (by someone else) the person may feel less able to negotiate aspects of his or her work (particularly changes arising from unforeseen circumstances) which may have knock-on effects for previously agreed learning programmes. Also, although employers may agree at the outset to the provision of structured learning opportunities within the workplace, more immediate business considerations could take precedence over carefully negotiated agreements. Guidelines for negotiation (and re-negotiation) must be made clear to all three partners in the work based learning process.

Where the work based learning element is a part of a mainly instruction-led programme of study, then a work based learning contract will be negotiated for that specific element. Where work based learning is at the heart of the programme (and drives the design of the whole programme) then any learning contract will tend to cover the individual's whole programme, up to the point where assessment criteria for the intended academic award have been satisfactorily met. If the individual chooses then to work towards a higher award, the process of negotiating a new learning contract will start anew. However, this pattern for 'whole programmes' is not universal. For example, the Ford-ASSET model for work based learning involves negotiation of both an overall Programme Action Plan (showing the place of work based module/s within the individual's proposed programme) and separate Module Action Plans. The Module Action Plans specify competences (previously identified for the overarching curriculum framework) in terms of the individual's particular work context and responsibilities, and indicates how relevant underpinning knowledge will be demonstrated and how assessment criteria will be fulfilled (Ford-ASSET project final report, 1995). Similarly, within the University of Luton work based learning degree programme, separate learning contracts are negotiated for each work based module undertaken. The learner has a central role in negotiating each contract, including discussion of expected learning outcomes, resource requirements, type of assignment work to provide evidence of learning, and deadlines for completion. The actual content of any learning contract is specific to the individual's work based learning programme (which as we have seen in Chapter Four may be tightly constrained by the overarching curricular framework, or may be more open to individual design). For some work based learning schemes, a clear distinction

can be drawn between supplementary and completion phases. For example, the University of Luton's Work Based Learning Degree Programme includes a one semester 'bridging programme' which aims to prepare students for third year honours degree level work (University of Luton, 1996). Other discipline specific schemes geared to full-time employees indicate compulsory modules drawn from existing university programmes that each student will need to build into their own programme *e.g.* modules in engineering mathematics to underpin individual learning in the Ford-ASSET scheme (Guise and Winter, 1995). However, for those schemes which are not necessarily discipline-specific, the need for a supplementary phase *per se* will be dependent on the individual's existing knowledge base and skills, and their learning intentions. Although the content of any individual's learning contract will be specific to the work based learning programme, at least one project team considered the possibility of a common theme running through work based learning.

A Common Strand in Work Based Learning?

As part of its development work in preparing guidelines for supporting students in the workplace, the QSC project team noted that the projects emphasis (on fostering specialist subject knowledge through work based learning) tended to underplay issues in the teaching and learning of ethical values (Butters, 1995). The undergraduate curriculum for some of the more established major professions has traditionally contained ethical issues and code-of-practice instruction. However, the QSC project team found that in a wide range of broad subject areas (*e.g.* art and design; computing and mathematics; engineering; health and social care), professional ethics emerged on the teaching and learning agenda at three distinct levels. These levels were: induction into the procedural codes for avoiding misconduct; exploration of professional values and the ethical commitments expected of practitioners; critical appreciation of human, as well as professional, dilemmas.

Each level demands progressively deeper analysis and reflection for successful problem solving, and Butters suggests that each offers scope for continuous learning of how to think and do better as a practitioner. Although 'ethical levels' are not commensurate with competence levels, it is suggested that a carefully organised practice/work based learning curriculum might move through these levels while leaving room for academic tutors and students to explore and debate professional dilemmas (in dialogue with practitioners) at every stage. (For a fuller discussion, see Butters, 1995.)

Ownership of Learning and Nature of Learning Contracts

For some, a work based learning approach within higher education radically changes the position of universities as providers of learning. Indeed, Tallantyre has suggested that

if the philosophical concept of learner autonomy, together with our more sharply honed understandings of the learning process and the new market concept of learner entitlement were pursued to their logical limits, the likelihood is that we would see a radical inversion of the way things are done in higher education. The focus on the learner as a whole person would be at the centre of the process, and the institution and beyond it would comprise a collection of resources, materials and facilities to be drawn upon when and as indicated by the student's largely self-directed, though objectively-guided, learning programme.

(Tallantyre, forthcoming)

In the context of work based learning, such considerations have led at least one development team to consider that the learner should be recognised as the owner of the learning and, as a consequence, the university's position as provider of learning shifts considerably. Thus, for work based learning programmes, the university itself may not be able to guarantee that an employer can support a student throughout his or her work based learning study. The knock-on effect is that learning contracts include a general disclaimer to the effect that in the event of the employer being unable to meet his or her obligations (in terms of necessary facilities, or terminating the learning contract) then the university will not be liable to the student legally or otherwise for any losses (University of Luton, 1996, p34).

The bigger questions of 'whose learning is it anyway?' which lie behind the technical aspects of APEL processes and the use of negotiated learning agreements will be taken up in our final chapter.

Summary

The design and realisation of work based learning has been viewed as three distinct phases viz. diagnosis, supplementary and completion, but in practice these phases may not be necessarily separate activities. For work based learning geared to full-time students, diagnosis of individual student's needs will take place during preparation for work based learning elements within the overall programme. For work based learning geared to full-time employees, diagnosis of needs is likely to be part of the process whereby the individual's prior learning is assessed. The assessment of prior experiential learning will be a part of this process. Institutions are gradually building up experience of assessing prior experiential learning using portfolios of evidence, but there is sometimes confusion about the end result viz. is the process a way of establishing the acceptability of learners rather than awarding extra credit?

Having diagnosed needs, a negotiated work based learning programme (often combining supplementary and completion phases) is devised. For effective work based learning, the three stakeholders (i.e. the learner, the higher education institution and the employer) need to come to an understanding and agreement beforehand about the intentions and processes. The stakeholders should negotiate a learning contract (sometimes called a learning agreement, or learning plan), which should cover the following: the needs of the learner and employer, the objectives or intended learning outcomes, the human and physical resources to be available to the learner, a timetable, what will be taken as evidence that the objectives (learning outcomes) have been achieved and how these will be assessed.

Learning contracts need to be kept under review as the work experience proceeds and circumstances change. One of the limitations of this approach, if too much emphasis is placed on defining specific intended outcomes, is that much unforeseen learning, which inevitably occurs, is either not recognised or is discounted.

Those responsible for preparing a learning contract need training. It is recognised by some universities that the very experience of negotiating a learning contract is a process of learning and so academic credit points may be awarded to the learner for taking part successfully in the negotiation.

Chapter Six: Support for the Learner in the Workplace

Introduction

In Chapter One, we asserted that people continue to learn and develop throughout their lives and in different locations. So why have we entitled this chapter 'the learner in the workplace'? Why not just 'people in the workplace'? Are not all people in the workplace learning? Why identify them with the separate tag of learner?

The focus of our review has been to look in detail at practices which aim to 'capture' the individual's learning being derived from experiences in the workplace and locate it within some overall structure which aims to consolidate and develop this learning. The resultant 'whole' is then viewed as a valid academic activity which can be overtly recognised within a higher education context, *i.e.* in the form of being awarded academic credit. People in the workplace may well be learning. They could be learning specific skills to operate a particular piece of machinery; or skills in team working and problem solving to ensure more efficient and effective responses to customer needs and new product development; or new ways of working in response to technological change. However, on the face of it, such learning may be primarily directed to a particular job in hand, and to the employers' needs, and may be taken on board by the individual in a passive *ad hoc* manner. What the process of work based learning tries to do is to make this learning more explicit and give it some structure so that it can be built upon and form the basis of a development programme geared to the individual's needs (which may well differ from, but overlap with in some ways, the needs of the employer).

As we have seen in Chapter Three, theories about learning, particularly about learning from experience, stress the need for certain interventions to happen that will transform experiential knowledge (which may not be readily accessible to the learner) into propositional knowledge (which can be shared and interrogated, and may be changed as a result). In particular, emphasis is placed on the role of reflection; of testing out and re-applying learning through discussion and in new situations; of facing dilemmas and confronting discrepancies; of understanding the socio-emotional contexts that might strengthen and /or inhibit learning.

Opportunities for such interventions to happen may well not arise naturally through the normal work processes of supervision and management. Additionally 'learners' in the workplace will need emotional support, practical support and political support if they are to capitalise on their workplace learning in terms of their overall programme leading to recognition in higher education terms.

Whilst the learner in the workplace is carrying out a productive work role (and at the same time trying to place the learning derived from the workplace experiences into a wider context), the learner on-campus is primarily there to learn. For on-campus learners, guidance and support are seen as having a significant part to play in their overall learning experience (see, for example, HEFCE, 1995).

The on-campus environment is geared to learner support and guidance, although whether it is within the context of 'passing on expertise and a sense of purpose' related to extending boundaries of knowledge, rather than equipping learners to choose their future directions, may be debatable (see for example, Tallantyre, in McNair, (ed) forthcoming). Nevertheless, it *is* the case that for the majority of students in higher education institutions guidance and support for learning should be fairly readily available, be it through opportunities to discuss learning materials in tutorials and seminars, group work with other students or discussions with personal advisers. Also, as institutions have met the challenges of an increasingly diverse student body,

and increasingly diverse styles and modes of learning (occasioned in part by the introduction of modular and CAT schemes), attention has been directed towards developing guidance systems that can cope with these challenges. For example, HEQC's guidelines for guidance and learner support outline a framework for policy covering a number of areas including admission and induction arrangements, academic tutorial support, remedial support, pastoral and welfare support, career information and guidance (HEQC, 1995). The same body has since published a further commentary on the issue of personal tutoring and academic advice in response to growing evidence of concerns about the effectiveness and utility of personal tutoring systems across the higher education sector (HEQC, 1996).

Contrast such an array of opportunities for support and guidance geared to the business of learning and personal development available on-campus with the opportunities (or lack of them?) available in the workplace. Although employing organisations may well have highly developed personnel and training functions, these will undoubtedly be primarily geared to the needs of the organisation's business overall. Moreover, management functions are focused firstly on ensuring that business needs are met, although within these functions there are of course opportunities for focusing on an individual's needs qua individual. However, such opportunities will vary amongst organisations and for many small businesses day-to-day concerns might push discussions and reviews of longer term individual development opportunities into the background. Moreover, for students undertaking (short-term) block placements, discussions about development opportunities might not seem appropriate. Also, whilst people in the workplace will no doubt take part in 'seminars' and other similar opportunities for group discussion and interaction the focus is likely to be on specific work related topics. Thus, opportunities for reflecting on such discussions within a wider frame of reference (and possibly set against different values and norms) may not easily present themselves.

Mechanisms for Supporting Learning

In other chapters, we look at some of the document-based vehicles which have been devised for 'capturing' work based learning. Checklists of competences which prompt learners to review and reflect on what they have achieved, how they achieved it, what impact that achievement might have on other areas of activity, are just one type of vehicle designed to support and make explicit work based learning. Alternative approaches include critical incident diaries, whereby students first of all describe an incident, then draw out an indication of the various categories of skill (both cognitive and general transferable) consolidated and/or developed through the incident, or variations of this, *e.g.* portfolio of work based 'products' with evaluative commentary drawing out what was learned, *etc.* However, as noted above, certain interventions may well be needed to transform (in Boud *et al's* terminology) 'experiential knowledge into propositional knowledge', which can then be evidenced through documentary sources. Such intervention may take the form of a person, not necessarily the same person for each type of intervention and not necessarily different people from those with whom the learner in the workplace normally interacts. It may be the case that in some instances it is the same person, but the agenda for that particular interaction is focused in a way that (say) promotes reflection and/or challenges the 'norm'. Moreover, time is specifically set aside for such interventions. This question of time is particularly relevant in the small firm sector of industry. One project team describes the situation succinctly as follows:

Smaller companies are characterised by their ability to respond quickly and flexibly to the needs ...of the individual customer in particular. Such flexibility is attained in part by the willingness and ability of the workforce to operate flexibly. In practice, this conflicts with the advice from tutors to plan for systematic study, when the exigencies of working in a market-responsive company requires the learner to change work patterns often at very short notice.....how much truer this is for owner/managers themselves.

(Seagraves *et al.*, 1996, p24)

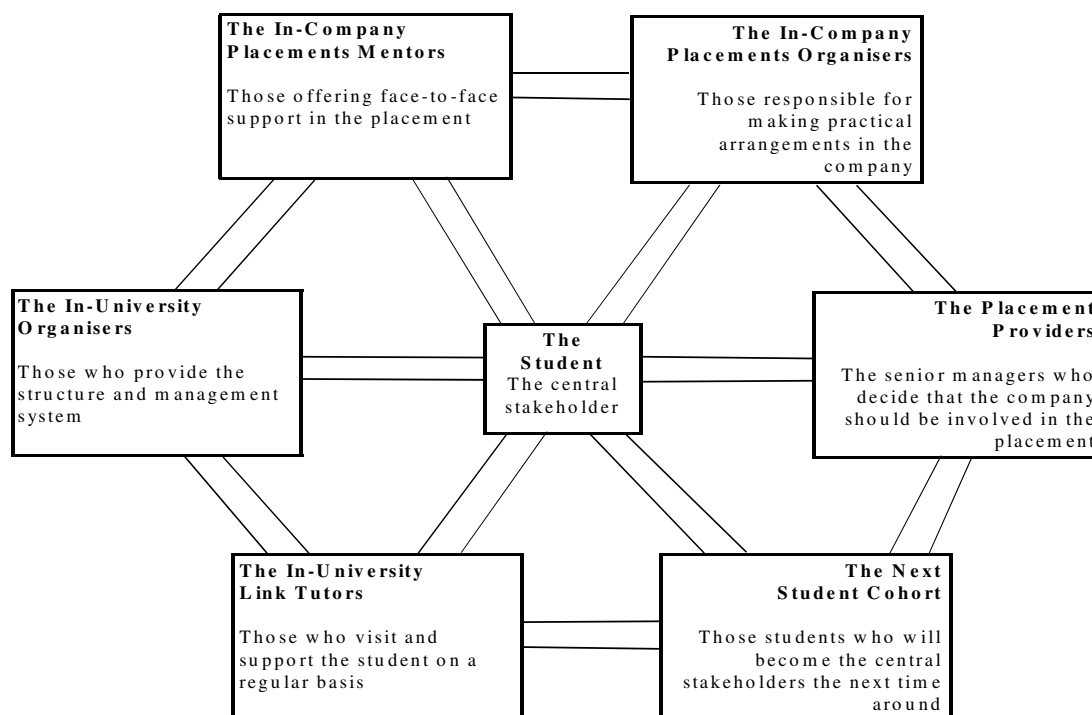
In developing this idea of 'people supports' for work based learning, institutions are not necessarily trying to replicate the types of support and guidance that is available on-campus. Given that the starting point for learning on-campus still tends to be instruction-led learning (albeit possibly in individually constructed programmes), then campus-based learner support and guidance mechanisms tend to reflect and complement this starting point. To support experience-led work based learning, institutions and employer partners may be seeking to put in place a team of people who between them can provide opportunities for the sorts of interventions which are seen as necessary to underpin learning from experience, and which build on support mechanisms that might already exist in the workplace. The team tends to comprise an academic tutor (or tutors), a workplace mentor (sometimes called tutor in the workplace), other learners, and finally a supportive employer. The rest of this chapter will look at each of the players in this team in turn.

The Academic Tutor and Work Based Learning

A recent QSC publication noted that there was little unanimity about what the role of the tutor in relation to work based learning actually involved, and even less unanimity about the name used to describe that role (QSC, 1995a). The term 'link tutor' was consequently used to denote the key reference point within the higher education institution in ensuring "the quality of the interface between the educational establishment and the work-based placement" (*ibid.*, p7).

As such the link tutor was seen as fulfilling a variety of roles in relation to students and workplace personnel, including an overall responsibility for the management of the placement experience itself. By the very terminology used (*e.g.* students and the workplace; the placement experience) it is clear that the QSC work was drawing on the literature relevant to work placements as one part of an overall programme of study. Earlier work, drawing particularly on experiences of operating sandwich courses, and some practice-based courses, had included detailed consideration of the link tutor role (see for example, Saxton and Ashworth, 1990). Such work had tended to concentrate on the nature of the visits made to students, explored the relationship between the purpose of the placement and the tutor's role, discussed variations in tutor style, and explored issues surrounding the assessment of student performance in the workplace. There were inevitably questions about the costs and benefits of link tutoring, but there was little question that some form of link tutoring was a necessary dimension in assuring the quality of the placement. Although, in advancing the cause of student empowerment, at least one writer did question the need for tutors to visit students and argued against rigid prescriptions of what should constitute link tutoring (Chapman, 1992). Early drafts of the QSC signposts guide for link tutors had also noted that placement systems tended to reflect a dichotomised culture in which work based learning was held inferior to academic learning. It was surmised that such separation may have had much to do with the uncertainties and unfamiliarity which many academics felt when exposed to a work based context they may have left many years before (or never been part of). However, moves towards more egalitarian and partnership-based schemes for work based learning would suggest that such distinct separations could not continue. Gillham identified seven separate stakeholders in the placement process as indicated in Figure 9, each with their own point of view.

Figure 9: Stakeholding in work placements
(Source: Gillham, 1995)



The link tutor must be aware of and manage appropriately these different points of view in a spirit of partnership. Some of these points of view may well emerge in negotiations about learning contracts and strategies for assessment, and the link tutor may have to operate as an "empathetic go-between, seeking to relate and rationalise two systems (of academia, and of commercially oriented work) which may, in extreme cases, reflect very different values and interests" (Gillham, 1995).

The QSC publication was based on a comprehensive review of the literature and although it may have been based primarily on one organisational form of work based learning, it did nevertheless produce a substantial listing of link tutor tasks within a number of distinct roles which could form the basis of discussions about rights, obligations and expectations of the academic tutor within work based learning partnerships. The roles identified include providing support for the host organisation, working as a negotiator, operating as an innovator, and acting as a facilitator, in addition to more traditional roles of assessor, and pastoral guide, etc. (The separate roles and tasks are listed in Appendix I to this chapter.)

For individually negotiated work based learning programmes, academic tutors may also need to develop expertise in assisting with the *creation* of such wholly original programmes of study, bearing in mind the university's overarching curriculum framework against which such programmes need to be devised.

Discussions about specific tasks within roles might clearly raise issues about staff development. As the QSC Guidelines note

there may be an unjustified assumption that the skills of negotiation, supportive tutoring, action planning, learning review and audit are already in place despite the absence of lecturer training in these areas.

(QSC, 1995b, p43)

QSC Guidelines suggest a number of approaches to link tutoring training but recognise that individual universities will determine to what extent all academic staff are required to undergo some form of 'training' to ensure basic lecturing and tutoring competences. Questions left open include

how far is it necessary formally to develop tutors for new responsibilities which might be linked to work based learning?

what kind of map of roles and competences could structure a staff development curriculum?

who might decide on participation and assessment, and how far should tutor training be tied into the university's quality assurance commitments?

(adapted from QSC, 1995b, p45)

In the current climate of external quality assessments (and internal reward systems that might reflect the focus of such exercises) the crucial question of resources to underpin staff development for tutoring work based learning also arises. Most project reports do not include precise details of resource implications arising from developments being proposed. However, in at least one instance (University of Huddersfield) the resource implications of implementing a specific development (in this case, costs associated with introducing self-assessment into placements) were considered in detail. The project team concluded that although there was a cost in initial staff development there were no additional recurrent costs involved - rather, what was required was 'a different way of using existing resources in the learning process' (Tuck *et al.*, 1993, p46). However, we might question whether institutions are prepared to redistribute resources and use them in different ways. There is also the question of just 'who' will undertake work based learning tutoring activities. Once again, we could surmise that existing external assessment practices might not necessarily encourage any increased emphasis on tutoring *per se*, although there are some indications of increasing recognition within institutions that tutoring roles and responsibilities of academic staff must now be defined and recognised, in addition to teaching, scholarship and research activities (HEQC, 1996). The 'who' question might not be a question of either/or. One work based learning partnership scheme involves different academic tutors at different stages of negotiation with the individual learner: a general tutor for the diagnostic phase and a specialist tutor for subsequent phases (University of Leeds, 1996). The 'two phase' tutoring process led, in some instances, to duplication of effort as the specialist tutor went back over the ground covered by the general tutor.

Whatever the ideals for tutoring for work based learners are, the realities depend in part on the type of work based learning programme in operation. A more significant impact on reality may well be financial aspects, for example the procedures which individual institutions have devised to 'cost out' support for work based learning in relation to the other teaching and learning provision, and (perhaps more crucially) the emphasis put on such tutoring activities in relation to other academic activities. As noted in Chapter Four, the Higher Education Quality Council viewed supervision and monitoring of students' work placements as 'often adequate' (HEQC, 1994, pxvi).

In addition to academic tutor support in general, the learner may be able to draw on support available *within* the workplace, in the form of mentoring. In very general terms, mentoring can be seen as a process of helping people make transitions (*e.g.* from a state of crisis to a state of understanding, from one job to another, from novice to competent practitioner/mature practitioner/expert). For some learning organisations, (integrating learning into their business performance) mentoring is a key element in the corporate learning process by which change is managed through people who learn and add value (Oxtoby, 1995).

Since the early 1970s, companies in the UK have been using mentoring schemes geared to young graduate entrants as a way of easing them into the organisation and helping them develop within that organisation. Mentor-protégé schemes have been used for several years in America, particularly in business and professional environments for building career

development relationships, and in affirmative action programmes. In more recent times, attention has also been directed at mentoring within certain professional groupings (e.g. nursing, teaching), role model/affirmative action programmes pioneered by the likes of Community Service Volunteers, and also schemes involving students as tutors and mentors to other students.

In the QSC Signposts for Staff Development (2): Workplace Mentors guide, mentoring is considered as a process "established to promote and enhance learning in the workplace ..." (QSC, 1995c, p5). Recognising that workplaces are subject to the pressures of their production, administrative or service functions and are not necessarily easily controlled for the purpose of learning, the process of mentoring was seen as playing

... a critical role in mediating these conflicting sets of requirements, as well as offering some specific instructional and guidance services.

(*ibid.*, p5-6)

These conflicts and tensions were re-iterated through research undertaken during the Leeds Metropolitan University's Working for a Degree-Mentoring project, where tensions between the roles of manager (ensuring operational performance) and mentor (willing to support learning and analyse mistakes in a 'safe' environment), were cited as potential areas of conflict (Jowett (ed), 1995).

Mentoring and Work Based Learning in Higher Education

Although the term mentor has been in common usage in industry for several years, it does not seem to have been so prevalent in higher education. Davies' thorough examination of issues relating to supervised work experience within higher education programmes of study makes no direct reference to mentoring as such (and only an indirect one, when noting that Nolan's analysis of types of work supervisor was based on Schein's typology of mentorship styles, Davies, 1990, p87). Employment Department-funded work based learning projects during 1990-1992 were using a variety of titles (e.g. mentors, workplace supervisors, clinical or practice teachers) to identify those carrying out the function (in the workplace) of providing advice and encouragement to learners in pursuit of their education and careers goals.

Although not using the term mentoring, Davies did discuss at some length how learning styles and workplace leadership styles might be analysed and how learning styles may be strengthened and/or modified. Particular emphasis was placed on the importance of the supervisor in bringing about successful learning (from placements) (Davies, *ibid.*, p76). His discussion of learning styles and leadership styles led Davies into questions of:

What supervisor styles are there? Which (if any) are more desirable than others in facilitating the learning and general development of students? Is there any way of meshing together learning styles of students with styles of supervisor, so that the student-supervisor relationship will be particularly beneficial?

(*ibid.*, p85)

Styles of workplace supervisor

In their extensive studies of sandwich courses at the then Sheffield City Polytechnic, Saxton and Ashworth emphasised the importance of the central role of the immediate supervisor in determining the nature and outcomes of supervised work experience. They identified the following seven workplace supervisor styles: mothering; negotiating; goading; establishing; neglecting; protecting; encouraging (Saxton and Ashworth, quoted in Davies, *ibid.*, p88).

Davies' final question relating to meshing together learning styles of students with styles of supervisor was left unanswered. Davies suggested it would be helpful to research the question of whether (and in what ways) students of different learning styles can be beneficially assigned to supervisors of different leadership styles. He recognised that matching particular student learning styles with supervisor styles - *e.g.* reflective and self-confident students might be 'happy' with laissez-faire supervisors, whereas students keen to act and not disposed to deep thought might be happier with relatively authoritarian supervisors - might tend to enhance a student's particular strengths and questioned whether too close a matching (in the positive sense) would always be desirable. Too obvious a mis-match of styles could cause unhelpful tension for both student and supervisor, but the potential for improving perceived weakness in a student's learning styles might be enhanced through judicious matching. It is of course debatable to what extent disciplines might differ in their conceptions about desirable learning styles (see for example Chapter Three, theories of learning). Higher education practitioners involved in work based learning espouse notions of developing learners' abilities in self-managed learning and reflective practice based on their experiences in the workplace. Those activities clearly draw on all four of Honey and Mumford's learning styles of activist, reflector, theorist and pragmatist (Honey and Mumford, 1986). As will be seen later, organisational cultures can also have an impact on supervisor styles.

Styles and cycles

In fact the question of matching learning styles to supervisor styles so that the student supervisor relationship may be particularly beneficial might actually be an unhelpful diversion. Much of the literature on mentoring talks of specific stages in the natural life cycle of any mentoring relationship (from initial orientation, getting established, performing, and finally ending the relationship), and it seems to be commonly accepted that as the relationship develops and progresses through its life cycle, an experienced mentor will adopt different styles of supervision to match the perceived needs of the learner at any particular stage in the process. Such considerations are also found in more general studies of management. For example, in their work on organisational behaviour, Hersey and Blanchard (1988) draw attention to the importance of situational and contextual factors in determining appropriate styles of leadership, and in particular the readiness and maturity of the followers/subordinates for any specific task; readiness being seen to depend on ability (experience, education, understanding and role perception), and maturity being seen to depend on motivation (security, confidence, willingness and incentive). Thus, rather than trying to identify a best style of leadership, the key to effective leadership lies in selecting the most appropriate style of behaviour for any given situation even though this may conflict with underlying attitudes and values. Thus, the matching process is a dynamic process, changing over time and the change initiated by a skilful mentor, as succinctly described in the extract below:

In the first instance the mentor will be more pro-active, supportive and encouraging, but in time the learner develops independence, confidence and autonomy. The mentor then needs to become more critical, challenging and confrontational, encouraging reflection. Experienced mentors indicated a dilemma in terms of balancing support and confrontation. *Effective and lasting learning* (emphasis added) takes place when learners experience a balance of challenge and support, confrontation and encouragement. Finding the balance in a particular mentoring relationship is at the heart of the learning process. Too little challenge and the learner is not stimulated to learn, too much and the learner may be scared off. There was some evidence also to suggest that in the early stages of a work placement learners' needs are more clearly associated with technical and vocational knowledge and skills, progressing to more generic needs related to managerial and personal transferable skills later in the relationship.

(Jowett, *ibid.*, p17)

The latter sentence, referring as it does to the early stages of a work placement clearly might not apply in those situations where the learner is already in employment. In fact, for these learners one might surmise that the situation may almost be reversed, *i.e.* in the early stages of

work based learning, an individual employee's needs may be more clearly associated with generic needs (related to explicit recognition of learning potential of their work situation, and managerial skills of planning opportunities for learning and managing time).

The Leeds Metropolitan University funded development work focused in particular on a model for mentoring that "supported university students' learning in the workplace" (Jowett, *ibid.*, p3). The project team found that the title 'mentor' as such was not widely used, although in most cases learners were supported in the workplace by a workplace supervisor, and most workplace supervisors undertook some (if not all) of the following activities: supporting and encouraging, guiding and advising, appraising, role modelling, supervising, directing, reflecting, challenging and confronting, educating (providing knowledge), criticising, counselling, coaching (developing skills), generating ideas.

Writing in the context of teacher mentors for student teachers undertaking school based initial teacher training programmes, Martin (1995) reaffirms the dynamic and changing nature of styles of intervention (ranging from authoritative-prescriptive, informative, confronting, to facilitative-cathartic, catalytic, supportive) that should be part of the mentoring relationship. But he notes that his own research on tutor and teacher (mentor) feedback to student teachers indicated that the majority of interventions were authoritative and prescriptive (reinforcing a hierarchical relationship between mentor and learner) creating dependency rather autonomy, which the author considered "may have serious repercussions for the overall learning of students" (Martin, *ibid.*, p10). This issue of dependency (albeit arising from a different set of circumstances) was clearly a matter of some concern in another of the caring professions, *viz.* social work, as evidenced in the Anglia Polytechnic University's work with Essex County Council Social Services Department in developing the ASSET Programme. Candidates on the ASSET programme (which focused on learning outcomes derived from social work employment experience and demonstrated in a portfolio of evidence within an honours degree framework) had some difficulty in managing the operational pressure of the workplace in order to prioritise their own professional development. Participants had been socialised into dependency upon the very external pressures they resented. Although a key purpose of the ASSET programme was to enhance morale through providing social work staff with the opportunity to take control of their own professional development, the very nature of the programme (which was based on flexibility and freedom of action) could result in undermining participants' self confidence. In consequence, and at participants' requests, the programme team found it necessary to bring back some constraints into the programme, in terms of short-term deadlines for stages of work (Maisch *et al.*, 1992, p10).

A further element in the effectiveness of mentoring relates to the culture of the workplace. Brunel University recently undertook research into the perceptions of mentors and mentees (*i.e.* those being mentored) *vis a vis* the role of the mentor involved in professional education courses in youth and community work, and in initial teacher training (Cleminson, Putman and Bradford, 1994). Their investigation focused on the extent to which the mentee's learning process was being influenced by social factors beyond the immediate mentee/mentor relationship. It was found that pressure of cultural and professional values within the workplace was supplementing the values from the formal mentoring process (as personified by the mentor and the organising institution) and thus affecting the mentee's learning processes. For example, the notions of a reflective practitioner were "less well harnessed in the school context than in the youth and community context". The researchers concluded that whilst the working pattern of the work base affects the mentor interaction (in terms of formality/frequency/timings *etc.*), at a deeper level "the norms and values of different occupations will influence the dynamics and quality of the work-base learning of the mentee" (*op.cit.* p367).

Models of mentoring

There exists a wide range of mentoring practice. Certain discipline areas have a long tradition of mentoring (*e.g.* nursing and social work, youth and community work) wherein formal mentoring schemes are well established and acknowledged as such as a strategy to support

learning in the workplace. Other areas (e.g. initial teacher training) may have a shorter tradition, but equally formal and acknowledged schemes. Different subject areas and professions clearly have contrasting traditions of studentship, traineeship *etc.* which may well imply contrasting models of mentoring.

QSC Guidelines set out four different models, *viz.*

apprenticeship model - whereby experienced practitioners accept a brief to give coaching, counselling and perhaps formal instruction to an attached student/trainee over an extended period;

competence model - whereby the mentor encourages the learner to prepare for, and work through, tasks with a view to mastering and demonstrating competences to specified standards;

reflective model - whereby the mentor aims to enable the learner quickly to acquire basic skills and procedural understandings so as to move into a relationship of collaborative working and co-enquiry. The mentor helps the learner reflect on cognitive and affective aspects of their own development, and may challenge the learner to re-examine values and competences already mastered;

informal model - relies heavily on tacit understanding shared by mentors and learners. The mentor offers what she or he feels is appropriate: perhaps encouragement and friendship, perhaps instruction and coaching. If the learner is assertive, there are possibilities for negotiating a more structured agenda for the mentoring relationship such that it may move towards one of the other models
(adapted from QSC, 1995b, p46-47)

Whilst the above models could be seen as being drawn from particular professional practices (and thus might be subjected to the 'not invented here' syndrome), a more helpful approach may be the one adopted by the Leeds Metropolitan University project team. They developed a *process model* of mentoring, based on what they considered to be the three key functions to the mentoring role (*viz.* educative, supportive, managerial). All mentors seek to fulfil all functions, whilst at the same time juggling the three functions and trying to find a balance between them such that the individual learner maximises their learning, and the mentoring relationship achieves the outcomes that have been defined for it by the participants and others (Wiggans, in Jowett (ed), 1995). The three key functions (adapted from Hawkins and Shoheit, 1989) are defined as:

educative - enables the worker to recognise strengths and weaknesses in their work, to develop new and existing abilities, to gain knowledge of work practices, to evaluate critically theoretical approaches and to define new theories in the light of practical experience;

supportive - offers opportunities for workers to explore feelings in relation to the work and the learning, be valued as a person as well as a worker, let off steam, receive sympathy and congratulations;

managerial - ensures that the worker recognises the boundaries of the working role, operates within team and organisational objectives, and performs to required standards.

Recognising that the individual learner in the workplace will develop relationships with a range of people in the organisation, Leeds Metropolitan University contends that the mentoring relationship *per se* is distinguished by the emphasis on the learning of the individual together with the combination of the educative, supportive and managerial functions. Further, in an effort

to tease out the distinctions between mentoring relationships, managerial relationships and counselling relationships (particularly in those work situations, e.g. the helping professions, where counselling takes on a specific professional meaning), the project team created a chart (Table 5) which seeks to re-emphasise the differences between mentoring (emphasising the development of the worker/learner), line managing (emphasising the work itself), counselling (emphasising the person and taking no responsibility for accountability to third parties).

Such discussions about a special relationship might imply a one-to-one relationship between a learner and one mentor. However, this same development programme also found evidence of group mentoring (for example, syndicate mentoring in nursing, where the aim was to achieve both a process goal (developing skills in reflecting on practice) and a product goal (producing a care protocol).

Table 5: Distinctions between mentoring, managing and counselling

FUNCTION	MENTORING	LINE MANAGING	COUNSELLING
Focus			
Educative - autonomy and self esteem	<i>Enable</i> the worker to learn, develop and move forward	<i>Enable</i> the worker to deliver and perform	<i>Enable</i> the person to change and move forward
Supportive - holistic, values the person	<i>Help/support</i> the worker to learn	<i>Help/support</i> the worker to be good at the job	<i>Help/support</i> the person to cope and to be in control of self
Managerial - accountability	<i>Ensure</i> the worker understands and can handle situations	<i>Ensure</i> the work is of at least adequate quality	None

(adapted from Wiggins, in Jowett, *ibid.*, p36)

Although short job descriptions for the workplace mentor may be drawn up emphasising the formal aspects of the function (e.g. matching a student to a workplace and a mentor, monitoring and guiding the student's/learner's progress towards agreed learning objectives, assessing recorded outcomes), many institutions fail to provide further explication of how to do these (and other) mentoring tasks (QSC, 1995b). In certain areas of higher education and particularly those concerned with the caring professions (e.g. social work, nursing), there are already moves to identify in detail what is required of a mentor and to provide the mentor with the 'essential tools of the trade'. However, in other fields QSC suggested that programme leaders and most managers may want to consider

how far down the road towards (this) 'full specification' they want their protocols (for mentoring) to travel. Much will depend on the extent to which they see mentoring tasks and skills as bound up with the standards to be set for organisational or professional staff development.

(QSC, *ibid.*, p52)

Specification of skills and competences?

In their work on developing a learning outcomes framework for the accreditation, delivery and assessment of work based learning, the education strand of University of Northumbria at Newcastle's project developed a set of necessary competences which they considered (teacher) mentors working in secondary schools should possess, and which were divided into three main areas, viz. the possession of appropriate *knowledge*; the possession of a wide range of *skills*; the development of *attitudes* likely to support the task (see Appendix II to this chapter for details).

The list of competences was developed when legislation concerning school based accredited initial teacher education was still being debated. There have since been calls to establish clear national criteria for the role and accreditation of (teacher) mentors (see for example, Lee and Wilkes, 1995). The inclusion of the development of 'attitudes' may be particularly significant given our earlier references to workplace cultures.

Essential skills of mentoring identified through the Leeds Metropolitan University project were grouped into organisational and interpersonal skills as indicated in Table 6.

Table 6: Essential skills of monitoring

(Source: Jowett, 1995, p18)

Organisational	Interpersonal
contracting recording structuring sessions time management evaluating assessing report writing maintaining boundaries using learning contracts and action plans	negotiation listening feedback skills intervention skills questioning motivation self-awareness coaching/teaching

For those involved in a group mentoring process, skills in group dynamics and group leadership would need to be added to the above interpersonal skills. Although possession of appropriate knowledge was not specifically listed, Leeds Metropolitan University found in their survey work that in work based learning situations where mentoring was relatively recently acknowledged, mentors' professional and technical competence tended to feature more prominently than their organisational and interpersonal skills. The University also found that more experienced mentors felt a need for deeper reflection on practice and the complexities of mentoring and learning, and identified a lack of skill in drawing out learners' own views and helping them to reflect and generalise (Jowett, *ibid.*, p20).

Training for Mentors involved in Work Based Learning

In his synthesis study of experience based learning in the curriculum, Davies called for higher education institutions to offer training courses to work supervisors (*sic*), particularly those in smaller organisations which may have no training functions of their own (Davies, *ibid.*, p199). Most of the more recent work based learning development projects have identified a need for some initial mentor training, although there is clearly a range of practice about the extent and formality of such training. Training varies from one day initial training/briefing sessions (either on a one to one basis, or in a group), a series of workshops run over an academic year, through to formally validated (by an academic institution) open learning programmes lasting six months. Such variations may reflect to some extent the working practices of the organisation in which work based learning is taking place and the status accorded to the mentoring function. For example, computer science students undertaking their year long placements with a major employer may be assigned to a pastoral manager, which is a role used by the organisation itself as the first managerial experience for the individual concerned. As such the pastoral manager scheme is presumably part of the organisation's overall staff development and training scheme within the management area. For such pastoral managers one might assume that only limited briefing about the mentor role might be needed. On the other hand, even in professional areas where the mentor role is firmly established (*e.g.* community practice teachers within the health and caring professions) there was evidence that the initial training did not fully prepare the professionals concerned for their mentoring role, either in terms of generic knowledge for

mentoring practice (e.g. different styles of learning, different models of mentoring) or specific key skills (e.g. active listening, giving and receiving feedback) (Harris, in Jowett, *ibid.*, p76). The specific skills of active listening, questioning, and encouraging through effective feedback are also the three main skills areas identified for the 'learning adviser role' arising from the Learning in Smaller Companies (LISC) project (Seagraves and Boyd, 1996). The LISC project's Guidelines for Learning Advisers in small and medium sized enterprises make clear that they are viewing the learning adviser role as similar to, though less comprehensive, than that of a mentor.

In drawing together practice from a range of institutions and recognising that different work based learning support requirements called for different degrees of responsibility and commitment (with different training implications), QSC Guidelines suggested three broad levels of initial mentor training and continuing development or network support, ranging from:

A: befriending and coaching mentors with relatively light obligations to student, employer and higher education institution

whereby the basic requirement to ensure that volunteer mentors understand their role and the expectations on the learner would involve a briefing meeting, reading of a thorough, well-presented guide to mentoring for the particular programme of study they are involved in, and a mid term follow up meeting;

B: longer-term mentors offering coaching, career guidance and supervision, perhaps with some call on counselling skills

whereby groups of mentors might follow a self study text for mentors, completing exercises and sharing experiences over a series of meetings. Such activities might be extended through (say) deepening their exploration of certain key skills, or by moving into more subject specific training;

C: specialist mentors combining roles including supervision and/or assessment as well as counselling contributions

whereby specialist training (probably through participation on a course leading to an award) would be needed.

(adapted from QSC, 1995b)

Although the QSC Guidelines use the term 'level', such terminology was not intended to imply a necessarily staged progression through the levels (and all the attendant notions of credit levels that such usage might carry with it).

The last of QSC's broad levels of training (C) highlights one of the contentious issues to do with mentoring: should mentors/workplace supervisors be involved in the summative assessment of learners? In some funded development projects, the workplace support role was split between a supervisor (*i.e.* support function from immediate line manager) and an assessor (*i.e.* workplace observation carried out by another supervisor) and in this instance two training and development modules had been developed. One of these concerned "supporting and assessing post qualifying professional practice" and a second concerned "portfolio accreditation of learning and the post qualifying programme procedures" (Anglia Polytechnic University/Essex County Council, 1992, p104 - 107). However, some contend that the mentor who also undertakes summative assessment merely reflects a realistic working relationship and is fulfilling an appraiser role in terms of reviewing learners' progress and capability which parallels, to some extent, the role of an academic lecturer/tutor (see, for example, CNA/SCOTVEC, 1992, p39).

However, even this comparison with an academic tutors' role may not be watertight. For example, in their work on developing models of learner self assessment, the Huddersfield University project team argued that, given a "self-assessment model challenges learners to

accept responsibility. ...making judgements about themselves ... how to face up their own deficiencies ...", learners needed a college mentor whose only purpose was to support the learner throughout the course. Such a college-based mentor would not assess the learner or pass judgement, since the learner needed someone with whom s/he could talk, without prejudice to discussion on grades (Tuck *et al.*, 1993, p38).

Practitioners in certain subject areas (*e.g.* social work and nursing) consider that the existence of *assessment* in different relationships (*e.g.* between learner and supervisor) can fundamentally change such relationships, particularly where the work rests on a great deal of personal insight and self knowledge. The added dimension of assessment can introduce new (and often troublesome) dynamics into the relationship and an understanding of and an ability to recognise and manage these dynamics is fundamental to both supervision and assessment (Little and Nixon, 1995, QSC Briefing Papers).

Most practitioners seem to agree that where workplace mentors are involved in making summative judgements on learners' progress and development (which may have implications for influencing their progression through a programme of study or for their final award) then their training should include issues to do with assessment policies and practices. For example, Middlesex University has developed a distance learning pack on Assessing Work Based Learning (accredited by the University as a 20 credit/level 3 module) and successful completion of the module is the pre-requisite for employers becoming assessors of academic work based learning (Naish, 1995). One might ask whether the parallel exercise, of requiring academic tutors to successfully complete a module on 'Assessment' as a pre-requisite for becoming assessors of academic learning, might also be recommended. Certainly, those involved in assessing portfolios of evidence for units of NVQs have themselves to have already acquired relevant units of Assessor/Trainer NVQs.

However, not all are sanguine about the possibilities of successfully effecting such mentor training. To quote from just one project report

Involving third parties in assessment involves a commitment to training as it is impossible to fully articulate assessment criteria and assessment at this level requires shared experience to gain a common sense of standards. *Without additional resources this training will not take place* (emphasis added).

(Sheffield Hallam University, 1995)

In their briefing paper on Assessment Strategies for Work Based Learning, Little and Nixon recognise that workplace supervisor input to learner assessment is vital since only such supervisors are in close and continuous contact with learners during the period of work based learning (Little and Nixon, 1995). However, they also highlight a number of difficulties which can arise in such input to assessment: varying standards by which student (*sic*) performance is assessed due to uncertainty concerning level of work the student can reasonably be expected to attain; stereotyping and/or personality conflicts which may distort an employer's view of the student; tendency to assess student performance highly so as not to have an adverse effect on students' degree chances (or, indeed, because a poor performance record may reflect negatively on their own supervisory skills); difficulties in ensuring that the supervisors directly involved in observing students in a range of work based situations actually complete the relevant assessment report/documentation (as opposed to training personnel, or higher management); tendency to highlight personal and social skills with insufficient attention being paid to technical competences and skills (possession of which may be taken for granted).

Some of these difficulties are of course not necessarily unique to work based supervisors and may occur in higher education based assessment undertaken by tutors. But whereas higher education based tutors will have an opportunity to form networks to share ideas and interpretations and thus develop common understandings about assessment practices, no such viable networks may exist for work place supervisors (Little and Nixon, *ibid.*).

The difficulties listed above are not necessarily insurmountable. For example, in developing an approach to assessment of certain aspects of student development during placements, the University of Huddersfield worked closely with one of its long-standing placement providers to develop a method of appraising sets of competences (which were equivalent in some respects to the competency profile being developed by the company for its own appraisal purposes). This joint development of assessment methods, and discussions on how best to describe the competences and ratings that the student obtained in the company type appraisal, provided opportunities for the university and workplace supervisors to share ideas and develop common understandings about assessment practices (see Downs and Mohtashemi, 1996).

In another example, a university developed a set of criteria for assessment within an industrial (as opposed to an academic) culture in the belief that notions of characteristics of achievement would be more helpful and more easily understood by academic tutors and workplace mentors alike than notions of credit level, hours of study *etc.* Assessment issues are discussed further in Chapter Seven.

Commitment to Mentoring and Mentor Training

A number of project reports highlight the benefits of mentoring for the mentors themselves, in terms of their own continuing professional development. This is a sentiment echoed by those experienced within the area of teacher training. In fact, in areas where the context of professional practice is rapidly changing (for example, current developments in the health care system) and increasingly complex levels of theoretical debate and analysis are expected to occur, mentors may well need ongoing context-specific development such that they can adequately support students' own learning in that professional area. Moreover, commitment may be high when mentoring is a formally recognised activity and contributes to mentors' own professional development in a context where developing others is an integral part of the profession. However, several projects recognised that the personal benefits of mentoring may not outweigh the pressures and stress that the addition of mentoring responsibilities (without adequate acknowledgement in terms of time/remission, training and ongoing support and remuneration) can create. As the Leeds Metropolitan University project team put it 'Who mentors the mentors?'

Moves towards awarding academic credit for successful completion of mentor training programmes might go some way towards providing mentors with status reward, even if no financial reward accrues as a result. However, regular attendance at mentor training courses may not be a viable option for many employers and employees. Some project teams have developed their own packs which could be used in the workplace (*e.g.* University of Stirling/Falkirk College of Technology's Guidelines for Learning Advisers; Middlesex University's distance learning pack on assessing work based learning).

At least one follow-up project report indicates that despite close cooperation between partners in work based learning programmes at senior management level, involvement at the operational level of workplace management has dwindled to the extent that instead of the intended three-way teaching/learning relationships between programme tutor, programme participant and his/her line manager/supervisor, most of the learning has come to be organised through a participants' peer group support process working under the guidance of a programme tutor (Maisch and Winter, 1994). This last observation leads in part to our final discussion under the 'mentoring' theme.

Does mentoring make a significant difference to learners' work based learning? In the (former) Employment Department publication 'Learning through work' (which reported on ten of the ED funded projects focusing on the integration, assessment and accreditation of work based learning with academic programmes), Duckenfield and Stirner note that

many argue that the existence of a mentor can be a critical factor in making work based learning a success by having the learner's interests at heart and the expertise to offer sound advice, by helping learners to reflect on their experience and by providing them with encouragement and motivation.

(Duckenfield and Stirner, 1992, p26-27)

Certainly, in the area of professional teacher education, the role of the mentor is seen as crucial in the development of the work based learner (Wilkin, 1992). This view is also reflected in social work education where practice teachers (mentors) are registered by the relevant professional body. However, more recently completed development projects have concluded that support for learning within a work based learning context is essential: mentoring is one way (along with others) of providing this support.

Support from Other Learners

Mentoring is one way of providing support for learners in the workplace. We have earlier discussed the role of the 'link tutor' in supporting learners in the workplace, and have described (above) a situation in which the work based learning support process rested primarily with the learners' peer group itself, working under guidance of an academic tutor. We now look more closely at the process of student/peer/learner support.

Within higher education generally there has been an increasing interest in the potential learning resource available from other learners. Although students may well have always made use of each other on an informal basis, the interest is now on developing student supported learning in a systematic way. Within higher education, Cornwall identified most 'peer tutoring' schemes as falling into the following categories: teacherless groups (in which tutoring takes place in peer-led discussion groups); co-tutoring (in which students at the same stage in their studies work in pairs and tutor one another); proctoring (in which students take on the role of individual tutors for students at a slightly lower stage in their studies - usually on a one to one basis); surrogate teaching (in which selected students are delegated some of the teaching functions normally undertaken by academic staff) (Cornwall, 1980).

Research evidence of the effectiveness of such schemes in higher education has recently been reviewed in a QSC booklet (QSC, 1995d). Most of the schemes reviewed had been introduced into university-based taught courses, and in general most were able to report benefits for both those being tutored and those students doing the tutoring. One particular form of student-supported learning *viz.* Supplemental Instruction (SI), has attracted increasing interest within UK higher education institutions in recent times. SI (whereby a student runs sessions for groups of students) had its origins at the University of Missouri - Kansas City in the mid-1970s where it focussed on specifically high risk or historically difficult courses. In the UK (where more than twenty higher education institutions are making use of SI, or variations of it) SI is commonly used in first year classes as a way of developing student approaches to learning within a higher education environment (QSC, 1995d). Positive outcomes have been reported, for both those students taking part in the group sessions, and those students leading the sessions (Wallace, 1992 quoted in QSC, 1995d). More recent publications have again highlighted some of the successes of SI as a student-centred learning mechanism, but also raise aspects in need of further research *e.g.* why schemes work well in certain areas of a particular institution, but are less successful in other areas of the same institution (see for example, Rust and Wallace (ed), 1994). Resource packs on peer tutoring have recently been produced by a number of universities (included in references to this chapter).

Within work based learning, there seem to be less reports of student supported learning. Where reported, learner support groups seem to be particularly beneficial for those programmes in which learners are primarily based in the workplace (rather than following a campus-based programme which incorporates blocks of placement in the workplace). The long

running Partnership Programme at the University of Portsmouth instituted learner support groups at the outset. Learner support groups are a compulsory element of each student's learning contract and students' work within the learner support group is credit rated. It is reported that such groups provide support in understanding professional standards and recognising the generic nature of many professional competences; in developing the ability to recognise work based learning opportunities; in developing strategies to deal internally with potential constraints which might undermine work based learning projects; and in improving skills in time and work planning (Lyons, 1993).

And as noted in the previous section, where workplace mentoring is no longer available, participant support groups may come to fulfil a learning support process. Even where mentoring support is available, moves towards establishing 'learning sets' may arise and be encouraged as an additional source of real support (see for example, University of Leeds, 1996, p31). Even though such learner support groups may be particularly important to learners who are primarily based in the workplace, some institutions have built them into the learning support mechanisms available to campus-based students undertaking work based learning elements of their programmes (see, for example, LET, 1993).

As with discussions about other forms of 'people' support in work based learning, there seems to be little hard evidence of the costs of such activities to set alongside the reported benefits (both to the learners themselves, and those 'doing the supporting').

Learner support groups may prove a more accessible source of support than tutors or mentors. As QSC notes, they may ensure that aspects of the curriculum pass into a zone of dialogue and debate between a programme team and learners themselves. However this move may pose a dilemma for academic staff: whether to 'let go' of a part of their pedagogic control (QSC, 1995b, p56). But if work based learning is truly about student-centred learning and negotiation of programme structure and content (within a clearly articulated framework) then such considerations should not be seen as a threat.

A Supportive Learning Environment

Employer commitment to work based learning will clearly help to encourage a supportive learning environment. However, commitment alone may not guarantee that the 'emotional support, practical support and political support' is in fact readily available. The culture and values of the work place may vary greatly from those of the university. Such variation can lead to misunderstandings and frustrations for all partners in the work based learning process. Opportunities for the main players in the support team to discuss certain topics together could well help to bridge the 'cultural divide', and to create a workable partnership. QSC cites just one example as follows:

A University ... runs workshops on industrial and university values and cultural practices in which workplace mentors and academic tutors identify their own values and their own images. Academic tutors are encouraged to 'hear' what industry knows and what it values in its partnerships with the university, whilst at the same time employer host staff are encouraged to influence the thinking of lecturers.

(QSC, 1995b, p65)

A discussion of 'values and cultural practices' may be one opportunity. Another may be in the area of learner assessment. It is clear from the analysis of link tutor roles and tasks, and mentor skills provided in this chapter that there are several areas of potential overlap. We have also highlighted issues to do with training and staff development (common for both academic tutors and workplace mentors) - particularly in the area of assessing learners - where a joint approach to training might well prove fruitful, and could provide a further opportunity for bridging 'divides'.

Institutions and their work based partners need to discuss how best to provide a supportive learning environment. Those discussions should take into account the type of work based learning programme on offer (including the basis for costing of that provision), the organisational contexts and the mix of people support that will be realistically available.

Summary

Learners on campus have a wide range of guidance and welfare support facilities, but because of the exigencies of business and the fact that the work place is not primarily about learning, the same facilities are not generally available to the work based learner.

Five levels of support are recognised: documents (e.g. check lists of competences, preparation of critical incident diaries), academic tutors (who can visit the learner and provide guidance and check that the employer is fulfilling its obligations under the learning contract), the workplace mentor (this Chapter is mainly about this function), the employer (e.g. senior managers who might be responsible for providing a suitable environment for learning) and other learners.

The workplace mentors (sometimes called "supervisors") have a number of roles: supporting and encouraging, guiding and advising, appraising, role modelling, supervising, directing, reflecting, challenging, educating, criticising, counselling, and coaching. Other ways of summarising these roles are by four models of mentorship: apprenticeship, competence, reflective and informal; or by three functions: educative, supportive and managerial. Mentors need to adjust their role, and the style of pursuing it, according to the needs and stage of development of the learner they are mentoring. There is a need for mentor training and to provide support mechanisms for them (e.g. networks of mentors, in the same way that academic tutors are linked through informal networks).

A number of roles have also been identified for academic tutors in relation to work based learning. Institutions may need to provide development and training opportunities so that staff are confident in undertaking these roles.

Learners on campus often are able to support each other, the need for learner self-support groups is even greater away from campus. Managers of work place learning should do all they can to encourage such groups and provide an environment which allows reflection and learning from the experience of work.

Chapter Seven: Assessing and Accrediting Work Based Learning

Introduction

Assessment of work based learning has the same variety of purposes, types and characteristics as the assessment of learning gained by other means. Purposes of assessment can be divided into two main types. *Formative assessment* is for establishing the progress the learner is making and to give feedback both the learner and to the provider of learning. Strengths and weaknesses are diagnosed and remedial action taken. *Summative assessment* is for establishing what has been learnt at the end of a period of study.

A longer list of reasons for assessing students (modified from Atkins *et al.*, 1993) are:

- to establish the level of achievement reached at the end of a course, or the progress made during a course
- to give a recognition by making awards or assigning credit (see below)
- to monitor standards and hence control and enhance quality
- to diagnose students' strengths, weaknesses and gaps in their learning in order that remedial action can be taken
- to motivate students and stimulate further learning
- to predict a student's likely performance in the future for purposes of selection or progression
- to select for employment
- to ensure requirements of external regulatory bodies (*e.g.* 'licence to practise') are met
- to help teachers and mentors improve their performance, and to improve the conditions for learning, by providing feedback
- to determine the extent to which course aims, or intended learning outcomes, have been achieved.

There are two major types of assessment: norm-referenced and criterion-referenced. *Norm-referenced* assessment is when students' achievements are compared with one another. There are no absolutes and students are either placed in rank order, or classified into groups. The grades or marks awarded to students usually fall roughly on a normal distribution curve. But some commentators note that the assumption that students fit a 'normal distribution' irrespective of increasing diversity in age, background, experience and motivation is a dangerous one: furthermore, norm-referencing can draw educational attention away from ensuring the attainment of specified outcomes (Guise and Winter, 1995). *Criterion-referenced* assessment is when criteria of desired performance are defined and specified and assessment then determines whether a student has reached the pre-specified standard. The criteria may define a minimum threshold of competence, or may be set to identify excellence (mastery).

In practice, in higher education neither type is used in its pure form and most assessment systems have elements of both. Work based learning is no different in this respect. For example, in Sheffield Hallam University's Engineering programme, it was agreed that final assessment of the work based learning units would be by portfolio. The criterion for pass/fail was that students had addressed all the learning outcomes in the learning agreement and the evidence provided was sufficient, valid, current and authentic. Criteria for grading purposes (which had been devised in collaboration with learners, their workplace supervisors and academic staff) related strictly to the evaluative report accompanying the portfolio (Sheffield Hallam University, 1996). During the last few years, forms of criterion referenced assessment have been more widely used: (1) partly as a result of moves to define the curriculum in terms of learning outcomes (see Chapters Three and Four), and (2) directly as a result of the requirements for obtaining national vocational qualifications by demonstrating workplace competence to national occupational standards. However, the continuing dominance of the classified honours degree within higher education means that achievement within competence-based schemes still needs to be graded, rather than assessed on a 'is this sufficient or not?' basis. For some, such grading might undermine the safeguarding of assessment standards since although grading might express a reluctance to fail a candidate outright, it can also permit a 'potentially damaging' evasiveness as to what really constitutes an acceptable standard of work (see Winter, 1993). It should be pointed out that this potential for 'undermining assessment standards' is not limited solely to competence-based schemes. The Higher Education Quality Council recently investigated notions of 'threshold standards' *i.e.* the distinction between failure to obtain a degree, and a bare pass, as part of its Graduate Standards Programme (HEQC, 1995a). The findings suggested that

the concept of threshold standards is, to most academics, unfamiliar and/or problematic.....Honours degrees ..are approved, reviewed, and the students on them assessed, not on the basis of explicit threshold standards, but largely in terms of some *implicit notion* (emphasis added) of 'satisfactoriness', the characteristics of which are not always clear to all parties.

(HEQC *ibid.*, p10)

The introduction of modular curricula in further and higher education, and the increasing use of credit accumulation and transfer schemes (CATs) during the last few years have also had an influence on approaches to assessment (DfEE, 1995a; FEU, 1995; HEQC, 1995b; Robertson, 1994). The onset of modularisation of campus-delivered curricula, whereby an overall programme of teaching and learning is sub-divided into discrete modules/units each with its own set of aims and objectives, *and* assessment strategy (and for credit based schemes, each module/unit is allocated a volume of credit at a specified level) has now sharpened the focus on the issue of equivalencies of learning derived primarily in the workplace, and learning acquired through campus delivered programmes (QSC, 1995). But within higher education generally, there are unresolved issues of assigning level and volume and incorporating it within an academic CATs framework. These issues are discussed in the later sections of this chapter.

Key Issues in Assessing Work Based Learning

Does assessment of work based learning differ from assessment of learning in higher education generally?

Assessment of work based learning may well have the same variety of purposes as the assessment of other forms of learning in higher education. Also the well known list of desirable characteristics of assessment in traditional settings (*viz.* validity, reliability, fairness, cost, simplicity and transparency, positive motivating effects) apply equally to assessment of work based learning. However, there are some significant differences between assessing work based learning and assessing other forms of learning in higher education.

One difference is the question of 'who' is doing the assessing, be it for formative purposes or for summative purposes. Whereas assessment of learning in higher education is generally undertaken by academics (and, for formative purposes, sometimes by learners themselves in discussion with academic tutors), assessment of work based learning (as understood for the purposes of this review) may also involve workplace supervisors and/or mentors. It is unwise to rely on only one of these types of assessor. Someone from the academic institution lacks day to day familiarity with the learner in the workplace and cannot appreciate the constraints on learning and the achievements made. Assessment of work based learning solely by an academic is therefore likely to lack validity. However, an academic does bring a knowledge of assessment methods and of the common standards which are being applied, and so can contribute to reliability and fairness (but see also later discussion on assessment criteria). Conversely, contributions to the assessment from mentor and supervisor increase validity, and are also likely to enhance the amount and level of learning by making formative judgements and providing feedback. We have already discussed some of the issues surrounding the role mentors and workplace supervisors play in assessing learners in the workplace in Chapter Six, and have highlighted a number of difficulties that can arise in such input to assessment. For certain aspects of assessment, it is clear that the workplace mentor is best placed to assess the learner (for example, assessing the learner's professional work; using company appraisal schemes to provide an initial indication of particular competences developed in the workplace). These assessments may well constitute one element of the assessment strategy for the work based learning overall. However, tutors may feel under threat from the introduction of different forms of assessment (*e.g.* learners acquiring more responsibility for their own learning through self-assessment). Such moves may be seen as redefining the traditional role of tutors in relation to learners. As one project team put it

tutors are heirs to a very long and noble tradition of academic responsibility and respectability. Professional self-respect stems from this certainty and from the carrying-out conscientiously of these duties.....feeling of tutors being under threat.....therefore understandable.

(Tuck *et al.*, 1992, p37)

Although such feelings may be very real, some would argue that academics need to be more open to the actual realities of the situation. For example, experience in some areas has found a strong correlation between grades awarded by visiting academic tutors and those awarded by industrial supervisors, which in the words of the project team

would seem to destroy the myth held by many academics that they are the only people capable of assessing students.

(Jowett (ed) 1995, p64)

In fact in this particular instance, the finding also removed one of the major objections to a greater weighting for the placement year and also an increased contribution for the placement assessment from the industrial supervisor.

Differences in criteria for assessment?

Linked to the question of 'who' is doing the assessment is perhaps more crucially the question of 'against what/whose criteria' is work based learning being assessed. The question underpins more fundamental issues of 'control' and 'quality assurance'. As the QSC Guidelines note, work based learning outcomes do not necessarily equate to industrial and commercial concerns, and academics and employers may well measure 'success' in different ways (QSC, 1995).

What is assessed as a result of work based learning obviously depends on the purpose. For example, occupational competence to accredited national standards will be assessed if the purpose is to gain a vocational qualification, whereas the assessment will be more related to knowledge and understanding if the purpose is academic. Atkins *et al.*, 1993, in a review of issues of assessment in higher education, recommend that academic departments should base

their assessments of work based learning on an internally agreed categorisation of knowledge, citing, as example, four categories: situational, practical and process knowledge and knowledge of people. Interpretation of these categories will not be very clear to the majority of assessors of work based learning, who are more likely to relate their assessments to the implicit or explicit intentions of academic programmes.

Deciding what is to be assessed from work based learning becomes more focused if there are already statements of intended learning outcomes for the programme of study as a whole. This approach is described in a Briefing Paper (DfEE, 1996), and has been illustrated in our discussions of curricular frameworks for work based learning (see Chapter Four). An example of matching outcomes (knowledge and skills gained) from placement experience to the intended learning outcomes (pre-specified statements of knowledge and skills it is hoped the students will learn) for some academic management and engineering programmes has been described (Lloyd-Langton and Portwood, 1994). However, concentration on assessing learning which is pre-specified suffers from the same drawback as the older behavioural objectives approach (Macdonald-Ross, 1973). Some high level and unplanned learning which actually took place (but which was not pre-specified) can be ignored, not only for credit, but more importantly for the self-knowledge and self-esteem of the learner.

As we saw in Chapter Four, curricular frameworks for work based learning tend to be devised in such a manner to include explicit indications of learning outcomes in terms of threshold levels of achievement expected. Criteria by which learning outcomes are to be graded are then devised (see for example, Lyons and Bement - reproduced here as Appendix I). Such practice does not necessarily differ significantly from those used more generally within higher education. In some work based learning schemes, the *learners and their supervisors* then use these criteria as the *starting point* to negotiate assessment criteria relevant to the work being undertaken (Lyons, 1993). Others have devised assessment criteria which clearly delineate between those learning outcomes sought by the employer (in line with overall organisation's needs reflecting particular strategies) and those required by the university which relate to evidence of individual development (see for example, University of Teesside's CECL project, reported in Middlesex University WBL Bulletin 1995).

The 'problem' of assessment criteria cannot be simply couched in terms of academic values versus employment values. Within academia there are not necessarily uniform approaches to assessment from either a philosophical point or a technical one, nor common understanding of the meanings of terms used to describe intended learning outcomes (see for example, Bryan and Assiter, 1995; HEQC, 1996, p9; Lyons, 1993, p31). It is clearly desirable to engineer opportunities whereby differently held views can be articulated and 'exposed' to debate in a wider forum. In this way, partners in the assessment process might at least become aware of such differences (which would be a first step towards teasing-out some commonalities) or, alternatively devising strategies to accommodate different views, may be along the lines of the Teesside example.

Those work based learning programmes which have sought to adopt a competence-based format also have to meet a number of concerns. Approaches to assessing competence have been widely criticised on a number of fronts. If competence is taken to mean the capacity to perform successfully a series of discrete observable tasks, then reducing an occupation to a series of such observable tasks runs the risk of providing a trivial and superficial representation of that occupation. Alternatively, if competence is seen as the possession of a *series* of desirable attributes and higher level skills (e.g. possession of certain knowledge, skills of problem solving, analysis, communication *etc.*) then assessment of such competences in isolation and out of context would bear little relation to future occupational performance (see, for example, Hager, Gonczi and Athanasou, 1994). As a way of countering such criticisms, an approach to establishing competency standards in 21 professions in Australia has been to use an integrated conception of competence, whereby competence is conceived in terms of knowledge, abilities, skills and attitudes displayed in the context of a set of realistic professional tasks which are pitched at an appropriate level of generality. For these authors at least,

experience seems to suggest that such an approach is able to capture the 'holistic richness of professional practice' which other approaches alluded to above were unable to do (*ibid.*).

Within work based learning developments in the UK, Anglia Polytechnic University set out to develop with Essex County Council Social Services Department a competence-based Honours degree in Social Work (the ASSET model - Accreditation of Social Services Experience and Training). It subsequently set-out to apply the ASSET model to a very different professional occupation, *viz.* engineering - partly as way of testing the transferability of the model, to determine its potential usefulness as a model of occupational, honours degree level, achievement (Guise and Winter, 1995). A necessary dimension of the competence-based formats adopted is the set of Core Assessment Criteria (or Core Professional Criteria for the engineering programme), which aim to specify a level of competence (to be demonstrated throughout the Programme) which is equivalent to the level of achievement normally expected of honours degree work (Maisch and Winter, 1994, p15). The criteria reflect a model of professional practice embracing responsible decision-making; integration of different forms of knowledge; working explicitly with emotional and ethical complexities; and continuous development of understanding (Core Professional Criteria of the Engineering programme are reproduced as Appendix II to this chapter). The Core Assessment/Professional Criteria are applicable to all the work based modules (defined in competence terms) within an individual candidate's overall programme (which might also include taught modules). However, in the engineering area at least, candidates sought a separation of the Core Professional Criteria such that, for any one work based module, some were assessed (by academic tutors) via their portfolio of evidence and others were assessed (by supervisors) from their performance at work (Guise and Winter, *ibid.*, p16). Such an artificial separation might run counter to the original purpose behind the development of 'core' criteria (even though it might conceivably assist candidates in writing up their portfolios).

Common characteristics

Those responsible for the assessment of learning whatever its origin (campus based, work based, distance, *etc.*) need to find a balance between all the desired features of validity, reliability, *etc.* For example, it might be possible to develop an assessment system of high reliability either at an unacceptable cost or with an unacceptable loss of validity. In seeking a balance, it is validity which is of prime importance. An assessment system that falsely testifies to attributes the test does not possess is of no use to anyone.

In their briefing paper of assessment strategies for work-based learning, Little and Nixon note that the veracity of the assessment of work based learning can be enhanced by drawing on several sources of evidence and using a variety of assessment methods (Little and Nixon, 1995). Methods used for assessing work based learning are summarised in Table 7.

It is desirable to use as many methods as possible, within the constraints of cost and time, in order to triangulate and so increase the reliability and validity of the overall assessment. The outcomes of work based learning are likely to be multifarious, and if a suitable combination of methods is used to detect and measure these, it is possible to record the results in the form of a profile (see, for example, Fenwick *et al.*, 1992). Such profiles display the extent of learning (proficiency) against the intended (or even unintended) learning outcomes (knowledge gained, skills developed).

Table 7: Methods for assessing work based learning
(Source: Little and Nixon, 1995)

Method	Useful for	Disadvantages	Comment
direct observation of the student at work	particularly used for assessing competence for vqs can provide evidence of team work, <i>etc.</i>	expensive disruptive to workplace	important to have 'checklist' of what to observe
assessment of student's log book or work diary	encourages self-reflection as a learner	some doubt about validity	needs to be combined with interview to establish validity
interviewing/ interrogation at work	obtaining evidence for knowledge and understanding needed for work place tasks	oral assessment can be subject and less reliable	sometimes workplace might need to be simulated
surrogate assessment, <i>i.e.</i> the assessor obtains views of others (managers, peers, <i>etc.</i>)	coverage of all work place tasks and performance	may be doubts about reliability	cheaper than trying to observe all tasks
student prepares a final report and this is assessed	encouraging reflection and communication skills	needs to be combined with other methods	report should contain reflection on what has been learnt
written or oral tests of the intended learning outcomes from the work based learning	testing background knowledge and understanding	lacks validity of direct observation	some institutions will wish to include this method, if assessment leads to credit used for an academic award

A model for assessing work based learning to provide evidence for occupational competences is provided by Thompson (Hevey, 1993). There are two sources: (1) 'specially elicited evidence', and (2) 'naturally occurring evidence in work process'. These are then further subdivided into four types: (A) knowledge and understanding, *e.g.* written or oral assessment; (B) performance, *e.g.* traditional skills, college assessments; (C) predetermined samples set in workplace; and (D) ongoing work. Types A and B are from source 1, and types C and D are from source 2. Thompson suggests that assessors should seek evidence from type D first and move through C, B to A if evidence is not available from the earlier type. Methods of assessment are listed for each type:

Type D - ongoing work

- direct observation of normal performance in real work situations
- log-books or diaries of day-to-day practice
- oral questions about ongoing work
- interrogation of rationale for work activities
- peer assessment and reports

Type C - predetermined samples set in work place

- samples of relevant work products
- plans and evidence of preparation
- evaluations of work outcomes and personal effectiveness
- assignments and reflective accounts for work practices and procedures

Type B - performance tests

- skills and proficiency tests
- direct observation of performance in simulated work situations
- examining performance on relevant tasks and multi-skill functions

Type A - written and oral examinations

- examination of relevant theory and underlying principles
- written simulations
- projects requiring independent planning and research

This is the most comprehensive listing of methods of assessing work based learning. Reports on the practice of assessing work based learning refer to the use of several of these methods, although less in written about the comparative costs of using such methods.

Assessing the evidence of learning

Evans identifies a four stage sequence which an individual needs to complete before experiential learning (and within this work based learning) can be assessed and accredited: (i) systematic reflection on experience to identify significant learning; (ii) identification of significant learning expressed in precise statements, constituting claims to possession of knowledge and skills; (iii) synthesis of evidence to support claims made to knowledge and skills; (iv) assessment for accreditation (Evans, 1992, p87-88 in Mulligan and Griffin).

In higher education, the assessment strategies devised can play a significant part in the learning process itself. Assessment strategies within work based learning are no different.

Chapter Five described the processes involved in assessing prior experiential learning centring on the use of portfolios of evidence. The vehicles used to capture and evidence work based learning are varied, but tend to include devices such as learning logs/diaries, checklists of competences, as well as the use of portfolios. These devices provide a current and ongoing record of activities from which learners reflect on their work based experiences and, in discussion with their workplace mentors, other learners and/or their academic tutors, identify the significant learning derived from those experiences, and set that specific learning within wider contexts. As such, learning logs/diaries may provide, along with work related products, the 'raw' evidence of experiences from which the work based learning is derived. Regular 'compiling' of such evidence and reflecting on what has actually been achieved at a particular point in time helps the learner, with the support of others, to diagnose strengths and weaknesses, to assess what has been achieved thus far, and plan future opportunities for consolidation and 'new learning'. It is thus a part of the learning process itself.

For summative assessment purposes, the individual is required to synthesise his or her evidence in the form of an evaluative review of knowledge, skills and competences. As noted in our earlier discussion of the use of portfolios for assessing evidence of prior learning (in Chapter Four), a number of practical/operational issues can arise. Where the portfolio is used to demonstrate learning derived from current and ongoing work, there may be questions about the inclusion of sensitive and/or confidential material. Also, individual students may have difficulty judging just where 'to draw the line' to the learning they can evidence within a portfolio, and what are the limits to keep the writing of portfolios manageable. In one area (engineering) candidates were matched with tutors of similar specialisms so that they could write their portfolios assuming the reader possessed a certain technical background (see for example, Ford-ASSET project Conference Papers 1994).

The step from *compiling* the evidence to *reflecting critically* on what has actually been learned in the working/productive processes (which may for example result in a work related product) is a crucial one for work based learning. However, it is not necessarily an easy one. For example, the Sheffield Hallam University project team which sought to use a portfolio based approach to assessing work based learning within engineering found that

most of the reports accompanying students' portfolios ...were more like engineering project reports than evaluative and reflective reports on learning.It appears that self review and evaluation of knowledge, skills and competence does not come naturally to engineering undergraduates or their assessors.

(Sheffield Hallam University, 1996, p10)

Although just one instance, the above quote does in fact reflect an aspect of the dominant learning abilities suggested within the Biglan-Kolb classification of academic knowledge (see earlier Chapter Three). And in more general terms, work on guidance styles of academic tutors within higher education seems to indicate that different disciplines tend to develop styles that are compatible with the professions with which they most associate (see for example, Tallantyre, forthcoming). Given the need for styles that encourage critical evaluation and analysis *etc.* for effective work based learning, there may well be staff development issues arising from the assessment of work based learning. For example, Anglia Polytechnic University found that within the competence-based Social Work Honours degree, candidates' portfolios of evidence sometimes lacked *analysis* of practice (as opposed to description of practice) (Maisch and Winter, 1994). The findings were backed up by external assessor comments, and encouraged the programme team to make specific demands for analytical work and for demonstration of professional knowledge. For the programme team it also highlighted

the uncertainties we experience in tutoring students in an assignment format which we have not undertaken ourselves - a most unusual experience for HE tutors

(*ibid.*, p10)

In consequence, all members of the programme team have themselves had to produce portfolios according to the programme procedures *and* have them assessed. Other project reports have echoed the above concerns (of academic tutors) relating to unfamiliar approaches to assessment, and the staff development implications of such concerns (see, for example, Kemp *et al.* 1992, p25). Moreover, academic tutors themselves may not necessarily feel competent to assess particular aspects of work based learning. For example, academic tutors involved in the Ford-ASSET project (which resulted in a work based, competence referenced honours degree programme in Engineering within the Ford Motor Company) felt they had difficulty in assessing "the quality of students professional work *i.e.* a sense of lacking the necessary expertise" (Project Conference Papers 1994, Evaluation report, p27).

For Winter and Maisch, the issue concerning tutors' familiarity or otherwise with the format of candidates' work for assessment is of general significance for the process of educational assessment (Winter and Maisch, 1996). They note that

tutors have been used to a situation where, as assessors, they are responding to an assignment which they have thought about many times before and/or which they themselves have had to produce as part of their own education. This gives tutors a comfortable sense of their expertise relative to their students, and enables them to respond confidently to students' work...

(*ibid.*, p87)

Traditionally, such responses may guide students' future work, but do not focus on what is required in order to pass. In competence-based programmes (where the emphasis is on 'what is required to pass') tutors have to distinguish between what they need to say (based on their understanding of the pass criteria requirements), and what they could say (based on their familiarity with the area of work). Their role shifts from providing authoritative expertise to a more facilitative role. Such shifts (and the implied loss of control?) may pose greater challenges for some discipline areas and professions than for others (*ibid.*, pp 87 - 88).

A further difference highlighted in the assessment of work based learning is between assessing a portfolio consisting primarily of practice/workplace based evidence (which may be structured by a variety of political and organisational pressures) and assessing a theory-based

assignment. Assessors used to conventional assignment work might thus be overly critical of work based evidence (for fuller discussion, see Winter and Maisch, *ibid.*, pp 88-92).

Successful assessment of work based learning clearly requires a combination of types of assessor, team work and careful planning and briefing so that everyone has answers to the questions: what is to be assessed? how will it be assessed? who will be responsible for which aspects? what standards will be applied? However, an overriding issue is the extent to which staff development and training issues are addressed, to ensure that those involved are able to form (in Winter and Maisch's words) 'an expert community for assessors of work based higher education' (*ibid.*, p91).

The Value of Qualifications

This review is restricted to learning resulting from workplace experience which is subject to some form of assessment by person(s) other than the learner. This is not to undervalue the vast amount of learning occurring at work which is not externally assessed or which is subject only to self assessment. For occupations at the professional or graduate level, self assessment of work based learning is extremely important as a tool for motivation, personal goal setting and development as a reflective practitioner. At this level of occupation, it is not always necessary that evidence for what has been learnt at work must be provided by some form of certification (credentialism). The ability to self assess one's learning is not easy and developing this high level skill should be one of the goals of higher education. Because it is so difficult, the guidance and judgement from an external mentor or adviser can be of significant help. During the formation of the professional, such mentoring is essential (Chapter Six). The remainder of this section, however, will be concerned with judgements by person(s) other than the learner about what has been learned at work. Such judgements may, or may not, lead to credentials (*i.e.* certification in the form of an award or credit).

As noted earlier in this chapter, assessment strategies in higher education generally, and in work based learning in particular, tend to be designed to play a significant part of the individual's learning processes. They are also designed to provide a summative judgement about what has been learned at the end of a 'set' period of activity (be it 'study' *per se* or other forms of activity from which learning can be derived). The summative judgement is made public through the award of some form of credit - which can be accumulated towards a qualification - or the award of a qualification itself. However, there are various purposes for qualifications. For some, the key purposes are selection - for subsequent access to particular avenues (within either a learning context, or an employment context). For others, the purpose is certification itself - whereby the award of a certificate embodies 'proof' of achievement, and can be seen as a quality assurance mechanism. For yet others, it is learner empowerment and access - whereby social mobility and economic advantage are seen as major benefits accruing to qualified people (Fuller, 1995).

Some commentators have noted the potential for 'conflicting messages' to be sent out in relation to purposes of qualifications. On the one hand, the claim that a certain level of education should be increasingly non-selective, while at the same time that it should continue playing a leading role in the distribution of jobs and roles in society (Furth, quoted in Fuller, *op.cit.*). Thus, mass approaches to qualification attainment could be seen as challenging established traditions of occupational division of labour and exclusionary approaches to qualification to achieve and sustain the privileges associated with professional status. Tied in with these different purposes are the different 'values' which may be placed on qualifications in terms of their perceived capability/use value (relevant to actual occupational tasks); their exchange value (enabling people with qualifications to exchange them for better jobs, *etc.*); and values relating to self-actualisation/self-esteem value (and how others perceive the 'holders' of particular qualifications). The perceived value of qualifications may well impact on students' orientations to study and motivations for learning.

Thus, in looking at the various approaches to accreditation used within work based learning, it is as well to bear in mind other considerations (about the perceived value of particular qualifications) that may have influenced the approach adopted. Decisions about which qualification framework to adopt might well be influenced just as much by considerations relating to (say) perceived market value/s, as by academic considerations.

For example, one institution uses units of NVQs² to accredit the work based learning derived from work placements (which in its words would otherwise have been 'lost in the academic award') and sees this as a way of making its graduates "more employable in the shrinking graduate employment market" (Jennings, 1995). For those already in employment, acquisition of a degree qualification may be the 'key' to professional recognition and further advancement. Also, bearing in mind discussion in Chapter Two about future patterns of labour markets and individual 'portable portfolios', the perceived 'exchange use' value of particular qualifications may also have an impact on qualification frameworks adopted to recognise work based learning. As Fulton *et al.* note

In the perception of some of their employers, graduates with work-based degrees were somehow less 'professionally' developed than their conventionally qualified counterparts.We are concerned that because of these perceptions and because of the assumptions about status which may underlie them, WBL graduates may be disadvantaged in the labour market. But the value of work-based routes in the *qualification market place* has not yet been fairly tested.

(Fulton *et al.* 1996, p11)

Financial considerations might also have some impact on decisions about appropriate qualification frameworks to use. Programmes which include scope for learners to produce evidence of occupational competence to meet specific NVQ performance criteria might well be considered acceptable for vocational training tax relief. This form of tax relief could act as a significant inducement for self funding students (Richards, quoted in University of Luton, 1996). However, such financial inducements for individuals may need to be set against financial implications of assessment for NVQs (*e.g.* costs of training assessors to meet TDLB NVQs performance criteria, and costs of NVQ assessment and accreditation services).

The literature on assessment of work based learning refers mainly to recognition of achievement, that is it is about credentialism. Six categories can be identified:

- (i) *Achievement is recorded (certified) by the higher education institution.* Certification may be by an endorsement on the whole degree/diploma certificate, or by a separate award independent from its academic certification. The former case is exemplified by the use of sandwich degree awards. It is the case in many institutions that the academic value of the individual learning derived from a period of supervised work experience and its public recognition is implicit in the fact that the student gains, on successful completion of his or her overall programme of study (including successful completion of the placement period/year) a *sandwich* degree award, as opposed to a full-time degree. Moves towards greater explicitness of purpose and increased 'visibility' have accelerated developments across the higher education system to recognise *explicitly* the academic value of work experience gained during the placement year (which was previously implicitly recognised by the nature of the award), usually in the form of a number of academic credit points (40) which can be accumulated towards the final award. In the case of a separate award, several institutions now offer the award of a separate Diploma in Professional Studies (or similar title) for successful completion of the placement period/s (*e.g.* Brunel University, Diploma in Professional Studies; University of Greenwich, Diploma in Industrial Studies). In some examples (*e.g.* Associateship of University of Surrey) the certificate is also

² NVQs will be used throughout to include NVQs and SVQs, and NCVQ should be read as including SCOTVEC.

formally accredited by the relevant professional body as meeting professional training requirements.

- (ii) *Achievement is recorded on a two point scale (satisfactory or not satisfactory)*. This often takes the form of a licence to practise (e.g. teaching practice component for qualified teacher status). In general, this form of assessment is criterion referenced, although the criteria may not be very precise.
- (iii) *Achievement is recognised by an independent awarding body (e.g. Licentiate awards of City and Guilds - University of Leeds, (1996))*.
- (iv) *Achievement is awarded a volume of academic credit at a specified level (e.g. general work based learning module of 20 credit points - Sheffield Hallam University, (1996))*.
- (v) *Achievement is awarded in the form of VQ credit, because competence in a unit of a national occupational standard has been demonstrated*.
- (vi) *Achievement is awarded by dual (academic and VQ) accreditation (e.g. elements of University of Luton Information Science work based learning degree 1996 report)*.

Frameworks of Assessment

The above categorisation reveals a dichotomy which is often referred to as the two 'frameworks for assessment of work based learning'. In other words, should credit for work based learning lead towards an academic award, a vocational qualification, or both?

Review of the literature on the experience of assigning credit for learning achieved in the workplace reveals that it has been a controversial area for about the last ten years ever since credit accumulation and transfer schemes (CATs) were introduced into higher education, principally by the Council for National Academic Awards (CNAA); and unit based assessment of competence in the work place for national vocational qualifications (NVQs) and Scottish vocational qualifications (SVQs) by the National Council for Vocational Qualifications (NCVQ) and the Scottish Vocational Education Council (SCOTVEC). At one extreme, work based learning is given credit which can contribute towards an academic award (certificate, diploma, degree, etc.). and at the other extreme work based assessment (which implies work based learning?) of occupational competence is given credit towards a NVQ.

Thus, two distinct systems of 'credit accumulation and transfer' were introduced into British higher/further education and vocational training at about the same time, inevitably resulting in confusion. Below we look at each of these systems in turn.

Academic credit

The general principle that learning wherever it takes place can be accredited towards an award is now well established, and there are many reviews of the issues of using and developing credit accumulation and transfer systems (FEU, 1995; HEQC, 1995b and c; Robertson, 1994; SEEC, 1996 and Welsh Higher Education Credit Framework, 1996). In principle then, assigning credit for learning achieved in the workplace is not problematic. However, if the credit is to contribute to an academic award it is necessary to demonstrate that there is congruence between the learning achieved at work and that achieved through more conventional study. Departments which design their courses in terms of intended learning outcomes find it much easier to demonstrate congruence. There are several other accounts of the assignment of academic credit for work based learning (DfEE, 1995a and b; Winter, 1993 and 1994).

In order to assign credit for learning two decisions have to be made. These are the volume (amount of credit usually in terms of a number of credit points) and the level. There is no definitive national system for assigning volume and level, although much has been written about these issues (see for example, Robertson, 1994; SEEC, 1996; Winter, 1993 and 1994). It is largely for institutions, or consortia of institutions, to decide the approach. In Chapter Four we included some examples of level descriptors as used by different institutions for the purpose of establishing an overarching curricular framework for work based learning: some had successfully developed distinctive level descriptors, but in others the use of phrases like '...the intellectual requirements displayed *at this level...*', which reflect a self-referencing approach reminiscent of the CNAA approach ('.....level...expected of the first year of an honours degree.....') are still prevalent. Others still seem to determine 'level' by reference to the *position* of the work based learning module within the overall programme of study. Moreover, some question whether a concept of educational level, presented in terms of hierarchical metaphors which purport to integrate a set of dimensions relating (*inter alia*) to cognitive processes, experiential commitment and organisational responsibilities is fundamentally sound (see, for example, Winter, 1993, 1994). It is argued, for example, that Bloom's taxonomy of cognitive objectives (which many have used as a basis for describing a hierarchy of educational levels) provides a strategy for grading work at *any* educational level, rather than a strategy for distinguishing between different educational levels. Winter, 1994, proposes that levels should be differentiated not in terms of cognitive function, but more in terms of the "developing social role of the learner and their work" (*ibid.*, p92).

As far as 'volume' of credit is concerned, even institutions which rely heavily on the intended learning outcomes and level descriptors, still need to use the concept of notional learning hours for defining volume (Robertson, 1994).

National Vocational Qualifications

In contrast to assessment for academic awards and credit, where as we have seen there is no national system, for vocational qualifications there is a very precisely defined system. Each vocational qualification is based on a set of nationally agreed occupational standards of competence together with range statements and evidence requirements. Vocational qualifications are central to the Government's Lifetime Learning Targets, although some question the extent to which such a system can upgrade or skill the workforce more effectively. For example, as Saunders notes

there is no sense in having a system which simply leaves the working population with precisely the skills they already have, even if they are able to produce a certificate to show that this is the case.

(Saunders, 1995, p214)

The NVQ system has been described (Frazer, 1995) and specific criteria and guidance are published regularly (NCVQ, 1995). A complete vocational qualification contains a number of units and a candidate may be assessed one unit at a time and credited with that unit. In that sense vocational qualifications have been said to be credit based and some have tried to link the NVQ and the academic CAT system. But the differences between the two systems are significant. There is no notion of 'time' built in to NVQs. The problems of assigning level and volume do not arise with vocational qualifications. The level is defined in the title of the award by the accrediting body - NCVQ. Assessors are required to check for every element of competence against precise criteria that the candidate is either competent or 'not yet competent'. The differences between academic and vocational qualifications are summarised in Table 8. This indicates some of the barriers to articulation and convergence.

Table 8: Work based learning assessment for academic and vocational qualifications

Feature	Academic award or credit	Vocational qualification
What is assessed?	Learning. Possibly matched against intended learning outcomes. Unlikely that these are written in terms of specific job requirements	Occupational competence in the work place expressed as specific required standards
Who determines what is assessed?	Institution assigning credit or making award	Occupational standards of competence are agreed by national lead bodies
Is the assessment criterion referenced?	Maybe, but usually element of nor referenced	Definitely yes. Candidate is either deemed competent or not yet competent
How is level determined?	By individual institutions. No national agreement	Level of an NVQ is determined by NCVQ at accreditation
How is volume of credit determined?	By institutions usually using a notional learning time approach	NVQ units are obtained when competence is demonstrated and time learning is irrelevant
What assessment methods are used?	Variety	Demonstration of competence at work, others used only if this is not possible
Who does the assessment?	Variety	Assessors appointed by the accredited awarding body. Must have TDLB
Who is responsible for quality assurance?	Institutions making award or assigning credit	Awarding body and NCVQ

Because national vocational qualifications are based on testing occupational competence in the workplace to standards agreed nationally, a higher education institution which decides to use this approach for assessing students work on placements does not have the problems of either defining its own intended learning outcomes, or matching learning outcomes on the placement with those of the conventional academic parts of the programme.

Articulation and Convergence of Academic and Vocational Credit

There is no reason in theory why learning at work should not lead to an academic award or academic credit award or an academic qualification at the same time as being assessed for one or more units of a national vocational qualification. This is described as dual accreditation.

However, the duplication of effort that dual accreditation entails has led to attempts to find articulation or convergence between academic and vocational awards (or credit). A number of universities are developing what are described as 'competence based degrees', and others are seeking to find ways of making it easier for students on more traditional courses to provide evidence of competence (learning) which might be used when subsequently seeking an NVQ. These approaches raise complex issues which go well beyond issues of assessing work based learning, although they are sometimes confused with them. (For a concise discussion on the political and ideological problems associated with articulation and convergence of academic assessment with NVQ assessment frameworks, see Frankham, 1996.)

Complete equivalence of awards is unlikely, and so most work has been concerned with articulating (translating) the assessment systems, or identifying components in the two systems which are common so that credit for learning, or demonstrating competence in the work place, can be accumulated respectively towards an academic award or a national vocational qualification. Hevey, 1993, gives examples of parts of Open University courses which might be used as evidence for competence. Lloyd-Langton and Portwood, 1994, and Portwood, 1993,

describe experience at the University of Middlesex based on four case studies in which learning outcomes for academic credit and NVQ competences were compared.

A comparison of NVQ Level 4 Management and the academic Certificate in Management programmes revealed a number of gaps, and that equivalence of the qualifications cannot be assumed (Association of Business Schools, 1995). Likewise in the areas of Design and Visual Arts there were considerable gaps between the intended learning outcomes of degrees and the NVQ level 3 in these fields (EUCLID, 1995). For example, despite the existence of outcomes which seemed similar in the two credit systems, the results of matching exercises indicated the primary importance of the contrasting experiences of undergraduate students on degree courses and people at work. Such a finding challenges the notion of equivalence between NVQs/SVQs and educational awards. As the EUCLID report notes

Level in terms of NVQ framework describes the increasing complexity of the occupational role and the autonomy and responsibility of the individual, which is not necessarily the same as increasing intellectual difficulty or academic autonomy in higher education.

(EUCLID, *ibid.*, p35)

EUCLID's work focused specifically on full-time undergraduate programmes. In the engineering area, Sheffield Hallam University has explored the potential for the dual award of academic and vocational credit for those currently in employment, drawing on occupational standards originating from a variety of sources (Engineering Training Authority; Standing Conference for Engineering Manufacture; Information Technology Industrial Training Organisation; and Management Charter Initiative) (Sheffield Hallam University, 1996). However, although the project team acknowledged that specifications of knowledge and understanding within NVQ/occupational standards could form the interface between occupational and academic credit, they would need to be sufficiently specific to be fully addressed within a higher education curriculum. Moreover, the way in which occupational standards were currently 'bundled' into units did not match individual job roles of employees in the workplace. (The project team acknowledged that this issue was being addressed by the relevant lead bodies.)

As far as work based learning is concerned there are three possible ways for the outcomes of assessment to be used for academic and/or vocational credit.

- (i) The learner obtains academic credit or certification, and independently is able to demonstrate occupational competence to gain one or more NVQ units. The NVQ level is likely to be at level 3 or lower.
- (ii) The learner uses the assessment as evidence towards an NVQ (possibly at level 4) but more work experience or evidence is needed before NVQ unit(s) can be gained. The assessment may also be used for academic credit or certification.
- (iii) The learner uses the assessment to obtain a single, integrated qualification. Some commentators see this as the ideal, although it has not yet been realised. They see the unhelpful distinctions between academic and vocational credit and qualifications vanishing.

A Challenge to Academic Practice?

In a thorough review of assessment issues in higher education, Atkins, *et al.* (1993) described and analysed problems and deficiencies of much of academic assessment, many of which stemmed from the *implicitness* still prevalent in higher education (*e.g.* implicit intentions of academic programmes and assessment strategies). However, as we have seen in this particular chapter (and earlier ones on curriculum frameworks, and on 'evidencing' work based learning), practitioners involved in work based learning have to be *explicit* about their intentions

so that comparisons can be made with learning derived from other sources and methods: work based learning cannot 'hide' behind implicit and often poorly articulated assumptions - about objectives of programmes, assessment strategies *etc.* In trying to be explicit, work based learning practitioners have had to try and find workable solutions to many of the problems currently besetting higher education in general, *e.g.* practical issues of CATS, underlying issues of what 'counts' as higher education, and who should be determining this. Critics may still claim that a common, or even comparable, curriculum for work based learning is not feasible, except that the validity of its assessment will be low and thus prefer the results of assessment to be in the form of 'satisfactory completion' rather than an explicit measure of academic credit. However, there is now sufficient evidence 'on the ground' to show that such perceived deficiencies can be overcome, albeit with much effort and discussion amongst all parties concerned. Such explicit discussions may bring to light some uncomfortable findings for the parties concerned, but this should not mean that the discussions and debates are abandoned. Those prepared to take up the challenge have shown that work based learning can be assessed in a way that leads to public recognition in higher education terms. Furthermore, where workable solutions have been devised, these have often been taken up on a larger scale across the institution (*e.g.* Anglia Polytechnic University's 'core assessment criteria'; University of Portsmouth cognitive skills attainment matrices).

Many issues are still outstanding - primarily to do with credit level and volume - but these are issues for higher education as a whole, and are not necessarily exclusive to work based learning (although the drive to find ways of giving credit for work based learning has no doubt 'sharpened' the debates). The key issue for work based learning assessment revolves around staff development and training for all those involved (academic tutors and workplace mentors), and the extent to which an expert community for assessors of work based higher education can be developed. This is not simply a matter of techniques and practices, but brings in more fundamental questions about 'power' and academic authority.

Current practices of work based learning within higher education tend to focus on individual development and consolidation of knowledge, skills and competences. For some, the fact that these practices require that "occupational learning taking place in the workplace should be harnessed, reconstructed and made available in a way that expresses academic convention" creates problems, since it makes the assumption that what is learned at work is *equatable* with what is learned in the 'lecture theatre' - it is not so much a matter of worthiness or otherwise, but of the efficacy of recognising experiential learning in terms of academic practice and convention (Saunders, 1995). What is at stake in reality is the continuing 'power' of academic qualifications in the occupational labour market, and in the self-esteem of individuals.

However, there may be larger issues on the horizon. For example, discussions on organisational transformation focus on the workplace as a learning environment where the learning processes are embedded in production and organisational structures. Jones and Hendry have characterised these as 'softer' learning processes that are focused more on collective learning and mutual knowledge construction (Jones and Hendry, 1994). As such, these processes are *not linked* to qualifications. Moreover, as Sommerlad notes, the likely impact of globalisation will be to favour the development of specialist market niches which encourages the progressive *internalisation of skills* adapted to companies' own requirements, which may have little transfer value in terms of standardisation or certification (as well as undermining the conditions for a well functioning occupational labour market) (Sommerlad, 1996).

Summary

Assessment of work based learning is no different in purpose, type and desirable characteristics than assessment of any other form of learning. In higher education, norm-referenced assessment is still the most common type because of the dominance of the classified honours

degree. However, criterion referenced assessment is becoming more widely used because of greater use of defining the curriculum in terms of learning outcomes (encouraged by the introduction of modularisation and credit accumulation and transfer schemes and by increased work based learning) and by the requirements for obtaining an NVQ by demonstrating workplace competence.

Methods of assessment of work based learning include: direct observation, scrutiny of learner's log books and portfolios, interviewing the learner, interviewing the learner's supervisors, judging the learner's final report and written tests. Normally a combination of these methods is used in order to obtain a balance of the characteristics of validity, reliability, fairness, cost, simplicity and motivating learning. Whether the assessment is made by the workplace mentor or the academic tutor, staff training in the unfamiliar methods (e.g. portfolio assessment) is needed. The outcome of the training should ensure that all those involved understand: what is to be assessed, how it will be assessed, who will be responsible, and what standards will be applied.

The summative outcome of the assessment of work based learning may be in one of six categories: certificate, or endorsement on degree certificate, awarded by the higher education institution; license to practice; certificate by an independent awarding body; academic credit points at a specified level; national vocational qualification or units; and dual (i.e. academic and NVQ) accreditation. The differences (Table 8) between assessment for academic credit and assessment of work place competence to national occupational standards (i.e. NVQs) are so great that most commentators suggest that dual accreditation is not possible.

Part Three Policy

Chapter Eight: Planning, Implementing and Assuring the Quality of Work Based Learning

Introduction

In previous chapters we have looked in detail at the various ways in which institutions of higher education have incorporated work based learning into programmes of study leading to academic awards. Discussion of the curriculum frameworks used by individual institutions to accommodate work based learning have shown that there are a number of different 'avenues' along which institutions might travel to establish work based learning as an alternative route to the 'same' knowledge and skills that might be delivered through more traditional routes through higher education, or as a route to different, but equally valid knowledge and skills within higher education. We have also looked at issues relating to the function of assessment of work based learning and its accreditation within particular qualification frameworks, and aspects of support for the learner in the workplace.

The extent to which the 'avenues' chosen by institutions vary depends on a number of factors: some relating to the direction of the overall programme of study (*e.g.* discipline specific, domain-based, geared to professional recognition); others relating to the type of partnership being developed with employers (*e.g.* partnership in relation to one or two employees from a number of different employers all operating in a similar industrial sector; partnership with particular employer/s); whilst others may stem from the aspirations of the individual learner. Decisions affecting some of these factors may well have already been taken by various agencies *outside* of the three main 'players' in any work based learning partnership and thus not susceptible to major changes overall (or only at the margins). However, in other instances decisions about 'which' work based learning avenue to follow will be in the hands of one or other of the main stakeholders of the work based learning partnership.

Of course (as noted in Chapter One), a prior decision for higher education institutions is whether they should get involved in work based learning at all. What are the needs for work based learning in higher education, and the needs for higher education in work based learning? To what extent are they alternative ways of achieving the same goals, or are there needs that can only be provided (or can be better provided) by one, rather than the other? How can the needs of individuals and the needs of organisations be effectively and efficiently reconciled? Those planning work based learning will need to clear about such distinctions before they consider more detailed questions of implementation.

In turning our attention to planning and implementation issues, we will look in turn at each of the main players, *viz.* the institution of higher education; the employer, and the individual learner. We will then consider some general issues of quality assurance.

Planning and Implementation Issues for the Institution of Higher Education

Partnerships between higher education institutions and employers are a significant feature of research and development activities and of those teaching and learning activities that lead to professional recognition. However, in looking to teaching-focused work based learning

collaborations, QSC Guidelines suggest that higher education strategic managers face a number of potentially difficult choices

between national, regional and local economic development goals; between prestige-enhancing high technology collaborations with blue chip corporations and more modest involvement with a broad array of small and medium-sized enterprises; and between collaborations in selected subject areas aiming for 'excellent' ratings and partnerships across the whole curriculum without regard to depth of expertise.

(QSC, 1995, p12).

We should add to these choices, questions about the 'status' of the learner involved in work based learning (leaving to one side the area of initial stages towards professional formation): should work based learning initiatives be targetted at those already in employment, or targetted at existing full-time and part-time programmes, or both?

There will probably not be clear cut answers within any one institution of higher education, and depending on internal structures of governance and control, common approaches may not necessarily be sought. However, in considering planning and implementation issues, the institution and its constituent schools/faculties will need to be clear on the main aims and objectives for its particular work based learning activities. In the following we will illustrate some of the key choices that need to be made.

Partnerships with major corporations or partnerships with an array of small and medium-sized enterprises?

Work based learning activities may form one strand of the institution's links with particular major corporations. Other strands might include research and development activities, credit rating of in-house company courses, subject specific programmes of study tailored to the particular company's needs and delivered partly in the workplace environment. As such, the institution should be able to build up a well-founded partnership with the employer based on clear understandings of what each partner is able to contribute to the partnership, developed through working together on various initiatives over a number of years. Sustained interactions could well help to overcome difficulties arising from differences of language and culture between academic and industrial practices which may manifest themselves in aspects of flexibility, relevancy, consistency, complexity, communications, and confidentiality and which are sometimes cited as potential problem areas within development projects (see, for example, Carmichael, 1992). Moreover, large companies' strategies for human resource development are likely to be linked to long term objectives (which could well be met through work based learning) as well as meeting specific and more immediate needs. Existing training and development support functions within the company could well be adapted to provide the basis for specific support functions needed to create a supportive learning environment for work based learning (see Chapter Six for discussion on the need for a supportive learning environment).

On the other hand, current government thinking on economic regeneration continues to emphasise the importance of the small and medium-sized enterprise (SME) sector - see for example, the White Paper 'Competitiveness: Forging Ahead' (1995a) and the Department for Trade and Industry's publication on Helping Smaller Firms (1995b). Support for SMEs is channelled through Business Links and Training and Enterprise Councils (TECs) in England and Wales, and in Scotland through Local Enterprise Companies (LECs). However, a recent project looking at TEC activity in the area of higher level skills development concluded that

TECs potentially (and some in reality) have an important role to play in influencing both the size and shape of the pool of highly qualified manpower in their local labour markets. This goes beyond the narrow focus on the supply of higher level skills which is an important concern of many TECs at present. It should also be concerned with ensuring vitality and responsiveness of local HEIs as key agents in local economic development.

There is little evidence yet that more than a handful of TECs are giving this sufficient priority at operational level.....

(Gordon and Parsons, 1996, executive summary).

Funding is available from a variety of sources to put in place projects which link institutions of higher education with SMEs by way of placing undergraduate students with SMEs to undertake particular projects based on the companies' business needs, either as part of course based work or undertaken during summer vacation time. Examples include the Shell Technology Enterprise Programme (STEP) which is designed to help SMEs utilise the undergraduate resource in their locality, at low cost (STEP, 1994); a joint venture between the Manchester Metropolitan University, UMIST, the University of Manchester and the University of Salford (financed through the European Regional Development fund) which links higher education students with a range of SMEs in the Greater Manchester area (Business Partners Scheme, 1996). Other schemes are targetted more on graduates taking up longer-term employment with SMEs (*e.g.* Teaching Company Schemes; University of Durham's Graduate Associate Programme; University of Liverpool's Graduate into Employment Initiative). What such schemes tend to have in common is providing the SME with a 'ready-made' resource (in the shape of a student) who is deployed to work on a particular business development project within the SME.

However, some development projects have been specifically looking at the extent to which work based learning can help the personal development of individuals *already employed* by SMEs, and contribute to SMEs' overall business needs and growth (see, for example, Seagraves *et al.*, 1996). There may be something of a paradox here, since there seems to be evidence that many small companies are not growth oriented: survival or stability is their main concern, rather than growth that can contribute to the economy (York Consulting, 1993, Gray, 1994 quoted in Seagraves *et al.*, *ibid.*). From survey work with owners of small businesses, Gray has found (*inter alia*) that desire for personal autonomy tends to overshadow their intention to grow; desire for personal independence and autonomy increases inversely with size of firm; and those SMEs that deal with other firms are more open to ideas concerning expansion and business development (Gray, 1995). Such findings could well have implications for the types of SMEs that might be eager to collaborate with institutions of higher education in developing work based learning partnerships geared to the needs of their individual employees. Funding from local TECs might be available for institutions to undertake feasibility studies of likely demand (see, for example, feasibility studies undertaken by University of Lincolnshire and Humberside to investigate potential for developing a Masters programme by work based learning, 1996). Through their work with a range of SMEs in Central Scotland, the LISC project team identified a number of recommendations in relation to the recruitment of companies to work based learning programmes, including

- rapid growth companies seeking to develop a range of skills in their organisations may look to management or vocationally related programmes to equip existing staff with the skills needed in the growing business; providers should develop niche products (*e.g.* Certificate in Small and Medium Enterprise Management) that are particularly relevant to this target group of companies (see, for example, University of Kent at Canterbury's work with Kent TEC to provide a management development programme designed especially for managers working within SMEs);
- moderate growth companies may be looking for rapid pay-back from training/education, and may not recognise the need for longer term solutions (which might be effected through broadly based workplace learning, or through portfolio based access courses for higher education). However, companies in mature markets, or in markets where competition is intensive are likely to be looking at ways to stimulate the development of employees. In such circumstances broadly based workplace learning may have greatest appeal;

- for work based programmes without immediate vocational relevance, recruitment of individuals may be as viable an option as working through companies themselves, particularly for those whose primary motivation is cognitive development;
 - whilst emphasis must be placed upon the benefits of work based learning (for both the individual and the company), the reality of commitment of time and resources must be stressed;
 - champions at various levels within companies must be identified and developed, and those firms with a quality framework are most likely to create a structure to accommodate such arrangements. Such structures should also be capable of identifying 'anti champions' who may block the development of work based learning schemes.
- (adapted from Seagraves *et al.*, 1996)

Other development projects looking at continuing education and training needs of particular sectors of industry (e.g. rural land-based industries), which tend to be represented by a diversity of small businesses, have concluded that successful provision of education and training for SMEs will be market led - "provision must be flexible and responsive to the needs of businesses and individuals" (Costley *et al.*, 1996 p42). These findings reiterate those emerging from wider ranging surveys of training and development needs (see, for example, Labour Market Skills and Trends 1995/96). Market research undertaken within particular knowledge-based sectors of industry to assess likely demand for work based learning professional development (leading to postgraduate qualifications) found that the employers surveyed tended to fall into three discrete categories, *viz.* recruitment-oriented companies who expected to recruit ready trained personnel; traditional companies who identified a need for professional development of scientists, but did not wish that development to be 'certificated'; human capital-oriented companies who valued and supported employees in gaining further qualifications (Woodward, 1995).

Work based learning within existing full-time and part-time programmes, or work based learning targeted at those already in employment?

As we saw from the discussion of curriculum frameworks, work based learning has been incorporated into existing programmes of study; has been used as way of delivering existing programmes in a 'new' mode for those already in employment; has been used as a vehicle for providing access to higher education and subsequently building individualised work based programmes tailored to an individual's specific needs and the needs of their employer.

General implementation issues for higher education institutions revolve around the following series of questions. First, to what extent are existing programmes designed on a unit based, credit accumulation basis, and are described in learning outcomes terms, such that learning derived from sources other than following a pre-determined syllabus can be accommodated and credited within the programme?

Second, to what extent is it desirable, from a teaching and learning perspective, to incorporate work based learning into existing programmes? For example, several of the strategies geared to promoting deep approaches to learning, and intrinsic motivations to study (as advocated by Gibbs and others) should on the face of it be more easily realised in work based learning than in other (possibly more traditional) forms of learning (see discussion in Chapter Three). Also, opportunities for developing some of the core generic skills which are currently being emphasised within higher education might be capitalised through work based learning. However, it might be difficult to separate out issues of 'academic desirability' from questions of institutional costs and benefits. For example, strong academic arguments for replacing taught units within a part-time programme with similar units realised through individual's work based learning (which could also result in shortening the overall study time for the part-time students) might conceivably be outweighed by counter arguments about the potential reduction in funding resulting from the reduced 'length' of the overall programme. However, there are some who

envisage the translation of full-time programmes into delivery by work based learning replacing traditional part-time routes (see, for example, University of Luton, 1996). Issues to do with cost-effectiveness are at the forefront of political debates about higher education: so what, if anything, can be said about work learning in this area? More to the point, perhaps would be to ask what measures of cost-effectiveness should we be looking at. Can cost-effectiveness be viewed merely in terms of inputs/process/ outputs in the short term, or should cost-effectiveness also try to capture measures of longer term benefits, say, for example, in terms of individual's increased confidence and motivation to continue to learn. Theories underlying experiential learning (and within that experience-led work based learning), notions of deep learning, and learner autonomy, which seem to underly many of the operational aspects of work based learning might point to long term benefits of work based learning to the individual, and their employer. But there seems to be little hard evidence of this.

Also the costs of providing a supportive learning environment in the workplace (e.g. training workplace mentors) would need to be brought into discussions of costs and benefits, as would consideration of costs relating to development and training for work based learning assessors in general (see discussion in Chapter Seven).

Third, to what extent are staff and other agencies (e.g. professional bodies) prepared to look again at (possibly implicit) assumptions about forms of knowledge and questions relating to authority and power in higher education (and professional formation) which might be challenged by developments in work based learning? Without professional recognition, some potential students may be reluctant to consider work based learning as a route to mid-career opportunities for continuing educational and professional development. Fourth, does the institution have a sensitive guidance system for potential learners, capable of teasing out the learner's expectations of work based learning programmes? For example, is the learner seeking a directly vocational programme of higher education, or looking for levels of higher learning and exploration of 'self'? Several project reports re-emphasise the importance of guiding learners in directions that adequately reflect their own motivations and aspirations (see, for example, Naish, 1995; Seagraves *et al.*, 1996, University of Leeds, 1996).

Fifth, does the institution have a well-established and well understood system for the accreditation of prior certificated and experiential learning (APEL), which can be used in the 'diagnostic/exploratory' phase in negotiating a work based learning programme? Sixth, to what extent should work based learning developments underpin institution-wide initiatives and thus gain the support of a wide range of academic and administrative staff (for example, continuing vocational education initiatives across the institution; mid-career development initiatives) or should they be developed on a 'piecemeal' basis, with the intention of 'cascading' throughout the institution in the fullness of time? Much will depend on existing programmes and structures within the institution. For example, Middlesex University already had an institution-wide modular scheme framework which accommodated all its academic activities and so developed a work based learning 'set' within that framework (Naish, 1995). On the other hand, the University of Luton set out to develop an institution-wide framework specifically for work based learning, within which discrete subject specific degree pathways (converted from full-time existing degree programmes) could be devised (University of Luton, 1996). A recent evaluation of a small number of work based learning development projects concluded that

much of what has been, or will be, validated seems likely either to become 'enclaved' (*sited in and delivered through one small section of an institution*) or was originally 'enclaved' and is likely to remain so.

(Fulton *et al.*, 1996, p7)

Seventh (and perhaps most importantly from an institutional management perspective), at a practical operational level, to what extent can the institution actually deliver the flexibility, accessibility and levels of individualisation which are so often flagged as positive aspects of work based learning? Small scale evaluations contained in project reports often include references to disappointments for both learners and their employers (for example, when timetabling effectively prohibits access to taught units which individuals wanted to build in to

their own programme; or when pressures at work mean meetings with tutors have to be cancelled at short notice, and cannot easily be rearranged). The development of distance learning materials might well resolve some timetabling problems (and prove beneficial to on-campus learners as well), but such developments take time and cost money. Moreover, problems of physical access to learning resource facilities could remain.

How should work based learning be funded?

There is little in the literature about the funding of work based learning (partly no doubt since the prime literature source is the suite of project reports which were externally funded as development projects). Moreover, in the market led environment in which institutions of higher education increasingly have to operate, costings of non-publicly funded activities may well be subject to commercial considerations specific to the institution and employer/s concerned. Nevertheless, a discussion of funding issues was undertaken at a meeting of some work based learning practitioners organised by the Department for Education and Employment in December 1995. From data provided at that meeting it was clear that individual institutions determined the charges they made for work based learning on the basis of several factors. Principal among these were the extent to which work based learning could attract public funding (through HEFCE/HEFCW/SHEFC): for some cases, (for example, work based learning access courses) current funding arrangements may prove a disincentive. Another consideration was the extent to which the institution was prepared to cross-subsidise work based learning from other funding sources, such that work based learning was costed on a marginal basis. Other considerations included the extent to which the institution views work based learning initiatives as potentially benefiting other areas of work within the institution; the extent to which individual learners would be sponsored by their employers; the extent to which employers/employees might be subsidised through other financial arrangements (*e.g.* through TECs, and LECs); the extent to which institutional administration was prepared to undertake bureaucratic activities needed to recoup NVQ tax relief (where eligibility had been established). Many of the variations mirror the range of models in operation for 'pricing APEL' detailed in the UCAS guide to higher education admissions tutors on APEL as a route to higher education (UCAS, forthcoming).

Currently institutions involved in work based learning have to seek creative ways of using existing funding regimes which are locked into traditional forms of higher education, where mode of study determines funding mechanisms. However, the boundaries between discrete modes of study are steadily being eroded with the widespread establishment of CATS frameworks which theoretically permit a variety of entry and exit points to/from higher education, and the variety of ways of learning (and demonstrating that learning). There is a need to look again at the issue of funding. As the HEQC CAT Development Project noted

There is widespread acceptance that current arrangements for institutional funding can act as inhibitors to student choice and mobility.

(HEQC, 1994, p12).

However, as HEQC also noted, there is uncertainty about the consequences of significant reform: should funding models provide for stability and continuity or should they promote greater institutional responsiveness to student demand, whereby direct empowerment of students by financial means would increase students' ability to negotiate individual academic programmes relevant to their personal needs (HEQC, *ibid.*)? There now seems to be some limited approaches to funding credit-based learning at both further and higher education levels. But as Sommerlad and her colleagues have noted, governments have an interest in supporting work based learning initiatives as a way of 'exporting costs' that have previously been met by the State (Sommerlad, 1996). The question of who picks up the costs thus exported could well be problematic. Work based learning is clearly one (of many) vehicles available for supporting lifelong learning, and it is clear from the DfEE's policy framework for lifelong learning that the Government sees work based learning as a way of making higher education even more accessible to lifelong learners (DfEE, 1996, p25). But, as at least one project team has noted, if full-time equivalent targets can be met by recruiting traditional students to traditional programmes, financial levers may be needed to fulfil policies promoting work based provision

(Seagraves *et al.*, 1996). There seems to be little discussion within the Government's policy framework about how current funding arrangements might actually create barriers to lifelong learning, although it is committed to looking at the possibility of running pilots "to test the effectiveness of different arrangements for part-time study while receiving Jobseekers Allowance" (DfEE, *ibid.*, p21).

Clearly, funding mechanisms should not unfairly hinder work based learning compared with other forms of learning, particularly part-time study. Some have argued that the tax break incentives for vocational qualifications should apply to all forms of learning, or at the least to work based activities. Additionally, or alternatively, incentive grants (similar to part-time incentive grants currently made available by SHEFC to institutions) should be introduced to stimulate supply (Seagraves *et al.*, *ibid.*). A number of English institutions have recently developed their work based learning activities through HEFCE's continuing vocational education initiative.

Issues for Individual Learners in the Workplace

The literature contains some evidence of learners' views of work based learning, often in the form of initial evaluations of newly developed schemes contained in project reports. As such these evaluations inevitably throw up a variety of teething problems, but they also point to the positive benefits of work based learning as personally and professionally motivating, opening up opportunities for, and avenues to, learning (which will gain some form of public recognition) that the individual learners had thought were not accessible. However, there seems to have been no widespread and systematic investigation into individuals' experiences of work based learning within higher education, and the long term benefits that accrue.

Employer support for work based learning is cited as a crucial factor in 'motivating continued participation' (Naish, *ibid.*, p38). Such support might comprise a number of tangible factors, including direct financial support. Surveys have shown that financial cost is one of the most commonly cited barriers to learning (alongside inability to get time off work, and family commitments), and individuals are unaware of the various financial incentives available (see, for example, Gallie and White, 1993). Also, as Winter has pointed out, although work based learners do not 'cost' an employer in the same way that part-timers with day release/time off work for study might do, there is still the need for the employer to provide an adequate learning environment, which may include guaranteed remission of other professional duties (Winter, 1994).

A further issue for individual learners is whether work based learning is the 'right' style of learning for them, and whether they are motivated to follow this route, especially where the programme is a highly individualised one. For some, a more directed style of learning, with a specific discipline focus might be more appropriate. Also, as we have seen from the evaluation of the most recent round of development projects, there may be issues to do with the status of the qualification (in the eyes of 'others') derived from work based learning compared with the status of qualifications derived from other routes within higher education (see, for example, Fulton *et al.*, *op.cit.*). Relatedly, there may be questions about the amount of credit to be gained through a work based learning mode. The conservatism of many higher education institutions may not always make work based learning the 'best deal' if a quick route to certification is the primary goal. Work based learning seems unlikely ever to be a 'soft option' for students.

Issues for Employers

Work based learning situations, whereby the individual continues to make a net contribution to productivity while learning, clearly have benefits for an employer in terms of cost effective human resource development. Also links with higher education institutions through work based learning have the potential for providing access to a wider knowledge base than necessarily exists within the company. There may be other benefits relating to links between partners in a work based learning process. An evaluation of the second wave of work based learning projects funded by the (then) Employment Department found that schemes geared to employees (as opposed to schemes geared to full-time students) which by their nature meant that employers were very much more involved in the process from the outset, resulted in close working relationships between all participants, 'to their mutual benefits' (Connor and Rawlinson, 1995, p19). All participants had a 'sharper appreciation of each other's needs and the climate in which they were operating' (*ibid.*, p19).

But employers need to be clear what they are hoping to achieve through work based learning (to avoid later disappointments). Short term gains geared to specific business opportunities may be better realised through other training and development opportunities. Furthermore, there seems to be something of a paradox for work based learning: whilst the employer is interested in the learning gains *per se* for individual employees and for the organisation, a number of projects have highlighted the doubts expressed about the value of certifying that learning in ways that provide the individual with a bargaining/negotiating tool for use either within their current work environment or in the wider jobs market (see for example, Sheffield Hallam University, 1996, p38; Woodward, 1995). Woodward notes that whereas individuals' aspirations and national policy (geared towards qualifications) may coincide, a significant number of employers appear to be opposed to award-bearing professional development (Woodward, *ibid.*). There is then a question of 'value added' for employers when it comes to collaboration with higher education for existing employees. Size of employer, the nature of the business and the attitudes of the potential higher education partner will be factors that will enter into the equation.

For those companies and organisations who do see certificated work based learning as a valuable route to enhancing employees' professional development and meeting business needs, issues related to the provision of a supportive learning environment will need to be addressed. Although costs might arise from certain activities in the short term (*e.g.* the need to develop workplace mentors/learner support advisers) these same activities may actually represent longer term gains, in terms of continuing professional development for more experienced employees. Further, where smaller organisations may not be able to sustain learner support structures, it has been suggested that they might be linked to a 'hub' organisation (see, for example, phase two of DEAL project, 1996).

Assuring the Quality of Work Based Learning

The literature on work based learning contains very little on quality assurance, although the foregoing chapters have looked at the various stages within the delivery and realisation of experience-led work based learning which separately and collectively represent points in the 'process' which are designed to assure the quality of the completed work based learning process.

Experience in practice might seem to suggest that for some partners in the work based learning process, the quality assurance mechanisms seem overly cumbersome and involve protracted discussion at various levels of institutional academic hierarchies (assessment boards, accreditation boards and the like). However, in the current climate of external quality assurance and accountability in which institutions are operating, there is clearly a need to meet both

internal and external expectations. And as with any innovative form of learning, institutions might well seek to adopt initially a 'belt and braces' approach to assuring the quality of work based learning. In other words, work based learning programmes may find themselves being forced to 'fit' into internal and external quality assurance systems designed for conventional college-based work. In fact, some have argued that some of the characteristics of procedures for accrediting work based learning offer some useful lessons in managing the quality of traditionally taught courses (see for example, Winter, 1994 and Reeve *et al.*, 1995).

Currently, the Higher Education Quality Council issues specific guidance on quality assurance of work based learning. HEQC's booklet on Guidelines on the Quality Assurance of Credit-Based Learning contains 100 guidelines of which eleven apply to work based learning. The four key ones are the following:

- (i) if an institution utilises placements, then such periods should carry the potential for the award of academic credit on the same basis as any other course or programme elements, provided there is appropriate, clearly defined and assessed learning to be achieved;
- (ii) it is vital that the quality assurance framework for the credit rating of off-campus provision relates in a systematic manner to the mainstream quality assurance mechanisms of the higher education institution;
- (iii) the learning achieved through work based learning should include underpinning knowledge and understanding in order to attract the award of credit;
- (iv) monitoring and review arrangements have to be clearly established involving the students, the workplace and the higher education institution;

Within the higher education institution, these arrangements should be within the established framework for quality assurance.

Other HEQC guidelines refer to the need for a written agreement between the academic institution and the organisation at the workplace, the need for clearly defined roles and, where necessary, training for all those who will be involved, the value of learning contracts and the learning support facilities to be provided at the workplace. For Winter (*op.cit.*), the format of the learning agreement between learner, employer and institution required to achieve guaranteed resourcing and effective study (and thinking?) time is a further dimension of the quality of educational provision which will need to be open to scrutiny.

QSC Guidelines suggest a collaborative approach to quality assurance for work based learning wherein the partners negotiate agreed monitoring and evaluation frameworks, and quality improvement is the only purpose (QSC, 1995), but such an 'ideal' situation may not actually stand up to the pressures for accountability being sought by the various stakeholders in a work based learning partnership.

The reports of teaching quality assessments as carried out by the higher education funding councils provide another source of potential advice on quality assurance issues. As part of a recent analysis of 298 such reports from the Higher Education Funding Council for England, however, QSC identified only 19 recommendations concerned specifically with work based learning. These concerned overwhelmingly the provision of sandwich placements on full-time undergraduate courses, suggesting perhaps that some of the more innovative forms of work based learning described in this review have so far escaped the attention of the assessors. No doubt, this situation will soon be changed, raising the question of the kinds of criteria that will be used by external assessors. On the admittedly limited evidence of the assessment reports published so far, it seems likely that questions of the extent to which, and the mechanisms through which, an academic institution is able to guarantee the quality of an educational experience in a setting over which it has no direct control, will be to the fore (see also our earlier reference to learning contracts).

Specific guidance on the quality assurance of work based learning which is to be assessed for the award of national vocational qualifications is given by NCVQ. NCVQ (1995)³ publishes regularly its requirements for how the accredited awarding bodies should assure the quality of the assessment process leading to NVQs. Essentially, NCVQ requires awarding bodies to: (i) ensure the availability of sufficient competent (certified to TDLB standards D32 - D35) assessors and verifiers; (ii) monitor or verify that assessment is operated in accordance with their requirements and consistently maintained at all assessment locations; (iii) select, train, certificate and review the performance of external verifiers; (iv) approve centres within which assessment will take place and ensure that they are capable of meeting all the requirements of the NVQ.

Whatever the external regulatory framework on quality to which higher education institutions will be subject to in future, the quality assurance of work based learning will pose difficult questions for *internal* frameworks and procedures within institutions. It may be that traditional peer review processes, rooted in the conventions of academic culture, will prove to be less appropriate than quality processes current in many business and public organisations. Approaches such as Total Quality Management (in its many guises) and Investors in People have the merit of emphasising the interests of consumers (whether 'customers' or 'people') rather than the producers, an emphasis compatible with the 'spirit' of most work based learning developments. Such approaches are not necessarily incompatible with quality moves within academic institutions themselves.

Summary

Issues of planning and implementation are different for the three major stakeholders in work based learning.

One policy issue for higher education institutions is to decide whether to have work based learning partnership links only with major corporations, or whether to attempt the more difficult task of developing links with SMEs. Several universities have now demonstrated the benefits to themselves, as well as to SMEs, of such collaboration. A second decision to be made by higher education institutions is whether to concentrate on work based learning for full-time students on existing programmes, or whether to target those already in employment. One of the major factors influencing these planning decisions is that of the funding of work based learning.

There has been no widespread and systematic investigation of learners experiences and views of work based learning. It is clear that they do need motivation and support, because work based learning will never be a "soft option". It may be that some individuals are more suited to learning by this mode than others, but the most crucial factor is that the status given to the credit (or award) for work based learning must be, and be seen to be, of equal status to that given for learning in other environments.

As far as the employer is concerned there are clearly benefits (meeting business needs whilst staff are further developed) and costs (providing mentors and a suitable learning environment). Some employers have expressed concern about certificated work based learning because they see the individual gaining a "bargaining tool" either with the employer or on the job market.

Little has been published on quality assurance of work based learning. HEQC issues guidelines, which apply to institutions awarding academic credit for work based learning. Basically these propose that the same methods and standards of quality control be applied as for on-campus learning. It may be that traditional peer review processes of quality control are not suitable for assuring the quality of work based learning and that the Investors in People

³ SCOTVEC also publishes guidance on quality assurance for SVQs.

approach would be more suitable. If work based learning is to lead to an NVQ, then the published NCVQ criteria apply.

Chapter Nine: Policy Messages: Prospects, Progress and Problems

Introduction

The developments reported in this review are part of much wider changes taking place in the workplace, in higher education, in the way knowledge is organised, and in the relationships between these and related changes in society. Developments in work based learning cannot be separated from the great expansion and diversification of higher education, the demise of the single career as the dominant experience of working life, changes in the content of jobs and the organisation of work, and changing conceptions of knowledge and new technologies for accessing it.

In all of these areas, we are in largely uncharted territory. The importance of some changes is probably overstated while other changes of potentially far greater significance are scarcely noticed. Visions of the future abound, some of which, by the very force of their advocacy, may indeed come about. Sceptics express doubts and fear the loss of much of value: the attractiveness of the new undermining the proven qualities of the familiar.

In this final chapter, we consider the prospects for work based learning in higher education, the progress which has been made in recent years, and the problems which still remain. The limitations of the available literature mean that there is much advocacy, some theory, but relatively little hard evidence on which to base firm conclusions. For some, attitudes towards work based learning will be shaped by the practical experience of direct involvement: these are the students, those who teach them, those who work with them. But their voices are insufficiently heard and perhaps too remote from those with policy responsibilities. The loss of a common higher education culture based on largely shared backgrounds and experiences makes it difficult to achieve widespread acceptance and recognition for innovation. Adopting Tony Becher's terminology, the academic tribes continue to fragment. Can the advocates of work based learning transcend the bounds of their own emerging tribe to help create fundamental changes in the way higher education supports and recognises learning, wherever it occurs?

An Economic or a Democratic Argument?

Much of the general case for the learning society, and the specific case for work based learning, rests on an argument of economic need, but the claims for work based learning should not be so limited. Learning, in all its forms, is for life. Which forms of learning require public recognition and certification is partly a matter of the preference of the individual learner and partly a reflection of wider social values. If learning is to be socially valued - and the case for the learning society is that it should increasingly be so - then a strong democratic argument can be made that recognition should be accorded to *all* learning and not limited to learning acquired by certain social groups in certain (formal educational) contexts. This appears to be the logic of national vocational qualifications but restricted to specific occupational applications.

The argument can be applied not only to the recognition/certification of work based learning but also to its support. However, in the latter case the question of costs and who should bear them constrains the democratic argument. How many organisations will genuinely become 'learning organisations' in the learning society? And what priority will they give to their workers' learning needs beyond the immediately vocational? Clearly the answer will be different for different organisations with the larger corporations on the whole better placed to support learning than

smaller organisations. And the opportunities available for the individual learner will vary as a result.

What do learners want? It surely includes (i) support for learning, (ii) recognition for learning, and (iii) equal opportunities to achieve both. Can higher education institutions provide these things without coming to terms with work based learning? And does doing so imply radical change within higher education or can it be done within higher education's existing frameworks?

The issue of work based learning cannot be divorced from broader issues of openness and democracy, of changing conceptions of knowledge and the use of new technologies (or 'knowledge media') for gaining access to it. It is a paradox that as modern society becomes increasingly characterised as the 'learning society', the 'knowledge society', or the 'information society', so the traditional role and authority of higher education institutions within it become more open to question and critique. The question for higher education institutions is how far to embrace new forms and uses of knowledge in society and how far to stay true to earlier forms of higher education with their attendant concepts and values.

Autonomy and Authority

Higher education supports the preparation of students for work in a wide variety of ways, but typically it does so on its own terms. Of the four types of work based learning discussed in Chapter Four, the one characteristic common to all of them was the responsibility of higher education institutions (shared in one type with professional bodies) for setting the curriculum framework. The traditional autonomy of higher education institutions requires that it is academic authority which is the ultimate arbiter of whether learning has taken place. Work based learning may, in some of its more radical versions, challenge this authority and reduce higher education to one partner (and not necessarily the dominant partner) in a negotiation. Some academics and institutions will wish strongly to resist this challenge. Others will regard the pass as already sold, seeing higher education as already open to the values of the work- and market-places. In an increasingly diverse higher education system, both responses are possible. Choices may be not about whether to get involved in work based learning, but to what degree and on what terms.

This review has demonstrated that, in principle and in practice, work based learning, in a variety of forms, is accepted and recognised within higher education. But at what cost to the various partners involved? Do higher education's customs and procedures so constrain learners in the workplace as to make higher education's recognition not worth the price? And does a broadening of the criteria for recognition of learning so undermine the principles of academic autonomy and authority as to require that such broadening be resisted within higher education?

It is not easy to draw up a balance sheet for the closer linking of work based learning to higher education. In an increasingly diverse higher education system *and* an increasingly diverse and segmented employment system, the balance of advantage will be different for different organisations and different learners. This review, however, is directed primarily to readers within higher education for whom the arguments may be summarised as a case for or against the separation of work based learning from learning within higher education.

The case for separation.

- (i) Higher education must retain its independence. It must focus on the long-term needs of learners and be relevant to all aspects of their lives.
- (ii) Higher education institutions and employers should concentrate on what each does best. Education and training to meet immediate employment needs is best done by employers themselves. Higher education should concentrate on providing its students with a good academic foundation as a basis for learning throughout life.

- (iii) *Individual* motivations for learning are likely to be given greater recognition by autonomous higher education institutions.
- (iv) The clear separation of internal organisational (employer) recognition and external (educational) recognition of workers' learning achievements is the basis for creative tension within organisations.⁴
- (v) Higher education has a responsibility to ensure comparability of standards and to meet the needs of a wider range of stakeholders than employers.
- (vi) Learning recognised within higher education should be independent of context.

The case against separation.

- (i) Higher education's independence is largely gone anyway! Changes in forms of knowledge, the growth in knowledge media, and the terms of public funding of higher education, mean that higher education institutions are but one form of knowledge organisation in the learning society.
- (ii) Key features of the learning society imply a shift away from initial to continuing education and the relevance of the workplace context for the latter must be recognised.
- (iii) There is a complementarity between learning in the workplace and learning in higher education.
- (iv) Work based learning can enhance the learning experiences of campus-based students; it can provide an alternative route to recognition and qualification for work based students.
- (v) Learning *is* largely context dependent.

Whether and to what extent individual institutions recognise work based learning will partly depend upon their missions and values. For example, many of the arguments run differently according to whether the institution focuses upon continuing or initial higher education. For institutions which focus upon initial higher education, the case for separation - for higher education to retain its traditional autonomy and authority - is probably stronger. Initial higher education, which for some may occur relatively late in life, needs to provide a foundation for learning throughout life in all sorts of social, organisational and work settings. Work based learning can contribute significantly to this foundation - as the success of sandwich courses demonstrates - but only by adopting higher education's standards and values. For continuing education, the case for separation is weaker. Teachers of adult students record the wealth of experience and learning which such students bring to their studies, much of which is work based. The value of such learning is recognised informally. If only on grounds of equity, there is a strong case that it should also be recognised formally. In continuing education, the knowledge resources of the learner may be particularly rich, the needs and contexts of the learner quite specific. Both these factors might justify rather greater negotiation between higher education institution, learner and (where applicable) an employing organisation.

Recognition of learning is not the same as support for it. Many higher education institutions provide short courses and distance learning materials to meet employers' learning needs quite independently of providing recognition through certification. The arguments for supporting and enhancing learning should not be confused with those for certificating it, whether in work based learning or any form of learning.

We would contend, however, that a general acceptance and recognition of work based learning in higher education does indeed challenge many existing frameworks and assumptions. For

⁴ [(iii) and (iv) have been described as providing an important source of innovation within organisations, (Desmarez and Thys-Clément, 1994).]

example, from a work based learning perspective are the distinctions between higher, further and continuing education meaningful? If work based learning draws on the practical, experiential, non-disciplinary contexts of the workplace, what authority does higher education have over such learning? If, as noted earlier,

knowledge is no longer seen as being predominantly generated within homogeneous communities of academic peers (but is) produced with heterogeneous networks where producers, users, intermediaries, popularisers co-mingle'

(Scott, 1996, p5)

then what authority over knowledge does the academic community possess? If, in a context of lifetime learning, there is a shift in the balance of importance between initial and continuing education, is the role of higher education - traditionally concentrated on the initial - thereby diminished?

To a greater or lesser extent, higher education has always reflected the needs of society at the time. The challenge to higher education now (as we approach the twenty first century) is not from work based learning *per se* but from changes in forms and sources of knowledge and the emergence of new technologies for gaining access to it. These are things which all higher education has to take into account, not just those concerned with work based learning. By taking them into account, many of the difficulties (both technical and cultural) encountered in the recognition of work based learning in higher education are likely to be resolved.

Knowledge is recognised in society in many different ways. In some contexts academic recognition may not be so important. For example, experience of working for the BBC may get rather more recognition in the media and communications industries than a media studies degree. Some large companies are developing their own in-company education and training provision to the point where claims about an in-company university may not be far-fetched. There is also a possibility that with the certification of everybody, certificates themselves lose their power in society. In an increasingly qualified workforce, is there a need for the continuing acquisition of certificates over a lifetime? Will it become normal to have two or three degrees related to job changes and several careers? If not, does that suggest that possession of a degree is not really necessary in the first place? Is possession of a degree as a necessary pre-requisite for a middle-class job not such a permanent feature of society as we tend to think?

As we remarked earlier in this review, work based learning is normal and is experienced by everyone throughout working life. Until recently, learning in higher education has been restricted to a minority at the start of a secure and predictable working life. Work based learning can genuinely be claimed to be at the heart of a learning society. The conviction of higher education's claims to have a central role in the learning society may well depend on its success in embracing work based learning, not in terms of its own frameworks and assumptions but in terms of the needs and aspirations of the learners.

There is no more mystery about work based learning than about any other form of learning. There are a lot of technical issues involved and growing experience of resolving them. Indeed, insofar as rather more searching questions tend to be asked of work based learning than of higher education based learning, the procedures for its support and recognition tend to be particularly stringent. This may not always be to the benefit of the learner.

In the following sections, we summarise the progress which has been made in recent years in the support and recognition of work based learning and consider some of the problems which still remain.

Progress and Problems

One might, of course, ask what criteria should be used to measure progress. Should it be measured:

- by the extent to which particular technical devices have become more widely used across higher education?
- by the extent to which certain ideas underlying work based learning have become more widely acceptable within the system as a whole (or within particular institutions, or within particular disciplinary groupings)?
- by the extent to which deliberations within particular work based learning initiatives have helped to illuminate more general debates (for example, debates surrounding competence and capability within higher education)?
- by the extent to which work based learning has opened up new routes to and through higher education?

Or should it be measured by the extent to which work based learning has indeed met the Employment Department's original objectives in funding a range of work in higher education, viz.

helping to develop higher education towards a system that is relevant, flexible and responsive to changing demands of the labour market and working life; assisting higher education's capability to respond to a changing range of potential learners; encouraging within higher education a sharper focus on learning and its assessment?

(adapted from The Skills Link, 1990)

Whichever measures of progress are adopted, the likelihood is that they will be qualitative rather than quantitative.

This review has separated consideration of various stages of implementing work based learning: from establishing a curricular framework for work based learning, through designing, assessing and accrediting work based learning, and creating a supportive learning environment. In commenting upon progress, we will consider those areas where national issues may hinder progress in achieving local solutions. In doing so, we shall recall the findings of an earlier piece of work funded by the Employment Department (ED) which sought to record the experience gained from a number of projects which focused on the integration, assessment and accreditation of work based learning with academic programmes (Duckenfield and Stimer, 1992).

Curricular frameworks

In making explicit and open to public scrutiny the learning derived from work based learning, practitioners have often had to challenge many of the implicit assumptions held within academia. Even the very tools for making explicit what previously may have been implicit (for example, by using statements of intended learning outcomes within learning contracts) have been the subject of considerable discussion and debate. Such discussion is not the sole preserve of work based learning practitioners, but it is often they who progress the debate in attempts to integrate work based learning into academic programmes. The discussion of curricular frameworks (Chapter Four) focused upon issues of power and control. The frameworks were grouped into four types according to these dimensions. Additionally, types differed according to the location of the learner: in types A and B the learner is primarily a full-time student, and in types C and D the learner is primarily a full-time employee.

For types A and B, much of the literature makes strong recommendations about the need for the close integration of work based learning elements within overall campus-based programmes of study, and the need for clarity about aims and objectives. Without undertaking a comprehensive survey, it would be wrong to assume that the specific examples provided in Chapter Four are necessarily representative of the field as a whole, but they illustrate some of

the ways in which some practitioners have successfully tackled the task of making explicit and integrating work based learning within existing academic programmes. Furthermore, continuing developments relating to the availability of general work based learning modules within wider modular schemes seem to indicate that these modules are popular with students. Such popularity may relate in part to students' longer term plans and perceived benefits in gaining access to the labour market. However, there is also some evidence that messages about the need for integration and explicitness of purpose are not being transmitted sufficiently clearly across higher education. The Higher Education Quality Council findings referred to in Chapter Four indicate that even if the messages are being transmitted, they are not necessarily being received and acted upon in a positive manner. However, as more general moves towards greater explicitness in teaching and learning permeate the system, sharper questions may be asked about many aspects of course design and delivery, including the form and purpose of placement elements. The current impetus within higher education for recognising and developing personal transferable skills may provide an added boost to such questioning, not least from students themselves.

An outstanding issue for Type B curricula, where the overall programme of study leads to both an academic award and some form of professional/regulatory body recognition, is the extent to which professional bodies give adequate recognition to work based learning. Given the continuing debates about the development of professional knowledge and competence, and in particular the interaction between (in Eraut's terms) propositional knowledge and process knowledge, there is surely room for further debate about the extent to which propositional as well as process knowledge can be acquired through work based learning. Within the context of lifelong learning, the issue of professional recognition might also become a matter for those general work based learning schemes catering for people seeking mid-career moves and/or advancement where professional recognition is important.

The two remaining types of work based learning curricula were geared to learners already in employment. There are some claims that particular designs are more cost effective in the long run than others. However, there is as yet little hard evidence to substantiate these claims. Moreover, curriculum development work which may eventually result in only small numbers of employees successfully completing a work based learning programme may nevertheless add much to continuing debates and understanding of notions of competence and of professionalism, both within particular organisations/companies and in higher education more generally. In these, as in other schemes, the success of work based learning initiatives should not be judged solely in terms of the amount of learning eventually certificated.

Type D frameworks were those which sought to couch intended learning outcomes for a complete programme of study in generic, rather than discipline or subject specific terms. Progress in the area of generic level descriptors is difficult to establish: what is successful in one institution may not easily transfer into another. Moreover, it is a complex task to produce generic cognitive skills descriptors which are easily understood and applicable across even a limited number of different subject areas even within the same institution. What some practitioners have developed is local solutions, and the solution has been refined over a number of years. Furthermore, within the locality of their own institutions, such refinement based on actual usage has done much to open up and progress debates across the institution.

Many of the issues concerning curricular frameworks for work based learning are also applicable to frameworks for credit and learning outcomes across higher education as a whole. It would be unreasonable to expect people working in the field of work based learning to have resolved problems affecting large tracts of the higher education system. Recently funded development projects focusing on this topic (for example, the work of the South East England Consortium, the Welsh CAT Consortium) have as yet failed to gain national acceptance for their proposals. Moreover, work being undertaken by the Higher Education Quality Council on what characterises 'graduateness' could clearly have an impact on this whole area.

Creating a supportive learning environment

In Chapter Six, we have argued the case for the need for specific support for the learner in the workplace. Duckenfield and Stimer (*op. cit.*) questioned how learners in the workplace could best be supported: could academics fulfil the required role adequately from a distance, or should support also be sought from within the employing organisation (via a workplace mentor, for example)? From our review of the literature, it seems that much recent work has focused on the role and functions of workplace mentors, whereas relatively little work seems to have addressed questions concerning the ongoing and emerging roles of academic tutors in relation to work based learning, particularly the shift from directing teaching and learning to facilitating learning. Moreover, although there has been increasing interest shown in student supported learning for campus-delivered programmes, little work has been done to try and look explicitly at strategies that involve learners themselves supporting other learners in the workplace. Instances where such support groups have been instigated are able to report positive outcomes; these need further dissemination and discussion within higher education.

The extent to which any *one* of these constituencies (academic tutor, workplace mentor, other learners) is essential to support work based learning is debatable. Much will depend on the form of work based learning itself, and the organisational and professional context in which the work based learning takes place. What is also debatable is the extent to which the roles and functions of tutoring and mentoring within work based learning have been clearly elaborated. Further work could usefully be undertaken to explore the different and emerging roles of academic tutors and the need for and nature of staff development, particularly in relation to work based learning.

As far as workplace mentors are concerned, research is needed to examine how useful it would be to have nationally agreed statements of knowledge and skills of mentors for work based learning. Such statements might serve as a guide for personal staff development of mentors, for selection and for training. Although some form of accreditation of workplace mentors might seem the logical conclusion of such further work (especially where mentoring is seen as an integral part of a professional activity), there might also be some resistance to formalising workplace mentoring in this manner. Whilst accreditation might prove beneficial in terms of (say) aspects of quality assurance, it might also have damaging effects on commitment to the process of work based learning, especially within small organisations.

Support for work based learning through assessment

There are many techniques for providing evidence of learning; these include the use of learning logs and diaries, periodic self-evaluative reports based on checklists of competences, portfolios which contain reflective reports on learning derived from working/productive processes. Many of these devices are intended to assist the process of learning *per se*, and encourage the individual to take an active role in exploring opportunities for learning. However, although the theory behind many of these devices may be sound, the literature exploring practice on the ground seems to suggest that further work is required to help learners to use these devices as intended. We would suggest that a simple guide for learners on how to make their portfolios more critical, and on how to develop a self-reflective approach to work experience, should be produced. Given that the issues may be different for different discipline areas or professions, these guidelines might be produced by collaboration of a number of professional bodies or subject associations and contain some advice specific for each area.

A related issue is the extent to which those assessing such devices (e.g. portfolios, learning logs) themselves feel competent to do so. Once again this is not necessarily a matter merely for work based learning, but could have more general implications for those involved in innovative forms of assessment. Nevertheless, our review of the literature on work based learning points to the need for further development and training in this area. Some institutions have already put in place procedures which ensure that those charged with the responsibility of assessing portfolios have themselves experienced the process of producing a portfolio and having it assessed. Clearly there could be merit in disseminating these institution specific practices more widely. There is probably a need for training workshops and materials for

academic tutors and workplace mentors on assessing portfolios and other devices that are used by learners to provide evidence of their work based learning. Such workshops might also go some way to providing a network of workplace mentors with responsibilities for assessment, and be a starting point for developing an expert community for assessors of work based higher education .

Recognition for work based learning through accreditation

Many of the issues and concerns arising from the assessment and accreditation of work based learning are tied in to much bigger issues affecting higher education as a whole. In Chapter Seven we noted that, although some still prefer to assess work based learning on the basis of 'satisfactory completion' only, there is now ample evidence of the practice of assessing work based learning for an explicit measure of academic credit. However, such practices are inevitably linked to wider discussions within particular institutions and across certain parts of the higher education system about the desirability and possibility of devising a common system (or at least a more commonly understood system) for assigning volume and level of academic credit. Whether local solutions to these and other matters are adequate or whether there needs to be a nationally co-ordinated framework is an issue of some importance. While local solutions may be sensitive to local contexts and issues, it is likely that the public recognition accorded them will be uneven, and perhaps reflect extraneous factors such as institutional status. Some form of national recognition would help give public assurance of a level of comparability in credits and other certification awarded locally.

Work based learning curricular frameworks designed primarily for people in employment (Types C and D) tend to use a process of assessing prior learning (certificated and/or experiential) to establish appropriate levels of access to a work based programme, and to diagnose ongoing educational and professional development needs that can be realised through work based learning. From our review, it seems that many institutions are still at an early stage of specifying the actual detailed process of assessing prior experiential learning for academic credit. Although much case law may be being developed within particular institutions (or particular functional areas of an institution), it would undoubtedly be useful for such case law to be documented and made more widely available so that those coming new to such processes can develop their own procedures and standards in the light of tried and tested practices elsewhere.

However, the assessment of an individual's prior learning is just the starting point for designing a work based learning programme. The literature contains much about the use of the learning contract as a vehicle for negotiating, approving and assessing the outcomes of work based learning, together with specific examples. Newcomers to work based learning could benefit from an authoritative account of the actual dynamics of diagnosing needs, negotiating (and re-negotiating) the intended programme (which might comprise elements of in-house training courses, and instruction led learning available from the institution of higher education in addition to work based learning), and on how academic credit has been assigned to the resultant overall programme.

The question of recognition of learning brings with it the question of what qualification framework to use for that recognition. The existence of credit accumulation and transfer schemes within higher education leading to academic awards, and unit based assessment of competence in the workplace for national vocational qualifications (and Scottish vocational qualifications) has led to much debate and confusion about the articulation of academic and vocational credit. And it is an issue on which questions concerning higher education's authority over certification processes arise once again. In all of the curriculum frameworks for work based learning which we have come across, it has been higher education which has set them. If other frameworks are to be used, then the role of higher education in work based learning might well be brought into question. This is not to say - as we have stressed throughout this review - that learning cannot be recognised in society in all sorts of ways.

Progress in work based learning *has* been made on a number of fronts: be it in furthering debates on particular aspects of teaching, learning and assessment; or providing alternative

routes to continuing educational and professional development; or providing explicit links between education and work for those primarily in higher education. What seems to be missing from the literature is any widespread and systematic evaluation of the long-term benefits of work based learning to individuals and their employers.

Many of the practices we have considered (curricular frameworks, negotiation of learning contracts, provision of support for the learner, assessment and accreditation frameworks) together form the building blocks of quality assurance mechanisms for work based learning. However, there may also be value in examining the potential applicability of quality assurance mechanisms which draw on quality processes prevalent in many business and public organisations, rather than relying completely on practices linked to traditional peer review processes rooted in the conventions of academic culture.

Issues of Funding

Many of the strategies and structures adopted for recognising work based learning in higher education have required substantial investment of resources, both in terms of staff time and commitment, and in terms of curriculum development, learner support systems, methods of assessment and accreditation etc. A crucial question remains as to whether higher education institutions and employer organisations can afford such investment.

As noted in Chapter Eight, comparable figures for the costs of work based learning in relation to other forms of learning are difficult to ascertain. Individual institutions and their employer partners have devised local arrangements using existing funding mechanisms in creative ways to fund work based learning activities. However, part of the answer to the question posed above will surely depend on the extent to which institutions and employers perceive work based learning as important to them and integral to their longer term goals. For institutions of higher education, current funding policies (such as those for research assessment) tend to reinforce traditional academic values and so militate against educational developments and practices (such as work based learning) that might be seen as challenging those values. If the Government is seriously committed to seeing work based learning as a way of making higher education more accessible to lifelong learners, then there is clearly a need to look again at funding models that place work based learning onto a level playing field with other forms of learning, both for the institution and the individual learner.

For employers, smaller organisations may be less able to sustain a commitment to work based learning where the benefits might be of a medium to long-term nature. Other forms of learning might produce more immediate short-term gains. It has been suggested elsewhere in this review that tax break incentives (for both employers and employees) might be one way of stimulating both demand and supply.

Issues of funding, and economic returns from investment in various forms of higher education are clearly part of the brief of the current National Committee of Enquiry into Higher Education. Funding for work based learning should be a part of this agenda.

Whither Work Based Learning?

To return to the question posed at the beginning of this chapter: can the advocates of work based learning transcend the bounds of their own emerging tribe to help create fundamental changes in the way higher education supports and recognises learning wherever it occurs? A prior question is, of course, do they need to? Would anything be lost if they just stayed as they are? In the current financial climate in which institutions have to operate, diversification and the ability to compete in various markets are seen as strengths. But it is debatable whether that diversification is akin to delivering 'more of the same' type of higher education to an increasingly

wide range of potential customers, or whether diversification means moving towards new modes of thought (including shifts in perception about how advanced knowledge is produced, who owns and controls that production), and operation (where cognitive, social, practical and emotional aspects of learning are no longer held distinct). Clearly, there are groups of academics in institutions who are actively pursuing new approaches. However, academic staff are increasingly under pressure to sustain their research/teaching/administrative responsibilities. As long as rewards systems are geared to traditional criteria dominated by research profiles, it seems unlikely that a significant number will actively seek to take up the challenges posed by work based learning.

What about employing organisations and their attitudes to work based learning? Much is written about learning organisations, but just how far are organisations (or, more importantly, the diverse groups of people within them) convinced that in order to survive, their operations and processes need to be continually informed by quality improvement and new learning? We have noted elsewhere that current practices in work based learning are geared primarily towards individual needs, whereas some commentators suggest that notions of enterprise competitiveness require new models of learning that place the collective rather than the individual at their centre. And how do current trends towards the casualisation of employment (part-time contracts, frequent job changes, no more 'jobs for life', increasing numbers of self-employed workers) impinge on these debates?

If we are serious about moving towards a learning society, where real opportunities for continuing lifelong learning are readily accessible (and not subject to increasingly artificial boundaries), then work based learning should be a serious contender for providing (at least) some of those opportunities. And what about those people without a work base? Can work based learning provide opportunities for people seeking to re/enter the labour market?

Higher education has much to offer work based learning, especially in terms of support for, and promotion of, such learning. But whether higher education can continue to be the final arbiter for recognition of that learning is more open to question. Can organisations themselves provide recognition for learning in a way that affords it social value? Or will the case for separation of employer recognition and independent, educational recognition remain? These are no longer marginal issues to be left to enthusiasts in a relatively small number of institutions. By posing fundamental questions for the production, distribution and recognition of knowledge in society, they raise matters of central concern to all in higher education.

Appendices to Chapter Two

Mapping of ED Funded Projects in the area of work based learning: **PHASE 1 1990 – 1992**

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>Anglia Polytechnic University and Essex County Council Social Services Department Accreditation of Social Services Experience and Training (The ASSET programme).</p> <p>First phase - (Sept 90 - April 92). Second phase (92 - 93).</p>	Professional social work staff engaged in social work practice (on part time or full time or voluntary basis).	Social work - post qualifying: initially child care area. Leading to Graduate Diploma of professional studies in Social Work or BSc (Hons) Social Work. Second phase extended range of modules/units of learning.	HEI and employer (Essex Social Services Department).	120 credits (of which no more than 60 credits may be gained through APL); whole programme based on workplace experiences assessment; Credit towards post qualifying professional award through the professional body (CCETSW Regional Consortium).	<p>The ASSET Programme: <i>Handbook for candidates, supervisors, assessors, tutors</i> (June 1992).</p> <p>'Accrediting Professional Competences'. Final Report (April 1992).</p> <p>'Professional Competences at Degree Level'. <i>Second Phase Report, 1992-1993</i> (1994).</p>
<p>Competences, Education and Assessment in Undergraduate Law Courses (CASEL) project with CNAA Literature survey and five inst'l case studies. (Sept 90 - Sept 92)</p>	Full time students.	Law (LLB).	HEI.	Various.	Report - <i>Competences, Learning Outcomes and Legal Education</i> , Philip A Jones (1994). Institute of Advanced Legal Studies, London.
<p>Council for National Academic Awards (CNAA) plus 8 HEIs Profiling work based learning in academic courses (1990 - 1992).</p>	Full-time students.	Undergraduate courses - various subjects.		Profiling as a means of assessing skills/competences gained in workplace.	<i>Profiling in HE: Guidelines for the development and use of profiling schemes.</i> A Fenwick, A Assiter, N Nixon (1992).
<p>CNAA/Scottish Vocational Education Council (SCOTVEC) + 16 'Sub contracted' college-employer partnerships. The SCALE project Scottish applications of learning through experience. (April 90 - March 92)</p>	2 broad categories of partnerships work based learning of employees; work based learning of placement students.	HNC HND Degree Postgraduate level Range of disciplines including: built environments; business, management, consumer studies; careers guidance; computing and engineering.	HEI.	Variable.	<i>The SCALE project, Learning at Work</i> (1992) provides summary of experiences of sixteen different HEI employer partnerships.

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
Coventry University Integration of work based learning with academic assessment (1990 - 1991).	Full time students block placements x 2; Full time employees.	Technical Communication (BA). Management Development Programme.	HEI.	Variable.	<i>Guidelines - A user's Guide: The integration of work based learning with academic assessment</i> , H Coates and J Wright (1991).
Glasgow Caledonian University Structured Industrial Practice Studies (SIPS) First phase (90-92) for engineering. Second phase (92-94) other areas.	Full time students; 2 - 4 ½ day industrial visits per year.	Engineering (BEng) Business and Manufacturing Systems Eng (BSc) Chemistry with IT and Instrumentation (BSc) Instrumentation with Applied Physics (BSc)	HEI, but looking to meet some requirements of professional body.	Successful completion of 1 or more SIPS counts to students' final work in subject module.	Report - <i>Structured Industrial Practice Studies: an approach to the integration of academic and work based learning</i> , Ian J Kemp with Andrew R Eastwood, Liz Seagraves, Linn Blair (1992). Structured Industrial Practice Studies, L Seagraves, A Eadie, J Maclachlan, B Temple (1995) in <i>DfEE Work Based Learning Network News (2)</i> .
Greenwich University Integration of Work Based Learning with Academic Assessment in industrial, professional and voluntary work contexts. (Sept 90 - May 92)	Full time students; 12 months placement, 3 x training periods, totalling 18 months. Part time students; some (limited) credit for <u>prior</u> WBL.	<i>Sciences</i> - Applied Chemistry - Material Science - Applied Biology - Environmental Health <i>Built environment</i> - Quality Surveying - Building Surveying - Estate Management - Architecture - Landscape Architecture - Civil Engineering <i>Social Sciences and Humanities</i> - inc Economics and Theological studies	HEI, plus professional body (for Environmental Health).	Assessment of sandwich placement contributes 50% of Diploma of Industrial Studies (Progs in Science Faculty); Schools of Humanities and Social Sciences - within CATS framework, a level 1 programme taking account of WBL in voluntary sector; Built Environment - units in post graduate programmes include scope for WBL.	Report - <i>Development of Models for integration of work based learning and academic assessment in 3 contexts</i> . University of Greenwich (1993).
Henley Management College with Institute of Personnel Management, Tesco Plc, TSB and Shell Use of work based learning in developing professional personnel managers. (Dec 90 - Dec 91)	Full time employee.	Personnel management.	Professional body?		Report no longer available.

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
Huddersfield University Self Assessment Model for the Integration of work based learning with academic assessment. (Oct 90 - July 92)	Full time students; 12 months paid placement, 9 weeks unpaid placement	Computing in Business (BA Hons). Historical and Political Studies (BA Hons).	HEI.	Credit towards final award for computing; for hist'l and pol'l studies, assessed on pass/fail basis.	Report - <i>A Self Assessment Model for the Integration of Work Based Learning with Academic Assessment</i> , R Tuck, B S Lee, Y Bennett (1993). Work Based Learning on an Arts Degree Course, B Roberts and M Myock (1995). <i>Journal of F/HE 19(1)</i> .
Learning from Experience Trust with Chester College of Higher Education, Liverpool John Moores University, Liverpool University Work based learning for academic credit in non-vocational full time degrees. (Oct 90 - Sept 92) + extension 92-94.	Full time, second year students; spending 4 days a week in workplace and 1 day a week college support over 8 week period.	Various - combined honours degree programmes.	HEI.	Level 2 credits, towards degree classification.	<i>Work Based Learning for Academic Credit</i> , LET (1993). Further work at Chester CHE, <ul style="list-style-type: none"> • work based learning module (single/double 8 wk) now compulsory for all BA/BSc students (level 2). • work based learning modules levels 0-3, undergraduate programme and within Master's programmes - particularly for part time students. Ref. Work to Learn - work based learning at Chester College. P Alston and J Carhart (1995). <i>In DiEE Work Based Learning Network News (2)</i> July 1995.
Napier University Contract learning in sandwich placement. (Aug 89 - Aug 91)	Full time students. Block placements 20-48 wks.	Business Studies (BA); Commerce (BA); Hospitality Management (BA); Civil and Transportation Engineering (BEng).	HEI.	Variable - From contributing (9%) to degree (Commerce) - to not yet incorporated.	Report - <i>Contract Learning in Sandwich Placement</i> , Iain Marshall (1993).
Oxford Brookes University with 7 companies/organisations. Implementation of learning contracts in the workplace. (Oct 89 - Oct 91)	Full time employees.	Individualised programmes.	HEI.	Range of credit levels, and credit points achieved.	Report - <i>Work based Learning Contracts</i> , Clive Robertson (1992).

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
Plymouth University Experiences of sandwich placement for psychology undergraduates. Samples from 7 HEIs.	Full time students: year long placement.	Psychology (BSc Hons).		Pass/fail basis.	Psychology Undergraduates' Experience of Placements: a role-transition perspective. T Auburn, J Arnold and A Ley (1993) <i>In Studies in Higher Education</i> 18(3).
Portsmouth University Development and implementation of a partnership degree programme. Feasibility study 1988-90 Implementation 1990-92	Full time employees.	Full range of undergraduate awards Initially learners' programmes in engineering area.	HEI.	Integral to award. WBL, average, 60% of learner's overall programme	<i>The Partnership Project and the Partnership Programme</i> , F Lyons (1993). Programme now extends to postgraduate awards as well as undergraduate and includes areas other than engineering.
University of Central Lancashire Legal competences for social workers. (July 90 - Sept 91)	Full time students.	Diploma in Social Work (pre-qualifying).	HEI and CCETSW.	Integral to award.	Report - <i>Work -Based Learning in Legal Studies</i> (1991) University of Central Lancashire. Summary report, + booklet on Teaching Law to Social Workers.
University of Manchester Work based learning in undergraduate pharmacy courses (90-91).	Full time student; 8 wk summer placement.	Pharmacy.	HEI.	WBL assessed through post-placement examination.	Report - <i>Use of Work based learning in the teaching of professional subjects</i> . J Rees and J Collett (1990).
University of Nottingham and University of Sheffield with The Boots Company Plc and Rolls Royce Plc Assessing and Accrediting work based learning in Higher Education.	Full time employees.	Engineering; Training; Management.	HEIs.	Credit within composite programme.	<i>How to accredit work based learning: a conceptual framework. Generic guidelines for Assessment and Accreditation of work-based learning within academic programmes</i> . University of Sheffield/ University of Nottingham (1992). Detailed case studies with three groups of workers. Executive Summary.
Wolverhampton University with local companies. Work based learning and academic assessment. (Sept 90 - Jan 93)	Full time employees.	Customised management and technical learning programmes.	HEI, plus looking to relate to Industry Lead Body occupational competences.	Variable.	Report no longer available?.

NOTE: titles of institutions of higher education are those currently in use as at 1996 - several changed their name following the 1992 Legislation which removed traditional financial, degree awarding status and title differences between universities and the former polytechnics.

Mapping of ED Funded Projects in the area of work based learning: **PHASE 2 1992 – 1994**

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>Anglia Polytechnic University and Ford Motor Company Ltd Ford-ASSET Project (Accreditation and Support for Specified Expertise and Training) (Sept 92 - August 94)</p> <p>Development of a Competence Referenced and Work Based Honours Degree. Developed on from work previously undertaken on Accreditation of Social Services Expertise and Training (ASSET project (90/92).</p>	<p>Full time engineers with Ford Motor Co. Ltd, Research and Engineering Centre.</p>	<p>Engineering (BSc Hons).</p>	<p>HEI.</p>	<p>Integral to award. APEL average 200 credit points; taught units; major project and 3 x 20 credit, level 3 work based modules</p>	<p>Available from Anglia Centre for Co-operative Education, Anglia Polytechnic University.</p> <p><i>Ford-ASSET Project Handbook (1994)</i> <i>Conference Papers, 1993 (1995)</i> <i>Working Papers (1993/94)</i> <i>Conference Papers, 1994 (1995)</i></p> <p>Final Report - <i>The Ford ASSET Project</i>, S Guise and R Winter (1995)</p> <p>Update: IMechE accreditation being sought</p>
<p>Leeds Metropolitan University Working for a Degree Mentoring project. (Oct 92 - Sept 94)</p> <p>Primary aims: - to identify/promote good practice in provision of WBL opportunities in variety of workplace setting; - to investigate role/function of workplace mentor, and to develop and evaluate an accredited mentor training scheme.</p>	<p>Full time students: 12 months placement; recurrent block placements; short block placement.</p> <p>Part time students:</p> <p>Full time employees.</p>	<p>Information and Engineering Systems programmes (BSc, BA)</p> <p>Quantity Surveying (BSc Hons).</p>	<p>HEI.</p> <p>HEI and links to Construction Industry Standing Conference (CISC) competences for NVQs.</p>	<p>48 week placement, formally assessed 10% to final degree classification 5 - 12 week short block, assessed but does not contribute directly to final award.</p> <p>48 week placement integral to s/w award. For part-time route, WBL accounting for 10% and 20% levels 2/3 resp.</p>	<p>Final project report - <i>Working for a Degree - Mentoring Project</i>, J V Jowett (ed) (January 1995). Volume 1 includes overall findings and separate faculty/school pilot scheme reports: Volume 2 comprises series of working papers on specific issues.</p> <p>Update: Faculty of Infn/Engineering systems lkg to extend assessment structure to other Faculty courses + involved in Informatics Mentoring Network initiative (DfEE) and students as mentors' pilot.</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
		Professional accountants' examination. Professional personnel management examination. Youth and Community work (DipHE). Nursing BSc(Hons). Health Visiting (Diploma in Professional studies). District Nursing (Diploma in Professional studies). Mentoring as focus for WBL in sports development (Advanced professional/ Professional Diploma). Mentoring within Leisure Studies (HND/BA). Mentoring within Initial Teacher Training	Professional body. Professional body. HEI and professional body. HEI and professional body. HEI and professional body. HEI. HEI. HEI	n/a n/a Fieldwork modules attract 50% CATS credit points for award. integral to overall award integral to overall award integral n/a n/a	Business School investigating mentoring vis a vis organisation learning. Faculty of Cultural and Education Studies to review needs of industrial partners supporting placements in the Leisure industry. Generic mentoring programme now established as short course within university's portfolio. Specific mentoring programme (in Health and Care) available 1996. Short course on mentoring/tutoring within LMU's Advanced Professional Diploma 'Technology and Learning in Higher Education'.

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>Middlesex University Auditing, Accrediting and Assessing Employees' Work Based Learning. (Sept 92 - August 94)</p> <p>Main aim to identify, in academic terms, learning inherent in specified jobs across four employer case studies.</p>	Full time employees in public and private sector organisations.	General management, and others more specific.	HEI.	Integral to award of credit. Levels 2/3, 10-100 credit points.	<p>Report - <i>Auditing, Accrediting and Assessing Employees' Work Based Learning</i>. J Naish, (March 1995).</p> <p>Update: General work based learning 'set' comprising full range of awards available within university's MACS framework.</p> <p>Various publications from Middlesex National Centre for Work Based Learning Partnerships.</p>
<p>The Open University/ Quality Support Centre + 18 collaborating institutions.</p> <p>Developing Students' Subject Area Knowledge and Skills in the Workplace. (Sept 92 - Dec 94)</p> <p>Aim to identify good practice in management of strategies for work based learning.</p>	Full time students. Full time employees.	Diploma and degree programmes. Art and Design; Computing and Mathematics; Engineering; Health and Social Care.	HEIs, + professional body as appropriate.	Various, depending on case studies.	<p>Quality Support Centre/Open University (1995)</p> <ul style="list-style-type: none"> - <i>Guidelines for Good Practice in Supporting students in the Workplace</i> - <i>Signposts for Staff Development (1): Link Tutors</i> - <i>Signposts for Staff Development (2): Workplace Mentors</i> - <i>Signposts for Staff Development (3): Student Peer Support</i> - <i>Briefing Papers</i> - <i>Annotated Bibliography</i>
<p>Oxford Brookes University University as a source of work based learning. (Nov 93 - Dec 94)</p> <p>Extension of work based learning contracts for employees project.</p>	Full time employees of the university.	Areas relevant to administration and technical staff.	HEI.	Credit points range 8 - 24; levels, 1 - M.	<p><i>A Place of Learning - A Place for Learning: The university as a source of work based learning and personal development opportunities for Administrative, Professional, Technical and Clerical Staff.</i> C Robertson and J Priest (1995).</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>Sheffield Hallam University Valuing Work Based Learning. (Sept 92 - Sept 94)</p> <p>Primary aim - to develop an institution wide framework for counting work based learning towards a qualification.□</p>	<p>Full time students: live projects, short unpaid placements.</p> <p>Full time (sandwich) students: 12 months salaried placements (and, for QS, work with HEI's own consultancy company).</p> <p>Part time students.□</p>	<p>Leisure and Food Studies (BA Hons).</p> <p>Housing (BA).</p> <p>Quantity Surveying (BSc).</p> <p>Biomedical Sciences (BSc Hons).</p> <p>Housing (HND/top up degree).</p> <p>Engineering (BEng/BSc(Eng)) (developments carried forward in to Phase 3 projects).</p> <p>Health Care Practice framework - (for experienced practitioners).</p>	<p>HEI.</p> <p>HEI and Chartered Institute of Housing (Test of Professional Practice, during placement year).</p> <p>HEI.</p> <p>HEI (and some units based on Council of Professions Supplementary to Medicine standards).</p> <p>HEI and Chartered Institute of Housing.</p> <p>HEI and professional body accreditation.</p> <p>HEI.</p>	<p>10 - 60 credits, levels 1-3 adapted units.</p> <p>20 credits, level 3 adapted from taught units.</p> <p>20 credits, levels 1-3 adapted units.</p> <p>20-40 credits, levels 1-2 designed units 60 credits level 3 dissertation and project.</p> <p>30 credits, level 2 matching taught units 60 credits, level 3 evaluation practical experience.</p> <p>20 credits, levels 1-3 negotiated/matching units.</p> <p>40 credits, levels 2/3 negotiated units.</p>	<p>Report - <i>An Institutional framework for counting work based learning towards a qualification</i> (1994) Sheffield Hallam University.</p> <p><i>Valuing Work Based Learning Conference Proceedings</i> (Sept 94)</p> <p>Update: Biomedical Sciences - WBL firmly embedded within part time provision General model of negotiated outcomes and log book approach linked into final year project to be adopted across the school.</p> <p>Housing - transfer of taught units into workplace for assessment did not work. Certificate for Employer Services/Estates Management by WBL (and open learning materials).</p> <p>Engineering - subsequent project undertaken 1994 - 96.</p> <p>Health Care Practice - central feature of work with Unison Open College. Model likely to expand to other professions allied to medicine, and may be adopted by other schools.</p> <p>Sandwich education - assessment for credit under review.</p> <p>Independent Study units - now embedded within School of Cultural Studies, in form of Community partnership projects.</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>University of Central Lancashire Work Based Learning in Psychology and Social Policy for Social Work. (Sept 92 - March 94)</p> <p>Main aim to examine the viability of work based learning and assessment of psychology and social policy within Diploma Social Work.</p> <p>(Followed on from earlier project re: Law in Diploma SW.)</p>	<p>Full time students on Diploma in Social Work programme; integrated practice elements.</p>	<p>Psychology and Social Policy.</p>	<p>HEI/CCETSW.</p>	<p>Integral to award.</p>	<p>Report - <i>Work Based Learning in Psychology and Social Policy for Social Work: The Accreditation of Work Based Learning in Social Work Education and Training.</i> Department of Social Work, University of Central Lancashire (1994).</p> <p><i>Psychology Profiles and Social Policy Work Book</i> (February 1995).</p>
<p>University College London Giving credit where it's due: widening access by means of work based learning in the Military. (May 93 - March 95)</p> <p>Primary aim to develop and test strategy to enable work based learning to be awarded credit towards a UCL degree.</p>	<p>Mid-career military engineers using distance learning materials prior to entry to third year UCL course.</p>	<p>Electronic and Electrical Engineering (BEng).</p>	<p>HEI</p>	<p>Credit for prior certificated learning.</p>	<p>Report - <i>Giving credit where it is due: The UCL Work Based Learning Project</i> (May 1995).</p> <p>Acceptance of scheme by professional body still to be resolved.</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>University of Kent at Canterbury The 'Learning at Work' Project (92-94).</p> <p>Main aim to develop models of accredited work based learning and design pathways to integrate work based learning modules with university taught modules.</p>	<p>Full time students/ block placements, years 1-4.</p> <p>Full time employees (supervisory and managerial staff of Dover Harbour Board).</p>	<p>Drama and Theatre Studies degree;</p> <p>Computer Science degree;</p> <p>Counselling - Certificate and Diploma</p> <p>Student Tutoring within Natural Science</p> <p>Management - Cert Supervisory Mgt Cert Mgt Studies Diploma Mgt Studies</p>	<p>HEI</p> <p>HEI</p> <p>HEI</p> <p>n/a</p> <p>HEI</p>	<p>optional work based learning modules</p> <p>optional (year 1) module; core (final year) module</p> <p>optional work based learning module (year 1/2)</p> <p>level 2, 15 credit points.</p> <p>integral to award.</p>	<p><i>The 'Learning at Work' Project Final Report.</i> G Davidson (December 1994).</p> <p>+ separate case study reports:</p> <p>—Drama: S Naylor. —Computing: S Santer. —Psychotherapy and Counselling: M Shaw. —Student Tutoring: N Halliday. —Management: L Keen.</p>
<p>University of Liverpool Accrediting work based learning in Higher Education through Work Placements. (June 92 - May 94)</p> <p>Aim to assess the potential of placements as an accredited element of wide range of courses.</p>	<p>Full time students. Weekly and block placements, years 1-5: optional/compulsory</p>	<p>Various degree courses across :</p> <p>Biochemistry Architecture and Building Engineering Dentistry Combined Engineering French General Practice Movement Science and Physical Education Nursing Psychology Veterinary Science</p>	<p>HEI + professional body where appropriate.</p>	<p>criteria for assessment developed in 9 departments: credit for WBL in 8 (out of 10) departments.</p>	<p>Summary Report - <i>Promoting Independent Learning: The Role of the Workplace</i>, I Taylor, J Barnes, N Astle (1995)</p> <p>Update: developments in individual departments maintaining/increasing commitment to work based learning. Further detailed work in Veterinary Science (national project) Ref: The Future of Work Based Learning at the University of Liverpool. I Taylor and J Barnes (1995). In <i>DfEE Work Based Learning Network News (2)</i>.</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>University of Luton Work Based Learning in Higher Education. (April 93 - March 94)</p> <p>Main aims to develop a general work based learning module; develop an Access to Higher Education by work based learning programmes; Link to relevant units of NVQs.</p>	<p>Full time undergraduates on 35-day structured work project;</p> <p>people with work experience wanting to gain entry to Higher Education.</p>	<p>Transferable skills, 15 credits at level 2; unit 7 in supervisory management for NVQ level 3.</p>	<p>HEI.</p>	<p>Integral to module assessment.</p>	<p>University of Luton - <i>Work Based Learning in Higher Education Final Report</i>, G Weller (July 1994).</p> <p>Update: General WBL module now 'core' in BA Public Policy and Mgt; Take-up (as option) on other programmes expanding rapidly.</p>
<p>University of North London Accreditation of Learning through Employment (ALE). (Sept 92 - August 94)</p> <p>Primary aim to address whether cognitive skills can be acquired in a workplace setting, and if so, how might these be accredited.</p>	<p>Full time students: 12 months placements; recurrent block placements.</p>	<p>Business Studies (BA) Hotel and Catering (BTEC, BA) Social Work and Applied Social Science (Diploma, BSc) Industrial Studies (Diploma) Professional Studies (Diploma)</p>	<p>HEI and for social work and nursing/health visiting professional bodies (CCETSW, ENB).</p>	<p>Variable- WBL assessed/not assessed for academic credit</p>	<p>Report and User Pack - <i>Cognitive Skills in work based learning</i>, C Bryan and A Assiter (July 1995).</p> <p>User Pack for students, academic tutors and employers: focuses on giving credit for cognitive skills/knowledge acquired in work</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>University of Northumbria at Newcastle A Learning Outcomes framework for the Accreditation, Delivery and Assessment of Work Based Learning. (April 92 - March 94)</p> <p>Primary aim, to devise models which would enable the award of academic credit for learning that takes place during periods of work experience, or employment in a range of subject areas.</p> <p>□</p>	<p>Full time students: undertaking 1 year industrial placement, or serial attachments.</p> <p>Full time employees undertaking part time studies;</p> <p>Full time employee;</p>	<p>Biomedical Sciences (Part time BSc Hons) (1/3 programme delivered in workplace).</p> <p>Careers guidance (Part I of Diploma) (post experience course).</p> <p>Computing (Sandwich HND and BSc).</p> <p>Initial Teacher Training (and CPD).</p> <p>Clinical education in physiotherapy (Masters level) (continuing professional development for chartered physiotherapists) .</p> <p>Quantity Surveying (BSc Hons).</p>	<p>HEI and state registration body for Medical Laboratory Scientific officers, and professional body.</p> <p>Largely driven by nationally set core objectives.</p> <p>HEI and looking for links to BTEC common skills and/or British Computer Society's professional development scheme.</p> <p>HEI and state registration body.</p> <p>HEI and endorsement by professional body (Chartered Society of Physiotherapy) for inclusion in their CPD scheme.</p> <p>HEI and professional body (Royal Institute of Chartered Surveyors) accreditation.</p>	<p>Integral to whole programme.</p> <p>optional in all units in Diploma.</p> <p>no separate accreditation: satisfactory completion only.</p> <p>Accreditation of WBL of student teachers in place: ongoing development of APEL accreditation process model for teacher mentors.</p> <p>Integral to programme. 80% programme WBL, 20% campus based</p> <p>40 credit points for placement period, so 400 credit points for (Hons) degree.</p>	<p>Report - <i>A Learning Outcomes Framework for the Accreditation, Delivery and Assessment of Work Based Learning</i>. Volumes One and Two, University of Northumbria at Newcastle, (June 1994).</p> <p>Volume One summarises project overall; Volume Two presents reports from each subject area.</p> <p>Update: Biomedical Sciences - p/t scheme adapted by other univs. For s/w scheme, professional body looking at WBL units in place of training logbook.</p> <p>Careers Guidance - supervisors/mentor training linked to TDLB units D32-33; only a few students offering 'evidence' based on WBL.</p> <p>Computing - support in principle for credit for WBL: considering proposals eg univ certificate; BCS scheme; units linked to NVQ competency elements; but issues of resourcing viable proposals.</p>

		Social work (access to post qualifying awards).	HEI and professional body (Central Council for Education and Training in Social Work).	As part of Access, Verification and Accreditation system for individuals to access UNN's post graduate and post qualifying training for social work and social welfare; integral to specific units of MA routes.	
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Mapping of ED Funded Projects in the area of work based learning:

PHASE 3 1994 – 1996

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
Leicester University Development of accreditation systems for postgraduate qualifications through WBL	Full time employees in food and beverage; pharmaceutical; medical sciences; industries.	postgraduate qualifications.	HEI.		Report not yet available? (project looking for efficiency gains in APEL + programme planning processes) Ref: <i>DfEE Work Based Learning Network News (1) February 1995.</i>
North West Regional Consortium for Work-Based Learning (universities of Liverpool, Liverpool John Moores, Manchester, Central Lancashire, Lancaster and Salford and participating TECs).	Primarily full-time students; and graduate workstart programmes; and programmes for SMEs.	Pilots at collaborating universities.	HEI.	University awards and investigation of NVQs; City and Guilds Licentiateship awards.	(Report not yet available?) Ref: <i>DfEE Work Based Learning Network News (1) February 1995.</i>
Sheffield Hallam University A Partnership Approach to Integrating NVQs and Academic Awards in the Engineering Industry (March 94 - December 95.) Broad aim to provide accelerated route through identifying/developing NVQ units that allow students to achieve up to 60 academic credits; and to establish regular network employers committed to WBL. Built on previous 92/94 Learning at Work project.	Full time employees in engineering sector.	Accelerated route (using WBL) through existing part-time Engineering Degree programme.	HEI	Academic credit (20 credits @ each undergraduate level).	Sheffield Hallam University: <i>A Partnership Approach to Integrating NVQs and Academic Awards in the Engineering Industry</i> - report (in portfolio format) 1996. Potential for NVQ credit not realised during project.

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>Stirling University/Falkirk College of Further and Higher Education/ Clackmannan College Learning in Smaller Companies (LISC) (April 94 - December 95)</p> <p>aimed to create WBL schemes for employees in SMEs.</p>	Full-time employees in SMEs.	APEL for SCOTVEC National Cert. modules, and Higher National Units. Open learning packs in Financial Accounting Statements, and IT applications. Portfolio-based access programme. Work-based delivery Certificate in Small and Medium Enterprise Management (CSMEM).	HEI	academic credit for CSMEM: credit for SCOTVEC provision.	<p>All published by Educational Policy and Development, University of Stirling.</p> <p><i>LISC Interim Report.</i> Osborne, Seagraves, Neal, Dockrell (April 1995).</p> <p><i>LISC Final Report.</i> Osborne, Seagraves, Neal, Dockrell, Hartshorn, Boyd (March 1996).</p> <p><i>Supporting Learners in the Workplace: Guidelines for Learning Advisers in Small and Medium Sized Companies.</i> Seagraves and Boyd (January 1996).</p> <p><i>Recognising Personal Skills.</i> Dockrell, Seagraves and Neal (April 1996).</p> <p><i>Workplace Study Skills Guide.</i> Neal and Osborne (May 1996).</p> <p><i>Leading the Way - Employers Report.</i> Willis, Harvey, Little, Neal (March 1996).</p> <p>Update: portfolio-based access course not really viable/limited uptake.</p>

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>University of East Anglia From Competence to Excellence (COMEX) (January 94 - January 96)</p> <p>aimed to establish feasibility of integrating/accrediting WBL in context of undergraduate and postgraduate degrees through developing learning opportunities that offered generic personal and professional development.</p>	Full-time employees.	<p>BA in Professional Development (4-6 years).</p> <p>MA in Professional Development (2 years).</p>	HEI	<p>UEA course unit/self-supported units - minimum 120 credits; employer in-house courses, credited by university - maximum 120 credits; APEL - maximum 120 credits. Core WBL minimum 120 credits.</p> <p>APEL - maximum 60 credits; professional development; research methods dissertation.</p>	<p>all published by School of Education and Professional Development, University of East Anglia.</p> <p><i>Formative Evaluation of COMEX.</i> B Zamorski, D Bridges, and L Jonker (March 1995).</p> <p><i>Summative Evaluation of COMEX.</i> A Marfleet (November 1995).</p> <p><i>Technical Report: an appraisal of the extent to which academic assessment can be designed to dovetail with existing NVQ and MCI Assessment Patterns.</i> J Frankham (March 1996).</p> <p><i>Final Report: Work-Based Learning, Accreditation and Professional Development.</i> January 1996.</p> <p>Update: BA Prog suspended in 1995/6 due to low recruitment but units in personal and professional development being introduced into UEA's undergraduate degrees.</p>
<p>University of Leeds with Elida Fabergé and The Henry Moore Sculpture Trust. Work-based Learning Project (July 94 - March 96)</p> <p>broad aim to establish entirely new WBL programme based on student-negotiated model.</p>	Full-time employees.	Full range of university's awards (Cert HE - Masters) + City and Guilds licentiateship award.	HEI	Learner designed programmes -variable credit levels/points.	University of Leeds <i>Work-based Learning Project Final Report</i> (April 1996).

Institution	Status & pattern of workplace experience	Focus & level overall curriculum	Control of overall curriculum	Status of WBL assessment	Outcomes
<p>University of Luton Work-Based Learning Degree Programme (April 94 - September 95)</p> <p>Aim to develop and pilot full degree programmes through WBL; + assessment of how NVQs could be incorporated into WBL degree programme.</p>	Full-time employees.	<p>University-wide framework for WBL degree programmes.</p> <p>Pilot pathways - Information Systems; - Mapping Science.</p>	HEI	<p>Existing degrees 'translated' into WBL delivery; + for Information Systems, units from NVQ level 4 in Information Systems Analysis.</p> <p>APEL up to 180 credits; Bridging programme 60 credits lvi 2; 8 x WBL modules, 120 credits lvi 3</p>	<p>University of Luton: <i>Report on Work-Based Learning Degree Programme</i> (April 1996).</p> <p>Further pathways within new framework to be developed for 1996/97: Business and Property Management; Electronic System Design; Biotechnology and Analytical Chemistry.</p>

Appendices to Chapter Four

APPENDIX I

Extract from University of Huddersfield, School of Computing and Mathematics Supervised Work Experience Periodic Record and Analysis, 1994/95

Remember, you are only expected to be in 4 to 8 areas.

To be completed each period. Tick the appropriate column(s) of any objectives met.

COMPETENCE AREA A - USER SOFTWARE SUPPORT

- A1. Provide advice and suggestions to users in the use of software packages.
- A2. Man a help desk.
- A3. Investigate software functionality in order to write/edit guides for users.
- A4. Provide software demonstration facilities.
- A5. Generate 'ad hoc' reports from company database.

Achieved through:-

- 1.
- 2.
- 3.
- 4.

Observed	Participated in	Undertaken	Feel Competent in

COMPETENCE AREA B - TECHNICAL USER SUPPORT

- B1. Give technical presentations to users.
- B2. Install and configure systems locally for users.
- B3. Provide hardware demonstration facilities.
- B4. Provide maintenance and fault rectification support to groups of equipment users.

Achieved through:-

- 1.
- 2.
- 3.
- 4.

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COMPETENCE AREA C - NETWORK SUPPORT

- C1. Install, configure and re-configure a local area network.
- C2. Act as a system manager for a local area network, maintaining, monitoring and enhancing its use.
- C3. Identify, diagnose and resolve network problems.

Achieved through:-

- 1.
- 2.
- 3.
- 4.

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COMPETENCE AREA D - ANALYSIS OF REQUIREMENTS (for a relatively complex system)

- D1. Interview users to establish requirements.
- D2. Search through existing records etc to understand existing systems.
- D3. Critically analyse, model and define requirements.
- D4. Work with colleagues/users to seek more effective business solutions.
- D5. Produce a functional specification of requirements.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA E - DESIGN AND SPECIFICATION

- E1. Produce a design specification from a given functional specification.
- E2. Design reports and forms.
- E3. Design a coding system.
- E4. Design security procedures.
- E5. Design and prototype user friendly dialogues/screens.
- E6. Specify a complete system.
- E7. Specify a program/module.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA F - PROGRAMMING

- F1. Understand a specification (informal, structured or formal).
- F2. Design a program using an appropriate method.
- F3. Code in an appropriate procedural language, using appropriate tools (e.g. for database and TP programming).
- F4. Develop software using a 4GL.
- F5. Document a program.
- F6. Become proficient in a new programming language/environment.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA G - TESTING

- G1. Design/develop a test plan.
- G2. Carry out defined test plans in a thorough and reliable manner.
- G3. Check other people's programs for quality.
- G4. Use configuration control techniques.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA H - PROGRAM MODIFICATION

- H1. Amend a complex program.
- H2. Convert a number of programs.
- H3. Identify and correct bugs.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA I - USING SOFTWARE TO SOLVE BUSINESS PROBLEMS

- I1. Become expert in the use of a generic software package that systems can be written or amended.
- I2. Work with users to identify requirements/opportunities for the application of software packages (including 4GL) to new areas.
- I3. Use and integrate software packages to solve business problems.
- I4. Produce, modify and enhance prototype solutions.
- I5. Document solutions and present them to users.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA J - TRAINING

- J1. Develop training material.
- J2. Develop user guides.
- J3. Deliver training courses.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA K- IMPLEMENTATION

- K1. Set up and convert files.
- K2. Conduct changeover routines.
- K3. Test system with transactions.
- K4. Set up test databases/spreadsheets etc.
- K5. Carry out user acceptance trials.
- K6. Handover a system to users.

Achieved through:-

- 1.
- 2.
- 3.

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COMPETENCE AREA L - MODELLING

- L1. Building models to represent problem situations.
- L2. Develop software to represent, and generate results from, the model.
- L3. Analyse the results of the modelling exercise.

Achieved through:-

- 1.
- 2.
- 3.

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COMPETENCE AREA M - EVALUATION/SELECTION OF HARDWARE/SOFTWARE/SYSTEMS

- M1. Conduct evaluation(s) of hardware/software.
- M2. Assist in reviewing underlying problems affecting the efficiency of a system.
- M3. Identify possible approaches to solving problems and evaluate alternatives.
- M4. Analyse product/system failures as an input to quality control.
- M5. Carry out the stages of hardware/software procurement.

Achieved through:-

- 1.
- 2.
- 3.

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COMPETENCE AREA N - MANAGE A SMALL COMPUTER SYSTEM

- N1. Prepare and maintain equipment for efficient utilisation.
- N2. Ensure that appropriate, current software is available, loaded and working.
- N3. Maintain in bookings and schedules for, and records of, usage.
- N4. Provide advice and support to users, including appropriate documentation.
- N5. Monitor, control and promote the integrity of the system (including testing, backups, patches, version control etc).

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Personal/Social Competence Areas

Some level of competence should be possible in all areas: not necessarily all items. To be completed each period. Tick the appropriate column(s) of any objectives met.

COMPETENCE AREA A - TECHNICAL KNOWLEDGE AND SKILLS

- A1. Demonstrate technical knowledge and skills from the course in the accomplishment of tasks involved in the job.
- A2. Acquire quickly and efficiently additional knowledge and skills required by the tasks undertaken.
- A3. Keep up-to-date with latest developments in the field.
- A4. Learn from people with greater technical knowledge and skills.
- A5. Deal with problems of appropriate technical complexity.

Achieved through:-

- 1.
- 2.
- 3.
- 4.

Observed	Participated in	Undertaken	Feel Competent in
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COMPETENCE AREA B - BUSINESS KNOWLEDGE

- B1. Demonstrate business knowledge from the course in the accomplishment of tasks involved in the job.
- B2. Acquire quickly and efficiently additional business knowledge required by the tasks undertaken.
- B3. Identify the people and parts of the organisation involved in/affected by his/her work.
- B4. Identify management and business skills from observing people with greater experience.
- B5. Take account of the wider implications for the organisation of his/her actions.

Achieved through:-

- 1.
- 2.
- 3.
- 4.

Observed	Participated in	Undertaken	Feel Competent in
----------	-----------------	------------	-------------------

COMPETENCE AREA C - PROFESSIONAL CONDUCT

- C1. Adopt the standard practices of an organisation in terms of dress, hours of work, punctuality, and company policies and procedures (including health, safety and security standards).
- C2. Represent the organisation/department to other organisations/departments in a professional manner.
- C3. Conduct him/herself in a professional manner in all dealings on behalf of the organisation.

Achieved through:-

- 1.
- 2.
- 3.

Observed	Participated in	Undertaken	Feel Competent in
----------	-----------------	------------	-------------------

COMPETENCE AREA D - MOTIVATION

- D1. Demonstrate application to tasks, however routine or long-term.
- D2. Carry through a task from beginning to end.
- D3. Demonstrate self-motivation and enthusiasm.
- D4. Complete tasks in an accurate and thorough manner.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA E - COMMUNICATION

- E1. Present information/argue a case either orally or in writing in a clear, concise and accurate manner.
- E2. Display tact, discretion or assertiveness to inspire respect and confidence in a colleague, a user or a customer.
- E3. Conduct information gathering interviews in an analytical and perceptive manner.
- E4. Participate constructively in meetings.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA F - INITIATIVE

- F1. Think and act effectively and independently.
- F2. Progressively require less supervision.
- F3. Contribute creative ideas and proposals to improve task management and the success of a project.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA G - WORKING WITH OTHERS

- G1. Demonstrate and maintain cooperative and helpful relationships with all employees.
- G2. Accept the authority of others and criticisms of work or ideas.
- G3. Take responsibility, and display some leadership qualities, within a group or team.
- G4. Seek help and guidance efficiently from colleagues.
- G5. Offer help and guidance to colleagues when appropriate.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA H - SELF ORGANISATION

- H1. Plan and prioritise own work.
- H2. Ensure the such plans/priorities accord with corporate objectives and the needs of other employees or customers.
- H3. Organise work-load to achieve maximum effectiveness and efficiency of resources.
- H4. Consistently meet deadlines.
- H5. Undertake more than one task or play more than one role at the same time.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA I - JUDGEMENT

- I1. Demonstrate a logical, objective and methodical approach in analysing the key aspects of a problem.
- I2. Make appropriate decisions with assurance and accept responsibility for them.
- I3. Recognise when not to make a decision.
- I4. Develop a self-critical awareness of own achievements/progress.

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Achieved through:-

- 1.
- 2.
- 3.

COMPETENCE AREA J - ADAPTABILITY

- J1. Grasp readily new ideas, concepts and situations.
- J2. Change at short notice procedures, technology, responsibilities or assignments.
- J3. Develop new skills quickly.
- J4. React to an unpredicted situation with respect to organisation policy.

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Achieved through:-

- 1.
- 2.
- 3.

APPENDIX II

Extract from Brunel University Diploma in Professional Development, Student Guidelines, 1995

Performance Indicators

A.1 PERSONAL COMPETENCE AREA

Motivation/Initiative/Adaptability

1. Completes tasks in an accurate and thorough manner within time schedules.
2. Progressively requires less supervision.
3. Contributes creative ideas and proposals to improve task management and the success of the project.
4. Reacts positively to set-backs and criticism.

Communication

1. Presents information, orally and in writing, in a clear, concise and accurate manner in a form appropriate for the requirement.
2. Displays tact, discretion or assertiveness as appropriate when communicating with colleagues, users, customers and supervisors.
3. Conducts information gathering exercises in an analytic and perceptive manner.
4. Participates constructively in meetings.

Relationships

1. Demonstrates and maintains co-operative and helpful relationships with colleagues.
2. Accepts the authority of others and maintains relationships under criticism.
3. Displays leadership qualities when required.
4. Seeks and offers help and guidance to colleagues when appropriate.

Self organisation and management

1. Takes steps to determine exactly what is required.
2. Plans and prioritises own work.
3. Ensures that such plans/priorities accord with corporate objectives and the needs of other employees or customers.
4. Consistently meets deadlines.

A.2 TECHNICAL COMPETENCE AREA

1. Identifies opportunities for the application of course knowledge/skills and applies such knowledge effectively.
2. Acquires a range of new skills and knowledge.
3. Applies these new skills effectively to the work done.

Note: Although there's only a few indicators here they will cover the bulk of the activity carried out by the student in the work placement period. The range of new skills and depth of knowledge should be correspondingly extensive. If the student is only using a limited range of skills over a long time period then the tutor should question the supervisor as what steps can be taken to enrich the student's experience.

A.3 PROFESSIONAL COMPETENCE AREA

1. Works effectively under supervision.
2. Seeks help and guidance when appropriate.
3. Does not assume knowledge that s/he does not have.
4. Is willing to put extra effort into gaining any necessary knowledge/skill required in order to carry out job effectively.
5. Works effectively with others, operating within time scales and budgets.
6. Adopts standard practices of the organisation in terms of hours worked, punctuality, company policies and procedures.
7. Accepts pressure/personal inconvenience by working overtime when required.
8. Adopts/works with the technical standards used by the company for the production of products.

A.4 CONTEXT OF ACTIVITY

1. Is aware of the business/user context of the application.
2. Acquires, quickly and efficiently, the necessary additional business knowledge required for the task at hand.
3. Is aware of the function of department work and its relationship to the organisation.
4. Acquires an appreciation of the role of I.T. both within the department and within the organisation as a whole.
5. Takes into account the wider business implications of his/her actions.
6. Forms a good understanding of the managerial, financial and production aspects of the company worked for.

Professional Development Objectives

Professional development objectives

The aims and objectives for professional development are set within an educational framework for experiential learning. This brings together the ideas of 'learning cycles' through which reflection on past activity and preparation for future activity are as important as carrying out the activity, with that of a 'spiral curriculum', where areas are revisited and improved upon at higher levels of maturity. The emphasis is on giving students ownership and responsibility for their own learning. Below are set out some overall educational objectives, some general objectives for all students on work placements and some more specific objectives within the context of professionalism in the field of information systems engineering.

Overall educational objectives

To enable students to:

- accept responsibility for their own learning and become active learners
- recognise the 'content independent' nature of many of the skills and so
- increase the transferability of much that they learn
- assess the quality of their own work, and their own learning, in their own terms and against other standards
- acquire skills and techniques which improve the quality, validity and reliability of this activity

General work placement objectives

- to provide students with practical experience in the application and usefulness of technical knowledge, skills and understanding gained at university
- to enable students to apply and extend this knowledge in a practical environment
- to enable students to develop both personal and professional skills, e.g.

planning skills, both personal and general
communication skills, both written and oral
problem-solving skills
contributions in a team or group environment
working to standards
responding to leadership
analysing and solving real-life problems
making appropriate decisions

- to enable students to learn about enterprises, business and social, by studying the organisation(s) in which they are placed

Course objectives

By the end of their work period(s), in the context of real-life situations, the students will have

- learnt and used a variety of technical computing skills
- participated in a variety of life-cycle activities, e.g. from requirements analysis through specification, design, implementation and testing, to maintenance, evaluation and quality assurance
- used appropriate software engineering methodologies in life-cycle activities
- received professional supervision and training throughout the work periods
- worked to acceptable professional standards in appropriate environments
- had the opportunity to set targets and objectives and to have measured his-her achievement against these objectives
- worked for a period as a member of a team
- had the opportunity to present both written and oral reports on work undertaken
- shown an understanding of organisational aspects of the environment in which the work has taken place
- evaluated the experience gained from individual work periods and overall

Extract from University of Luton: Work Based Learning in Higher Education Final Report (1994)

General Work Based Learning Module

Credit Value: 15 points Level: 2

Aims: This module has the following aims:

1. To develop the student personally and intellectually, and encourage responsibility for his/her own learning.
2. To enable the students to exploit opportunities for learning that exist in the workplace and to carry out an in depth work based project.
3. To develop personal transferable skills in the workplace.

Learning Outcomes: Students will be able to:

1. Present and analyse a situation to a given brief using appropriate methods.
2. Solve pertinent structured problems both individually, and , if appropriate, in a group.
3. Report on learning achieved on the project, in an appropriate reporting style.
4. Make recommendations and/or suggest guidelines for change based on project findings.
5. Reflect on experience and/or practice.
6. Collect relevant information independently.
7. Plan and implement personal transferable skill objectives.

Pre- and Co- Requisites:

Any student who meets the University conditions to register for level 2 modules will be eligible to take this module, subject to the conditions listed below. There are no excluded combinations. The basis for this module is learning in the workplace through the student undertaking a structured project. Each project is based on practical development of transferable skills that can be derived from a structured work based project. Other modules may enhance the experience for the student using a taught element e.g. the Career Development Module. The former may prompt the student to seek experience in their chosen future career, the latter may provide confidence and practical opportunity to apply their knowledge and skills.

This module is open to any student who had successfully completed Level 1 of a degree level course and can fulfil the following conditions:

1. Evidence can be obtained from the personal modular tutor and Faculty Modular Counsellor as to the suitability of the student for this course of study, which by its nature would be suitable to those students who are able to work independently, and towards self directed study.
2. The student is required to attend a meeting with a member of the course team, in order to discuss their objectives for taking this module.
3. The student is required to attend an interview with the employer organisation that is offering the project, and gain agreement to carry out the placement.

On satisfying the above conditions, the student may register for the module.

Content:

Students will be applying their cognitive and intellectual skills and in some cases the bodies of knowledge they have already acquired to carry out a project within the work place. Within this context they will undertake the following:

- The practical application of skills development in the workplace; e.g. communication skills, time management skills, literacy and numeracy skills, interpersonal skills.
- The negotiation of a structured placement report, formalising the agreement between the employer, student, and tutor.
- Report writing and presentation skills, analysis of specific workplace scenario, gathering company information, evaluation of information relevant to a Work Based Learning Module.

Note: Specific details of content are more fully described in the *Student Handbook to the Work Based Learning Module*.

APPENDIX IV

COGNITIVE ATTAINMENT BY LEVEL OF STUDY

<u>Cognitive Field</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Level M</u>
<p>1. KNOWLEDGE <u>Descriptions</u> of facts; criteria; definitions; classifications; data organisation; principles; theories.</p>	<p>Emphasis on "facts", terminology, the nature of the field of study. Tutor-presented material little questioned.</p>	<p>Widening appreciation of the scope of the field of study. Beginnings of understanding of the limited nature of the known.</p>	<p>Able to demonstrate confident familiarity with the more usual areas of the knowledge base or canon.</p>	<p>Focus on specialist areas, predicated on certainty about the conventionally-accepted knowledge base of the canon.</p>
<p>2. INTERPRETATION <u>Understanding</u> of knowledge in the categories in 1 above.</p>	<p>Knowledge understood, but without integration into a generative framework.</p>	<p>Beginnings of a 'mapping' of knowledge into an overview of the canon.</p>	<p>Confident in the relationships between areas of principle and fact. Aware of the provisional nature of the state of knowledge.</p>	<p>Ability to deal with complexity, lacunae and/or contradictions in the knowledge base. Ability to <u>diagnose</u> - to exercise judgement based on incomplete or confused information.</p>
<p>3. APPLICATION <u>Use</u> of knowledge in the categories of 1 above in real situations.</p>	<p>Rote application of principles. Reliance on guidance by tutor.</p>	<p>Understanding of the need to select principles and facts appropriate to the problem in hand. Applies principles under guidance.</p>	<p>Confident and accurate selection and application of principles to the solution of a range of problems posed externally.</p>	<p>Accurate isolation and identification of problems and areas of investigation. Confident, autonomous and self-reflective application of appropriate problem-specific principles.</p>
<p>4. ANALYSIS <u>Breaking down</u> of knowledge into its constituents in a variety of ways for various purposes.</p>	<p>Acceptance of classifications presented by tutor. Some ability to analyse with guidance.</p>	<p>Ability to recognise familiar ideas or principles in texts or situations.</p>	<p>Identifies and classifies principles and ideas from new texts and situations.</p>	<p>Ability to edit complex documents. Ability to classify facts, principles and theory for a variety of ends. Ability to work from a brief.</p>
<p>5. SYNTHESIS <u>Bringing together</u> different elements of knowledge in a new way or within a new framework; producing new ideas or solutions.</p>	<p>Absent or imitative.</p>	<p>Understands the need for the marshalling of facts and ideas in an argued case. Can produce new design ideas in closely-defined situations.</p>	<p>Ability to bring together principles and facts in support of an argument. Ability to design novel solutions with minimum guidance.</p>	<p>Ability to define, elaborate and defend a thesis. Ability confidently to synthesise novel design solutions.</p>
<p>6. EVALUATION <u>Assessment</u> of what is known against a variety of criteria.</p>	<p>Heavy reliance on tutor's assessment of work. Lack of appreciation of the need for criteria.</p>	<p>Understanding of the need for known and agreed criteria. Able to make acceptable assessments of own performance under guidance.</p>	<p>Accurate assessment of own levels of performance. Accurate predictions of outcome from courses of action selected.</p>	<p>Ability accurately to assess and report on own and others' work, with justifications. Can accept others' evaluations and act appropriately on them.</p>

extract from M Bement and F Lyons (1994)
University of Portsmouth, Partnership Programme

STUDY, TRANSFERABLE AND PROFESSIONAL SKILLS BY LEVEL OF STUDY

<u>Skills Grouping</u>	<u>Level 1</u> (Unwitting incompetence)	<u>Level 2</u> (Conscious incompetence)	<u>Level 3</u> (Conscious competence)	<u>Level M</u> (Trained instinctive competence)
REFLECTION & APPRAISAL	Beginning self-reflection on strengths and weaknesses; developing consciousness of own levels of competence and incompetence.	Awareness of the scope of tasks. Beginning to use tools of self-reflection and appraisal of self and others.	Ability to reflect on strengths and weaknesses and to assess own work with acceptable accuracy against published criteria. Ability to make formative self-assessments.	Habitual reflection and appraisal. Evaluation leads to action. Ability to articulate plans to remedy shortfalls. Can accept others' evaluations and act on them.
LEARNING & PROCESS MANAGEMENT	Developing: new approaches to work & study; group working skills; independent enquiry; ability to justify, reason and argue rationally and persuasively about the study area.	Some support from tutor still needed in management of learning, but responsibility taken for most decisions. Clear understanding of the nature of study and work.	Ability of manage own learning with minimal guidance, both in independent and group study. Ability to justify current and future personal academic and practical goals.	Autonomous. Professional use of others in support of self-directed learning. Instinctive awareness of importance of group processes.
TECHNIQUES AND TOOLS	Developing awareness of the need for a flexible approach to problem-solving, design tasks, evaluation and views of the world. Beginnings of group working skills.	Able to question value of new approaches Viewpoint can oscillate between enthusiastic adoption of new methods and a pervading emphasis on their drawbacks. Used to group working.	Confident knowledge of appropriate general and technical subject-specific skills. Ability to articulate own viewpoint and use as a basis for questioning, discussion and debate. Clear understanding of group processes.	Confident selection of tools for the job. Ability to develop new approaches in new situations. Quick to perceive merits or demerits of new ideas, techniques or technologies. Confident understanding of group dynamics.
APPLICATION	Recognition of the necessity for study skills appropriate to the subject (library, laboratory, computer literacy, articulate and accurate written and oral presentation). Development of a questioning attitude.	Exploration of an expanding range of skills and techniques. Valuing of study and transferable skills, both in the group and as an individual.	Confident and flexible application of subject-specific skills in evaluation, problem-solving, design and analysis of real-world issues.	Creative use of techniques and skills. Skilful and confident planning and successful execution of programmes of work "on time and within budget". Works effectively as a team member or leader.

APPENDIX V

Extracts from: **Work-based Learning Programme Handbook. University of Leeds** **Work-based Learning Project (1995)**

Fields

The criteria are in five inter-related fields. These fields are concerned with:

- the formulation of the problem
- the generation and design of possible solutions or responses
- the implementation of solutions or responses
- the evaluation of outcomes
- the organisation and presentation of all activities

The above fields apply at all levels. They are elaborated in more detail in Appendix 1.

Levels

Progression through the different levels is based on six key level variables. These level variables are:

- **Complexity** of concepts, variables, influences
- **Autonomy** and control
- **Relevance** and impact
- **Integration** of content, skills
- **Abstractions**, generalisations and transfer
- **Creativity** and innovation

Appendix 2 shows how one particular field (The Formulation of the Problem) is identified at different levels.

Appendix 1

The General University Criteria

Field 1 The Formulation of the Problem

- a) shows awareness of the wider context in which it is set
- b) shows understanding of values or ethical implications
- c) is justified in terms of possible alternative formulations
- d) relates to identifiable needs in the work place, the student's own development or the wider context
- e) recognises its tentative nature, being subject to testing against outcomes of experience of subsequent activities
- f) displays creativity, originality, imagination or insight
- g) has potential as a vehicle for learning

Field 2 The Generation and Design of Possible Solutions or Responses

- a) is in response to a range and a review of alternatives
- b) shows awareness of knowledge and skills base
- c) is consistent with the scope of the problem
- d) is consistent with the planned time-scale of the problem

Field 3 The Implementation of the Solutions or Responses

- a) makes effective use of methods of enquiry appropriate to the needs of the formulated problem and the field in which it is set
- b) involves the collection, interpretation and analysis of data from a variety of sources

Field 4 The Evaluation of the Outcomes

- a) takes a critical stance towards problem formulation, chosen strategy and methods used
- b) focuses on general as well as specific outcomes and explores possible transfer of learning to other fields or parts of the same field
- c) explores the wider significance of the project for the field as a whole
- d) leads to a reformulation of the problem and proposals for further work

Field 5 The Organisation and Presentation of all Activities

- a) conforms with literacy, oracy, numeracy and other conventional standards appropriate to the field of enquiry
- b) is an effective means of communicating matters of substance to lay as well as specialist readers and audiences and relevant to their purposes
- c) is managed efficiently within agreed schedules, budgets and partner expectations
- d) shows effective collaboration with teams, data suppliers, clients and other specialists

Level indicators at levels 1, 2, 3 and M: example for one particular field

Field 1 The Formulation of the Problem

Aspect	Level indicators
a) shows awareness of the wider context in which it is set	L1 shows awareness of both the work-based and academic contexts in which it is set
	L2 shows understanding of i) the relationship between work-based and academic contexts, and ii) the relevance of other studies, work or previous formulations
	L3 illuminates and justifies the formulation with informed debate and cross references to other problem areas, perspectives and specialist knowledge
	LM illuminates and justifies the formulation with informed debate and cross references to other problem areas, perspectives and specialist knowledge appropriate to this Level
b) shows understanding of values or ethical implications	L1 shows awareness of values or ethical implications
	L2 shows understanding of own value position in the context of other values
	L3 accommodates possible value ambiguities or tensions and engages in informed debate on ethical implications
	LM successfully synthesises possible value ambiguities or tensions and engages in informed debate on ethical implications
c) is justified in terms of possible alternative formulations	L1 shows awareness that alternative formulations are possible
	L2 is described in the context of explorations of possible alternative formulations
	L3 is based on informed judgement on the relative merits of alternative formulations
	LM is based on well-informed judgement on the relative merits of competing alternative formulations

d) relates to identifiable needs in the work place, the student's own development or the wider context	<p>L1 derives from identifiable needs in the work place and/or the student's own work-related development</p> <p>L2 elaborates work-based needs in terms of previous experience or circumstances, obstacles to be overcome and aspirations for the future</p> <p>L3 is integrated with the student's work-based concerns through its operation or the application of its outcomes</p> <p>LM is integrated with the student's work-based concerns through its operation or the application of its outcomes</p>
e) recognises its tentative nature, being subject to testing against outcomes of experience of subsequent activities	<p>L1 acknowledges that problem formulations are provisional, waiting to be tested</p> <p>L2 is expressed in ways which invite testing against possible outcomes or experience</p> <p>L3 includes some provision for responding to the need to reformulate in the light of experience</p> <p>LM includes substantial provision for responding to the need to reformulate in the light of experience</p>
f) displays creativity, originality, imagination or insight	<p>L1 while concerned with established or given perceptions of the nature of the problem, proposes a distinctive enquiry which is original to the student</p> <p>L2 adapts established or given perceptions of the nature of the problem, proposing a distinctive enquiry which is original to the student</p> <p>L3 creatively devises a distinctive formulation in response to 'client' needs or creates a distinctive arrangement or interpretation of existing perceptions and knowledge</p> <p>LM creatively devises a distinctive formulation in response to 'client' needs or creates an original or distinctive arrangement or interpretation that can go beyond existing perceptions and knowledge</p>
g) has potential as a vehicle for learning	<p>L1 identifies opportunities for personal learning through the proposed activities</p> <p>L2 has been planned for use by the student as a vehicle for further learning</p> <p>L3 has been specified with sufficient scope and substance to enable the student to demonstrate achievement of the intellectual requirements of work at this Level</p> <p>LM has been specified with sufficient scope and substance to enable the student to demonstrate achievement of the intellectual requirements of work at this Level</p>

extracted from: Work-based Learning Programme Handbook. University of Leeds Work-based Learning Project (1995)

Appendices to Chapter Six

The Link Tutor Task Checklist from OU/QSC (1995) Signposts for Staff Development (2): Link Tutor, London: QSC.

Role 1: Providing support for the host organisation

- | | | |
|--------------|------|--|
| Tasks | 1.1 | Briefing for work-based placement personnel. |
| | 1.2 | Providing appropriate written guidance materials. |
| | 1.3 | Engaging in clarificatory and developmental discussions face to face with mentors. |
| | 1.4 | Supporting mentors in a variety of ways. |
| | 1.5 | Liaising with company personnel at appropriate points pre-, during, and post-placement. |
| | 1.6 | Operating as a reference point, information provider, adviser, and problem solver for providers. |
| | 1.7 | Developing and consolidating a partnership ethos. |
| | 1.8 | Encouraging and facilitating networking activity amongst providers. |
| | 1.9 | Setting up and supporting joint activities. |
| | 1.10 | Empathising with understanding the provider's standpoint. |
| | 1.11 | Negotiating productive change to improve the placement for students, and accommodating the legitimate commercial and industrial values espoused by the provider. |

Role 2: Acting as an assessor

- | | | |
|--------------|-----|---|
| Tasks | 2.1 | Undertaking formative assessment activities in the interests of the student and the workplace. |
| | 2.2 | Designing and implementing formal assessment procedures. |
| | 2.3 | Briefing students and work-based mentors about the assessment process and related documentation. |
| | 2.4 | Creating and refining assessment documentation and process models as appropriate, in line with current educational development. |
| | 2.5 | Collecting and collating placement assessment data. |

- 2.6 Encouraging student independence and refining student approaches to self-assessment and placement management.
- 2.7 Moderating assessments in terms of validity, reliability and comparability between placements.

Role 3: Working as a negotiator

- Tasks**
- 3.1 Negotiating the general character of the placement with the placement providers to achieve mutual agreement, satisfaction, and payoffs.
 - 3.2 Negotiating the necessary learning, and the experiences through which it will be achieved, with the student and the work-based mentor.
 - 3.3 Negotiating and agreeing a learning contract, or a less elaborate set of agreements about placement objectives, with the students.
 - 3.4 Negotiating amendments and developments within and beyond the learning contract/initial agreement.
 - 3.5 Negotiating and liaising with the work-based mentor during the placement to avert difficulties or solve in-placement problems.
 - 3.6 Negotiating with the work-based mentor developments and changes to be made in future placement work, in the light of experience.

Role 4: Operating as an innovator

- Tasks**
- 4.1 Reviewing the placement model and process on a regular basis to identify necessary refinements and re-orientations.
 - 4.2 Identifying and responding to needs evident in the wider community of education and training.
 - 4.3 Responding quickly and positively when change is required so as to maintain the match between available resources and the placement process model in order to ensure that the placement remains effective within the bounds of continuing effectiveness.
 - 4.4 Identifying and evaluating alternative modes of operation, procedures and documentation and adopting and customising such approaches when appropriate.
 - 4.5 Undertaking research activity in relation to placements and disseminating the findings to other link tutors.

Role 5: Working as an effective collaborator

- Tasks**
- 5.1 Adopting a co-operative stance with the other placement participants.
 - 5.2 Demonstrating a willingness to work collaboratively, consulting, sharing and agreeing a set of common purposes.

- 5.3 Working collaboratively in all the key areas of placement operation, including assessment.
- 5.4 Becoming involved as co-workers in the work context and in collaborative project work.

Role 6: Providing support for the university

- Tasks**
- 6.1 Undertaking research and/or publications work relating to placements.
 - 6.2 Explaining and justifying to placement personnel the university's contribution to the student's academic, professional and vocational development.
 - 6.3 Supporting developments within the university which seem likely to enhance the quality of placement activity.
 - 6.4 Acting as an ambassador/salesperson for the university in terms of its values and products.

Role 7: Serving the student as pastoral guide

- Tasks**
- 7.1 Providing an approachable and responsive source of support, personal advice and guidance.
 - 7.2 Establishing a trusting professional relationship with students in order to help them to avoid or deal with problems experienced on placement.
 - 7.3 Acting as a personal counsellor under normal circumstances and referring the student to the special services available when they are not.
 - 7.4 Being sensitive to the fact that the style of pastoral care offered must reflect the nature of placements and match the wishes and perceptions of students.
 - 7.5 Distinguishing clearly between the pastoral role and the assessment role in the interests of frank discussion and interchange.
 - 7.6 Identifying and creating mechanisms and procedures for the effective provision of pastoral care.
 - 7.7 Developing a comprehensive awareness of sources of support which the student may access when required.

Role 8: Acting as the manager

- Tasks**
- 8.1 Assisting with the identification, evaluation and initiation of suitable placements for students.
 - 8.2 Analysing the complexity of the placement experience in order to anticipate likely problems, identify resources and priorities, and set up appropriate systems to fulfil the link tutor's role.

- 8.3 Investigating alternative management approaches where these are likely to enhance the quality of placements.
- 8.4 Ensuring the placements bring appreciable benefits to all parties such that placement providers are likely to wish to continue their involvement.
- 8.5 Monitoring placement progress to ensure effectiveness and efficiency within the resource levels provided.
- 8.6 Identifying minimal quality assurance expectations of placement activity and setting up individual procedures which ensure that these are delivered.
- 8.7 Providing regular support for and interaction with students undertaking placements and the work-based mentors working with them.
- 8.8 Creating and distributing support documentation to those involved in placements in order to help them organise, record and benefit from their experience.
- 8.9 Delegating responsibility for placement management to students and mentors in a responsible and professional way in order to reduce the level of student dependency.
- 8.10 Engaging in frequent consultancy discussions with students and their mentors about further support required and ways in which current support might need to be modified.
- 8.11 Using visits to the workplace as an important element in the placement management process, and structuring them to achieve a range of management purposes above and beyond those of student support and assessment.

Role 9: Helping students to prepare for placement

- Tasks**
- 9.1 Preparing the ground for the student by the effective briefing or other tutors and work-based mentors.
 - 9.2 Providing information about all aspects of the placement and the host company.
 - 9.3 Producing necessary protocols and documentation to help establish the parameters and placement planning and management.
 - 9.4 Clarifying issues relating to learning outcomes, resources, and support.
 - 9.5 Negotiating placement objectives and learning outcomes.
 - 9.6 Facilitating discussion between students and other participants.
 - 9.7 Undertaking activities which help students to rehearse for the placement experience and practise the necessary personal skills.
 - 9.8 Encouraging and arranging pre-placement contacts with providers.

- 9.9 Setting up and running a specific pre-placement programme or creating placement study materials when appropriate.
- 9.10 Establishing clear agreements regarding the obligations and entitlements associated with placement work.
- 9.11 Employing students who have previously undertaken the placement experience to feed back their experiences face-to-face or in writing to the next cohort.
- 9.12 Encouraging students to audit their own strengths and weaknesses in relation to the placement and to undertake systematic remediation if required.
- 9.13 Allowing students an influential voice in the way the placement will be managed and developed.
- 9.14 Enhancing the efficiency and economy with which the placement experience is handled in order to maintain effectiveness.

Role 10: Acting as an evaluator

- | | | |
|--------------|------|---|
| Tasks | 10.1 | Undertaking evaluation activities as part of the quality assurance process. |
| | 10.2 | Ensuring that significant elements of the students' placement experience are systematically evaluated. |
| | 10.3 | Designing, contributing to or implementing a significant part of the placement evaluation strategy. |
| | 10.4 | Undertaking research on selected aspects of placement activity as part of a broader academic role and reflective professional practice. |
| | 10.5 | Undertaking evaluation activity designed to lead to the refinement and improvement of the placement experience and more radical innovation. |

Role 11: Intervening as advocate

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|--------------|------|---|
| Tasks | 11.1 | Representing the interests of students in their relation to other participants in the placement. |
| | 11.2 | Operating as a balanced intermediary in dealing with interpersonal and organisational problems which occur. |
| | 11.3 | Seeking to set up procedures and encourage relationships which will prevent confrontation and unproductive disagreement. |
| | 11.4 | Establishing a trusting relationship with students which permits the student to confide in and expect the tutor to represent their interests and concerns fairly. |
| | 11.5 | Seeking to arbitrate and resolve intractable problems when they occur. |

- 11.6 Offering similar services to the workplace mentor if the need arises.

Role 12: Acting as the reflective practitioner

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|--------------|-------|---|
| Tasks | 12.1 | Displaying evidence of reflective thinking about work-based learning and providing a model of 'reflection in action' for the student. |
| | 12.2 | Engaging in open-minded critical debate about the nature and value of work-based learning and its special contribution to professional competence. |
| | 12.3 | Demonstrating and exploring the complexity of the professional decision making and emphasising the use of critical judgement rather than the application of simple routines. |
| | 12.4 | Ensuring that students are provided with challenging opportunities and opportunities to challenge during the placement. |
| | 12.5 | Devising and facilitating situations which encourage enquiry and reflection - for example, through group work and exploratory, open-ended discussion and diagnostic feedback. |
| | 12.6 | Emphasising the importance of theory as an interpretative resource for understanding experience. |
| | 12.7 | Encouraging students to engage in systematic, disciplined and critical reflection about placement activity and to assess their own level of success and personal development. |
| | 12.8 | Drawing the work-based mentor into the development of reflective practice. |
| | 12.9 | Providing tentative guidelines and documentation which will facilitate the development of reflective practice. |
| | 12.10 | Allowing the student sufficient freedom and room for manoeuvre to permit real decision making and independence of action. |
| | 12.11 | Facilitating and encouraging professional dialogue between all the partners involved in placement activity. |

Role 13: Operating as a guide and teacher

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|--------------|------|--|
| Tasks | 13.1 | Recognising the limited nature of this role in practical terms during the placement itself because of the special context of the work. |
| | 13.2 | Assisting and supporting the work-based mentor in their teaching and guidance work. |
| | 13.3 | Offering technical guidance and study suggestions on an informal basis. |
| | 13.4 | Providing teaching of a reflective sort to students prior to and following on from the placement. |

- 13.5 Helping to provide a structured and supported learning experience whilst allowing a reasonable level of professional independence.

Role 14: Acting as a facilitator

- Tasks**
- 14.1 Reinforcing the importance of placement work for personal and professional development.
- 14.2 Operating effective procedures in a flexible and considerate way, pruning and changing them in the light of critical consideration and discussion by participants.
- 14.3 Empathising with and supporting other partners in placement work, offering them reassurance, respecting their convenience, and helping them to control their workload.
- 14.4 Clarifying the placement process when required, and smoothing its practical implementation in the interests of effective experiential learning.
- 14.5 Encouraging students to adopt an active and collaborative stance, allowing them to capitalise on the placement experience, rather than passively accepting the status quo.
- 14.6 Making things happen, helping them to happen, and being supportive when they do happen.

Role 15: Ensuring effective follow-up

- Tasks**
- 15.1 Encouraging students to reflect critically on their own placement experience and the experiences of other students.
- 15.2 Setting up mechanisms and procedures by which effective follow-up can be assured.
- 15.3 Concentrating students' attention on self analysis, the auditing of strengths and weaknesses, and future development planning.
- 15.4 Arranging situations and events in which placement experience can be communicated and disseminated.
- 15.5 Combining effective follow-up for one cohort of placement students with effective preparation for the next.
- 15.6 Encouraging other tutors - whether involved with placements or not - to engage in debate about placement and make more extensive use of placement experience in their teaching in the academic areas of the course.

APPENDIX II

Knowledge, Skills and Attitudes and the Competent Mentor for Secondary Initial Teacher Training

**Extract from University of Northumbria at Newcastle
1994 Project Report - volume two, pp67-69**

Knowledge and the Competent Mentor

The effective teacher mentor must:

1. be aware of the latest developments in the field of secondary education in general, and the National Curriculum in particular;
2. understand the implications of Circular 9/92 for the definition and development of professional competence in beginning teachers;
3. understand the structure of the course of study being followed by each student attached to them;
4. be fully conversant with the functioning of the school, its constituent parts and its personnel;
5. understand the connection between the principles of effective learning and learning techniques and approaches;
6. be aware of the capabilities of practising a wide range of classroom teaching skills.

Skills and the Competent Mentor

The effective teacher mentor must possess and exercise a range of supporting skills, managerial skills, and assessing skills.

Supporting skills

Effective mentors will seek to:

7. provide counselling for students as and when appropriate;
8. facilitate professional development opportunities and provide these opportunities whenever possible.
9. act as a frequent discussant, listening, responding, probing and encouraging the student;
10. work collaboratively with the student in a variety of ways;
11. encourage reflection by the systematic debriefing of important activities;
12. provide regular, sympathetic and positive feedback on all aspects of the student's performance.

Managerial skills

Effective mentors will:

13. consult and liaise with other professional colleagues and agencies in the interest of the student;

14. co-ordinate and ensure balance in the range and scope of activities undertaken by the student;
15. communicate effectively by passing on necessary information and fulfilling course requirements when appropriate;
16. plan and prepare both with and for the student, and encourage the student to operate in a similarly systematic way;
17. negotiate for and intervene as an advocate for the student when appropriate.

Assessing Skills

18. monitor the progress of the student on a systematic basis;
19. undertake formative and diagnostic evaluation of the student's work on a regular basis;
20. observe the student regularly and provide immediate and retrospective feedback;
21. arrive at final assessment decision on the basis of a broad range of opinions, observations and other evidence.

Attitudes and the Competent Mentor

22. display a reflective and self-evaluative approach to their performance in the mentor role;
23. show understanding and respond empathetically to the difficulties experienced by students;
24. exhibit flexibility within the bounds of professional behaviour;
25. be open-minded and able to envisage and value alternative approaches to professional tasks;
26. adopt a realistic and honest approach when working with students;
27. be willing to share ideas and work collaboratively with students in a variety of situations.

Extract from University of Northumbria at Newcastle, A Learning Outcomes framework for the accreditation, delivery and assessment of work-based learning, April 1992 - March 1994, Project report Volume 2.

Appendices to Chapter Seven

APPENDIX I

Sixfold Criteria for assessing Work Based Learning indicating standards by degree classification

MARK	CHARACTERISTICS OF ACHIEVEMENT
<p>>70% 1st class</p>	<p>Thorough understanding and assimilation of key concepts (both practical and theoretical, trends and interactions with the learning outcomes specified in the learning contract;</p> <p>Overview of the field of study used as a basis for creativity, synthesis, innovative thinking, predictive judgement and diagnosis;</p> <p>Awareness of the significance of the field of study within the wider context of work and society, and a demonstrated ability to move across boundaries;</p> <p>Evidence of a thoroughly professional attainment in terms of the coherent presentation of the work;</p> <p>Evidence of a process of continuous evaluation and reflection integrated with technical aspects of the work, together with evidence of critical self-evaluation;</p> <p>Reference to, and thorough assimilation of, latest published material in the field of study;</p>
<p>60-69% Upper second class</p>	<p>Good understanding of key concepts within the learning outcomes specified in the learning contract;</p> <p>Confidence in use of ideas and processes within the field of study;</p> <p>Awareness of the significance of the field of study within the wider context of work and society;</p> <p>Written material fluent and soundly structured;</p> <p>Critical evaluation given some importance;</p> <p>Evidence of use of background knowledge and investigation;</p>
<p>50-59% Lower second class</p>	<p>Evidence of understanding of the distinguishing feature of the learning outcomes specified in the learning contract;</p> <p>Use of ideas and processes from the field of study;</p> <p>Some awareness of other related issues and areas of study;</p> <p>Adequate structure;</p> <p>Some evaluation of outcomes and procedures;</p> <p>Evidence of investigation of published materials;</p>

40-49% Third class	<p>Basic understanding of learning outcomes specified in learning contract;</p> <p>Evidence of some assimilation of basic concepts in the field of study;</p> <p>Some understanding of significance of matters within the field of study;</p> <p>Material poorly organised and largely descriptive;</p> <p>Limited attempt to evaluate outcomes or procedures;</p> <p>Inadequate investigation of sources;</p>
<39% Fail	<p>Confusion about or misunderstanding of learning outcomes as expressed in the learning contract;</p> <p>Theory wrongly applied to the work in hand with little or no analysis;</p> <p>Little or no evidence of understanding of the significance of the work or assimilation of issues;</p> <p>Long on description, with structure inappropriate to content;</p> <p>No real evaluation of outcomes;</p> <p>Little evidence of investigation, or heavy and unacknowledged reliance on one source.</p>

These criteria are to be used as the starting point in negotiations between student, mentor and tutor to agree the criteria by which work-based learning is assessed.

Criteria may need to be varied according to the nature of the project, the intended learning outcomes and the nature of the evidence that is to be submitted. Criteria may be amended, deleted or added to.

Ref: University of Portsmouth, Partnership Programme: Lyons and Bement, 1994

Extract from Final Report. Guise, S and Winter, R (1995)

Ford ASSET Project

CORE PROFESSIONAL CRITERIA

CRITERION 1: "Effective Grasp of Professional Knowledge"

This involves demonstrating:-

- comprehensive knowledge and critical evaluation of theories/technologies/methods/policy/procedures/research findings/legislation
- ability to relate specific details to other contexts and to general principles
- ability to recognise when and where to search for additional information

CRITERION 2: "Intellectual Rigour and Flexibility"

This involves demonstrating:-

- precise, open-minded, challenging analysis of problems and the generation of a range of different solutions

CRITERION 3: "Continuous Professional Learning"

This involves demonstrating:-

- willingness and capacity to learn from other people and from a variety of sources
- recognition that the changing environment demands constant updating on one's understanding
- ability to evaluate one's work, recognising and analysing its strengths and limitations

CRITERION 4: "Task Effectiveness"

This involves demonstrating:-

- initiative, responsiveness, decisiveness and tenacity
- ability to focus on a given objective and manage resources accordingly

CRITERION 5: "Effective Communication"

This involves demonstrating:-

- ability to communicate in a form and manner which is clear/accurate/concise/ sensitive, and appropriately varied according to different audiences and purposes

CRITERION 6: "Interpersonal Awareness"

This involves demonstrating:-

- awareness of the effect of one's own and others' feelings on work situations
- ability to work collaboratively within a team

CRITERION 7: "Commitment to Professional Values"

This involves demonstrating:-

- acceptance of responsibility for the quality of one's own work and of the work for which one is accountable
- personal integrity, honesty and respect for others
- incorporation into one's judgements of an understanding of the ethical/economic/environmental impact of one's work

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